



SNOWBOARD INSTRUCTORS

# Snowboard Manual

---

YOUR GUIDE TO TEACHING & RIDING  
FROM BEGINNER TO ADVANCED



Snowboard Instruction New Zealand (a division of NZSIA)  
PO Box 2283, Wakatipu, Queenstown, New Zealand.  
[www.nzsia.org](http://www.nzsia.org)

### **Editorial**

Written by Paul Phillip, Leo Carey and Keith Stubbs.

Additional contributions from Sam Smith, Tony Macri, Claire Dooney, Rhys Jones and Elaine Tseng.

Edited by Keith Stubbs and Alex Kerr.

### **Imagery**

Front cover: Nick Hyne and Stef Zeestrateen taken by Vaughan Brookfield.

Inside spread: Nick Hyne taken by Vaughan Brookfield.

Teaching photography by Kahli Hindmarsh.

Sequence images and technical riding from Rhys Jones, Richie Johnston, Tony Macri, Paul Phillip and Freddie Bacon; all shot and edited by Keith Stubbs.

Additional photography from Ricky Otaki, Richie Johnston and Cardrona Alpine Resort.

Design by Loz Ferguson from Pop Creative. Printing by Print Central.

A huge thank you to all past SBINZ Examiners. You have all been a huge part in making SBINZ what it is today.

© 2017 SBINZ / NZSIA. All Rights Reserved.



## PREFACE

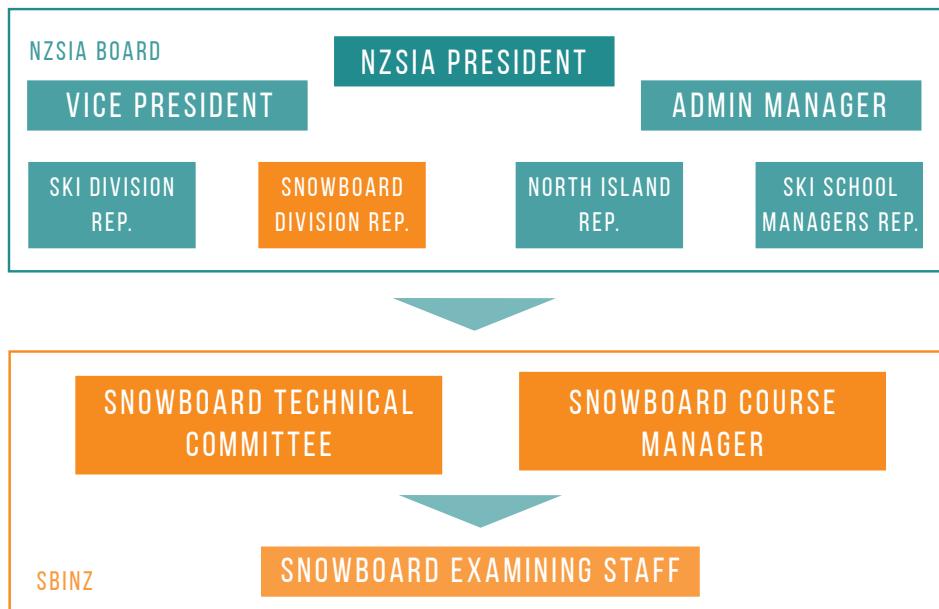
Snowboard Instruction New Zealand is responsible for the education and certification for snowboard instructing throughout New Zealand.

First established in 1992 under a different name, SBINZ quickly joined with the New Zealand Ski Instructors' Association to create the New Zealand Snowsports Instructors' Alliance (NZSIA). SBINZ is one of the four divisions within the NZSIA and has become an internationally-recognised educational body that is renowned for producing professional, knowledgeable instructors, with the capabilities to teach and ride at very high standards.

Driven by a Course Manager and a Technical Committee, the Snowboard Division is responsible for all snowboard course content and delivery, and the direction of snowboard teaching and coaching throughout New Zealand.

Through prominent international relationships, SBINZ has established a qualification framework that not only caters to our distinct New Zealand environment, but also prepares our instructors to teach in the many diverse cultures and conditions that we encounter around the world.

## ORGANISATION STRUCTURE



## SNOWBOARD CERTIFICATION PATHWAY

The snowboard instructing education pathway in New Zealand includes the following certifications:

- ▶ Level One Certification, which is designed to create a solid foundation of instructing, focused on teaching beginners.
- ▶ Level Two Certification, which is focused towards instructors working internationally, while teaching varying beginner and intermediate levels.
- ▶ Level Three Certification, which is renowned for its extremely high standards in both riding and teaching, and produces instructors that can perform in any condition, any time, at any level.
- ▶ Children's Teaching Certification, which is designed to build a much deeper understanding of kids-specific theories and teaching techniques.
- ▶ Freestyle Certification, qualifying instructors to teach in the park and pipe.
- ▶ Trainer's Certification, which is designed for those who wish to progress into training other instructors.



This manual is the guide for all of the above certifications.

Digital versions of this manual are available at:  
[www.nzsia.org/downloads](http://www.nzsia.org/downloads)

Further learning resources can be found at:  
[www.nzsia.org/snowboard](http://www.nzsia.org/snowboard)

The Snowboard E-Learning resource is available to members only at:  
[www.nzsia.org/members](http://www.nzsia.org/members)

All videos are hosted on [www.vimeo.com](http://www.vimeo.com)

**“DELIVERING WITH EXCELLENCE,  
INTERNATIONALLY RECOGNISED SNOWSPORTS  
QUALIFICATIONS AND PROFESSIONAL DEVELOPMENT.”**

# HOW TO USE THIS MANUAL

This manual is a guideline and reference book for the SBINZ certification system, and the teaching of snowboarding in general. It is by no means the only way to teach snowboarding and offers a select number of examples. The concepts and progressions within this manual are tried and tested, and have been developed over many years. They have been used by thousands of instructors both within New Zealand and around the world.

Indicators and icons are used throughout this manual to identify the type of content or the point at which a concept is first introduced.

## CERTIFICATION INDICATORS

LEVEL ONE CERTIFICATION CONTENT 

LEVEL TWO CERTIFICATION CONTENT 

LEVEL THREE CERTIFICATION CONTENT 

FREESTYLE CERTIFICATION CONTENT 

CHILDREN'S TEACHING CERT. CONTENT 

The indicators above show the first point within the education pathway that a particular concept is introduced. These concepts are then carried through to the following levels of certification and often explored in more detail.

The progression icons to the right can be used as a quick searching tool to get ideas or find specific content quickly.

Note that all content from Level One upwards is considered relevant for the Trainer's Certification. Further concepts that are not included within this manual are also explored at that stage of development.

## PROGRESSION ICONS

### WHAT, WHY, HOW?

An example verbal description for how to present a task.



### TECHNICAL DESCRIPTION

To create a more detailed understanding for instructors.



### TERRAIN & CLASS HANDLING

Methods and tips for managing your students.



### SELF REFLECTION

Questions to ask yourself as the instructor.



### DETECT & CORRECT

Common inefficiencies and some simple corrective steps.



### EXPERIENTIAL TEACHING

Adapting your lesson to the experiences of your students.



### ENVIRONMENTAL TEACHING

Adapting your lesson to the environment around you.



# CONTENTS

## SECTION A - TEACHING AND LEARNING

Chapter 1 - Getting Stoked on Snowboarding	Page A/01
Chapter 2 - How People Learn	Page A/09
Chapter 3 - Lesson Format	Page A/22
Chapter 4 - Effective Communication	Page A/32
Chapter 5 - Teaching Children	Page A/49

## SECTION B - A TECHNICAL UNDERSTANDING OF SNOWBOARDING

Chapter 6 - The Snowboard Turn	Page B/01
Chapter 7 - The Movements of Snowboarding	Page B/09
Chapter 8 - How the Snowboard Performs	Page B/31
Chapter 9 - Basic Biomechanics	Page B/39
Chapter 10 - Effective Rider Analysis	Page B/45

## SECTION C - PATHWAYS AND PROGRESSIONS

Chapter 11 - Using, Adapting & Creating Progressions	Page C/01
--	-----------

## SECTION D -TEACHING BEGINNER SNOWBOARDERS

Chapter 12 - First Time Snowboarders	Page D/01
Chapter 13 - Learn to Turn	Page D/21

## SECTION E - TEACHING INTERMEDIATE SNOWBOARDERS

Chapter 14 - Exploring the Turn	Page E/01
Chapter 15 - Exploring Freeriding	Page E/11
Chapter 16 - Exploring Carving	Page E/19
Chapter 17 - Exploring Freestyle	Page E/29

## SECTION F - TEACHING ADVANCED SNOWBOARDERS

Chapter 18 - Advanced Turn Types	Page F/01
Chapter 19 - Advanced Freeriding	Page F/11
Chapter 20 - Advanced Carving	Page F/31
Chapter 21 - Advanced Freestyle	Page F/43

## SECTION G - EQUIPMENT & GLOSSARY

Chapter 22 - Snowboard Equipment	Page G/01
Chapter 23 - Glossary & Appendix	Page G/10
Chapter 24 - Maori Translations	Page G/25

## SECTION A - TEACHING &amp; LEARNING

1

# Getting Stoked on Snowboarding

IN THIS CHAPTER WE  
WILL EXPLORE...

The underlying essence  
of why people snowboard  
and how to create stoke  
in your students whilst  
keeping them safe and  
maximising fun.

SAFETY



FUN



ACHIEVEMENT



STOKE



Snowboarding is addictive! If you're reading this, it's highly likely that you're aware of this already and know first-hand how addictive snowboarding can be. You may even be an addict yourself.

For many, the addiction to snowboarding begins the first time they slide down a snow-covered hill sideways, linking their first turns. This can occur within hours of picking up a snowboard, or it can take much longer.

There are a number of reasons why this addiction can be so powerful. The simple sensations of sliding on snow; the acceleration felt when gravity pulls you down a slope; the unusual movement patterns created by standing sideways on a board; these are all key triggers in helping the snowboard addiction to take hold.

As instructors, we are responsible for introducing hundreds of people to the addiction of snowboarding each year and we play an important role in developing and shaping the sport's future. The question we should be asking ourselves as instructors is:

*"How can we help to foster and grow this addiction in our students?"*

## SAFETY



"Safety first!" ... Or is it?

The fact that snowboarding can be dangerous is fuel in the fire for some people. Or it may be the barrier to fun for others. Adrenaline can play a large part in our addiction to snowboarding, which for some people means getting out of their comfort zone.

People perceive safety in different ways. Someone with lots of board sport experience will expect a few falls and will be happy to try anything. Those who do very little sport will probably be cautious when simply walking to the learners' area.

A ski resort can either look like a danger zone or a playground depending on whose eyes you're looking through. Your job as the instructor is to help everyone be a part of this awesome environment in a safe way.

To do this, you must first understand the dangers well enough so you can make your students aware of them at the appropriate time. This will comfort your students and even excite those who want to safely push their limits.

Aside from riding, just the environment itself can pose a threat. This can vary greatly from a cold, windy trail, 3000m above sea level, to a hot spring day walking up and down a learners' slope.

Special attention must be paid to...

### TEMPERATURE

Dressing appropriately to avoid hypothermia on cold days; look out for people shivering and going very quiet. Overheating on hot days; look out for people staggering and sitting down a lot.

### SUN

With increased UV rays at higher altitudes, even on cloudy days, it is important to wear goggles and sunscreen.

### HYDRATION

It's easy to forget on a cold day, or maybe students sweated a lot with all their gear on; but people need to drink enough water, not eat the snow!

Injuries can be caused from falling, crashing into objects/people, using lifts incorrectly or from other, less common hazards, such as falling rocks. Helmets are one form of protection that can reduce head injuries, padding and wrist guards are another, but the best form of protection is to minimise unwanted exposure to these risks.

Other snow users should also be considered a hazard. For your more cautious students, this should be one of the biggest concerns. As instructors, this is easily forgotten, as we typically have enough control over our abilities to share the slopes with others safely. Be aware of the general blind spots for snowboarders (particularly on the heelside) and ensure you pass this knowledge on to your students.

Note that each country has its own set of resort rules, usually known as the Snow Responsibility Code. All instructors must know and adhere to the rules within that country and, more importantly, be positive role models for other slope users to follow. In addition, each individual ski school typically have their own safety policies, covering topics such as lift loading and lost children. As a working instructor, these policies are imperative to learn thoroughly and adhere to.

Good class handling, terrain selection and use of appropriate tasks are the main ways in which you can set students up for success, minimise the chance of injury and help to retain your students as future guests. These factors will be covered in more detail throughout the manual.

**IF YOUR STUDENTS STAY SAFE, THEY CAN SNOWBOARD AGAIN THE NEXT DAY!**

# FUN



"How was your lesson? Did you have fun?"

This is the most common question instructors hear when returning students to families, partners etc. Fun can be hard to define specifically and is unique to each individual. In the same way a meal can be delicious to one person and too rich or bland for another, a specific type of fun could be exhilarating to one student, yet mundane to others. A good snowboard instructor is aware of the factors that let people have their own type of fun.

## EASY FUN

Just by snowboarding, being active and trying something new, people can have fun. Motivating students to try something new, takes their mind away from other worries in their life, and can create easy, simple fun.

## HARD FUN

Here, the act of snowboarding alone isn't enough and people feel the need to be challenged. They want to progress, push themselves or achieve something new. Avoiding placing restrictions on your students will help to create this.

## SERIOUS FUN

Snowboard trips can take a lot of planning. When everything goes smoothly and expectations are met, people relax and feel a sense of relief, which may only happen on reflection at the end of a lesson. Discovering motivations and goals will help you ensure that your students get what they hoped for.

## SOCIAL FUN

Humans are social by nature and get positive feelings through interactions with each other and being friendly. This is something that happens automatically for some, whereas others may need the instructor to facilitate this. Being talkative and encouraging interactions will foster this type of fun.

Identifying when your students are enjoying themselves is important in understanding the different types of fun above. Smiles and laughter are the most obvious indicators, but be aware that some people may prefer to hide their emotions, so check in with people rather than trying to force them to have fun. Most of the time, when YOU are having lots of fun, this rubs off on your students. So make sure you enjoy the learning process with them too.

**IF YOUR STUDENTS HAVE FUN DURING THE LESSON,  
THEY WILL PROBABLY TAKE ANOTHER ONE!**

## ACHIEVEMENT



*"I tried it!"  
"I did it!"  
"I landed it!"*

*"It makes sense now!"  
"I know what I'm doing!"  
"I felt it that time!"*

These are all common phrases that you will hear from adults and/or children who really feel like they have achieved something in your lesson.

*"We worked on turning!"  
"We worked on carving stuff!"  
"I just followed him!"*

*"I can get up on my own!"  
"We went on the chairlift!"  
"I did a whole run without falling!"  
"We did a black run!"  
"I tried a rail!"*

Here are some common phrases that you will hear when students DO NOT feel like they have achieved something in your lesson.

*"The instructor tried to get me on my toeside edge."  
"The group was pretty slow so I just went along with it."  
"We went really slowly down a hard run."*

The difference between these example comments or phrases usually comes down to personal goals. A good instructor will take the time to establish these goals and make an effort to give individual attention to each person.

It's important that students feel like their instructor is helping them to achieve their goals and not just giving a stock standard lesson that isn't personal to the student.

As much as possible, make your students aware that everything you do in the lesson is going to benefit them individually, within their own snowboard progression. This will help to retain them as a snowboarder within a wider industry, not just as your one-time student.

Achievement without recognition can be very limiting in its effectiveness. This recognition can take multiple forms:

- ▶ High-fives, handshakes, woop woops, arms in the air; these are all ways of you letting a student know when they achieved something.
- ▶ Making your students aware of a feeling they get when they do it well, is a way of recognising their own, internal achievement.
- ▶ Some people like to compare themselves with others to track their own progress and aim to be the best in their group.
- ▶ Photos and videos are an extremely effective way of recognising achievement and your students seeing their own goals being met.
- ▶ Simply being less tired at the end of a run can be a big achievement for some people.
- ▶ Making time for your students to take pictures of themselves, and each other, will allow for this.
- ▶ Letting their friend, partner or parents watch them do their last run well is another great form of external recognition for your students.
- ▶ Achieving the next level of group lesson is a way for students to recognise their progress.
- ▶ Certificates and report cards is a way of reminding kids about the specific skills they've achieved.
- ▶ Having children tell their parents about the most fun parts of the lesson gives you the opportunity to discuss their achievements.
- ▶ Social media is a powerful way of earning recognition for achievements.

IF YOUR STUDENT ACHIEVES THEIR GOAL DURING THEIR LESSON WITH YOU,  
THEY WILL BE MORE MOTIVATED TO TAKE ANOTHER LESSON... WITH YOU!

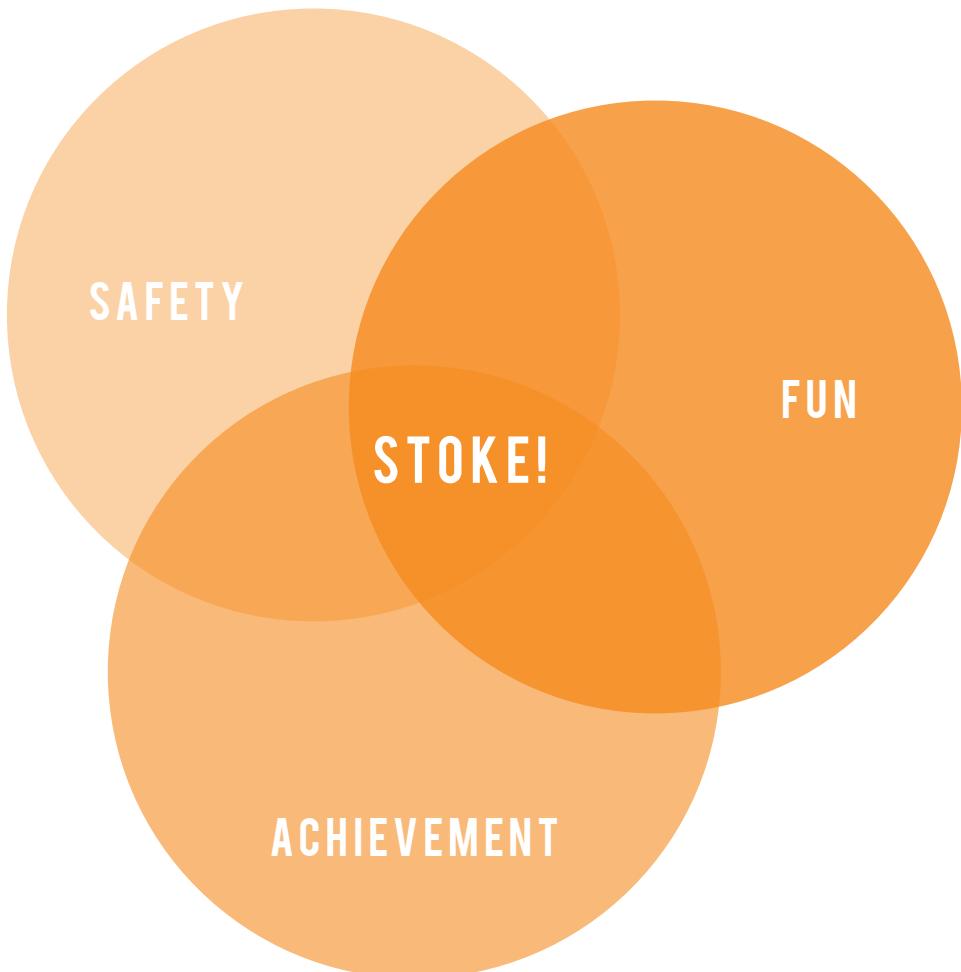
## STOKE!



*"Ahh, that was amazing. I'm soooooo stoked!"*

This is where the magic happens and the addiction takes hold!

Striking the most suitable balance between the Safety, Fun and Achievement elements - that is specific to your individual students - is your goal here. The outcome of this is STOKE.



STOKE is a tricky word to explain in its entirety. Being excited, pumped, exhilarated, thrilled or amped, are all states of happiness that describe similar feelings.

Yet the word STOKE sums it all up. It is the essence of that addiction that people feel towards snowboarding.

Your students may have felt this in other situations or sports, and desire the same feeling from snowboarding.

It may even be their first time experiencing the feeling of stoke. In which case, they will have one of the best days of their life with you.

Keep in mind that catering to one individual is simple, but making sure that every student in a larger group feels that same level of stoke by the end of your lesson can often be challenging. This gets easier with experience and is what makes a truly great instructor.

THE MORE STOKED PEOPLE GET DURING THE LESSON, THE MORE LIKELY THEY ARE TO GET HOOKED ON THIS AMAZING SPORT; AND THAT IS THE JOB OF A SNOWBOARD INSTRUCTOR!

#### EXAMPLE

Your student is a confident skateboarder and surfer. He/she is used to taking falls and understands the basics of snowboarding. Being overly cautious with this student could make them feel like they are being held back and may result in wishing they had just tried it on their own. Letting them get on with it after enough instruction and be more independent, whilst keeping them challenged with options and giving them a high-five for doing their first trick will get them stoked.

#### EXAMPLE

Your student is the mother of the family, on the mountain because her kids are too. She is nervous but wants to try it anyway. Safety is a bigger concern for her, so using more hands-on assistance and staying close will help her feel secure enough to avoid panicking. Watching her kids and chatting to others in the group could be her main motivation, but if she can get up on her own or ride a small slope without falling... that will be an achievement she can tell her family and get stoked about.

## SECTION A - TEACHING &amp; LEARNING

## 2

# How People Learn

MASLOW'S HIERARCHY OF NEEDS



UNDERSTANDING FEAR & USING THE 3C'S



VISUAL-AUDIO-KINESTHETIC



LEARNING THROUGH EXPERIENCE



LEARNING THROUGH ENVIRONMENT



MULTIPLE INTELLIGENCES



## IN THIS CHAPTER WE WILL EXPLORE...

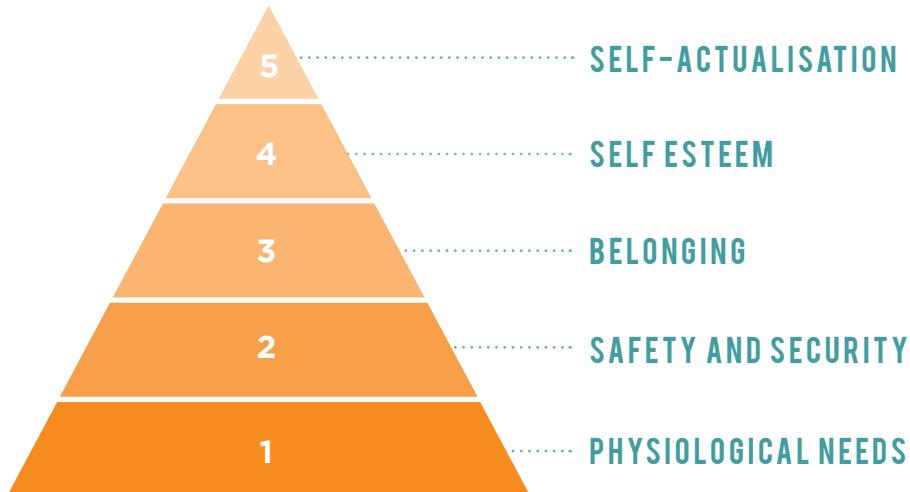
How people learn and some of the things that may inhibit the ability to acquire new skills and absorb information. There is endless literature out there on learning. The following will help to provide insight into several areas of learning that we need to be aware of and utilise when teaching snowboarding.

Becoming a skilled teacher takes time, experience and practice. Reflecting on your lessons should be done on a regular basis to help you understand and learn how to improve and evolve as a teacher.

## MASLOW'S HIERARCHY OF NEEDS



Abraham Maslow created a hierarchy of needs during the middle of last century. His theory helps us to make sense of a child or adult's emotional needs and motivations. It is still commonly used in education and a variety of industries to help understand what may be inhibiting learning or performance. These needs can result as motivations that affect our ability to concentrate and focus on anything else except the immediate need we are dealing with. We can use this theory to help guide our understanding of why our students may be struggling with a particular task.



### PHYSIOLOGICAL (OR BASIC) NEEDS

- 1 This is the need for food, water and shelter, or the need to survive physically. If we are hungry, cold, fatigued, or just uncomfortable, we will find it increasingly hard to concentrate on the task at hand. Our motivation will shift to trying to address this need.

If we are hungry, we need to eat. If we are cold, we move to get the blood flowing or head inside to keep warm. A student may not tell you that they are hungry, thirsty or cold.

## SAFETY AND SECURITY

**2** If we feel we are in danger or threatened we may not want to carry on with what we are doing. When this need is not met we may find ourselves wanting to get away from what is endangering us. If it is not possible to change what we are doing or where we are, we will tend to become tense and lack the ability to focus. In extreme cases we may totally freeze up. Our motivation to stay safe in these situations can become the priority.

When we're scared, we try to change what we are doing or the environment we are doing it in. A student is trusting us to make these decisions for them.

## BELONGING

**3** We all want to feel that we belong and are accepted. It is a fundamental emotional need to be liked or loved, which is especially strong in childhood. When we do not feel that we belong, many and varied responses may occur. These responses are usually there to help us to feel accepted or protect ourselves emotionally.

When we feel that we are not liked or accepted our motivation can change to focus on this instead of the task at hand. Often students have never met each other, it can be up to us to help create a sense of belonging. With young children, it is especially important to build trust and a strong group rapport to feed a sense of belonging.

## SELF ESTEEM

**4** Everyone wants to feel good about themselves and respected. When we feel good about ourselves and respected we will be more confident and ready to attempt new and challenging tasks. If we feel the opposite, our desire to gain respect and self esteem can affect our performance.

Giving positive feedback to our students is especially important in helping them to feel good about what they are doing and build their self esteem.

## SELF-ACTUALISATION

**5** This is the need or desire to be the best you can be at something. It is commonly thought that self-actualisation can only be achieved when you have successfully fulfilled all the other needs. Some people will never reach this stage. Those who do, have an in-depth understanding of what they need in order to perform any task to the best of their ability.

Creating this for your students can be extremely challenging. Consider this to be the absolute pinnacle of performance and achievement.

**EXAMPLE**

An instructor makes the decision to take a five-year-old student to the top of the mountain. The child was making nice turns on the lower mountain and the terrain is no steeper at the top. So up they go. The child is feeling very good about themselves going on an adventure so high up the mountain. They get started on the run and the child makes half a dozen turns, stops, sits down and starts crying. The instructor stops and asks:

"What is the matter? Did you hurt yourself?" The child says, "No, I'm scared I'm going to fall off that cliff over there."

The child has gone from feeling good to not wanting to move because they are not feeling safe. They do not have the ability to deal with their need to feel safe. Their motivation has lowered from Self Esteem to the need for Safety and Security. It is up to the instructor to find a solution. The instructor says:

"Shall we take our boards off and see what is over the edge of the cliff?" The child agrees to have a look. As they look over the edge the child discovers that it is not a cliff, just a steeper off-trail run. She looks at the instructor and says, "Can we go down there?"

If we know which of Maslow's Hierarchy of Needs is affecting our student's performance, we may then have the ability to change or adapt what we are doing to help cater to that need. We should try and be attentive to a student's energy levels and body language as a basic indicator. If a student is struggling or looking uncomfortable, ask yourself, why is this? Is there anything I could change, say or do to help?

## UNDERSTANDING FEAR AND USING THE THREE C'S



Fear is a very powerful emotion and works as a mechanism to keep us safe and avoid harm. All people are susceptible to being afraid and we all have different things that may scare us. It is often the things that we have learnt to be afraid of, yet not necessarily experienced for ourselves, that have the potential to create the greatest fear response. The reaction to fear is different in each individual and situation.

You may have heard of the flight or fight response. Do you get away from the danger or do you have the courage to overcome the fear and confront it?

It is important to understand and address fears before attempting new tasks. Fear will often stop you from listening to what you are being told. Using courage to overcome fear is a very powerful tool. This is where the instructor has a very key role to play in encouraging the student.

Fear can be broken into two basic types: rational and irrational.

**Rational fear** is being afraid of something that is truly dangerous.

**Irrational fear** is being afraid of something that may or may not exist. This fear is common in most people, though it is usually minor.

Snowboard instructors tend to deal more with their students' rational fears, such as fear of the unknown, fear of pain or injury, and the fear of failure. It is easy for instructors to forget what it was like to attempt something on a snowboard for the first time. Being empathetic and patient towards students will let them know that you are aware of how they may be feeling and that you are there to help.

Now we need to understand how we can manage fear. Feeling nervous should be viewed as a positive emotion, it is just our body preparing us for something we are about to experience. The following introduces a simple tactic that we can use to help manage fear for ourselves and our students...

## THE THREE C'S - COMFORT, CONFIDENCE AND COMMITMENT

**Comfort** or feeling comfortable relates to a sense of physical and mental ease. If we are feeling uncomfortable, there is obviously something causing it. If we are able to identify it then we may be in a position to change something to feel more comfortable. Being too comfortable also has its problems as we may not want to leave our comfort zone. When this occurs, we tend to limit our ability to progress. It is a balancing act. The trick is to know how far out of your or your student's comfort zone to go.

**Confidence** is generally described as a state of being certain. If we are certain of an outcome then we are more likely to succeed at the task being attempted. When we are lacking in confidence, there is a degree of uncertainty which can lead to a lack of focus on what we are doing. Again, we need to try and find out why our student is not feeling confident. Overconfidence can result in poor decision making and taking uncalculated risks. In snowboarding this will often result in safety issues.

### EXAMPLE

#### RATIONAL FEAR:

If I slip off this track, I will fall 50 metres over that cliff and possibly die.

### EXAMPLE

#### IRRATIONAL FEAR:

The chairlift has stopped. What if it's broken down? Will it fall off the cable?

**Commitment** obligates you to do something. We should consider a few things before we commit to a task. Do we have the skills required? Are we aware of the situation? What has influenced us to commit? If our student shows a fear of commitment to a task there will often be a lack of confidence or comfort as the cause. If we commit to the task anyway, we will tend to be more vulnerable to failure or injury.

## VISUAL-AUDIO-KINESTHETIC (V.A.K)



Every individual learns differently and there are many in-depth theories around learning styles. V.A.K is a simple theory based on sensory input. It can help us to order and present information in three different ways, so we cover the general styles of learning.

### VISUAL

These students learn through watching and observing. They will pay particular attention to body language, demonstrations and diagrams drawn in the snow. Accurate demonstrations showing the task from different angles or perspectives are of particular importance to the visual learner. Highlighting the part of the body they should be watching will help them to focus on the right thing. Watching other riders and giving visual reference points in terrain can also help this type of learner.

### AUDIO

These students learn through listening and hearing. A clear and concise verbal explanation is important for them. The information should also be presented in a way that is easy to understand and appropriate to their age. This type of learner might ask a lot of questions. They are often the last ones to practise something, as they will be processing the information in their heads.

### KINESTHETIC

This type of learner is generally more aware of the mechanics of the body and tends to learn through experimentation. They are aware of pressure points in their boots, extended muscles etc. Analogies to similar movement patterns from other sports and day-to-day skills will help these learners. Manipulating body parts into the desired position while stationary will also be helpful. Students will sometimes be standing still, practising the movement and registering the feeling or sensation they get. They are generally the first ones in the group to practise the exercise.

Some people may have one dominant learning style, while others may respond to two or even all three styles. As you present information try to include some of each to cater to all three learning styles. You will naturally include auditory input unless you choose to say nothing, which can make it challenging to teach. You typically provide a visual demonstration, unless you choose to present the task with an alternative method. Kinesthetic is often the learning style that gets left out. Here is a simple recipe to help you cover all three...

**EXAMPLE****TALK-SHOW-FEEL:**

In a stationary position, talk about the task that you are going to try. Show them how they should move. Get the student to make the movement and explain what they may feel, or better still, ask them what they do feel. Then show them the full task using a moving demonstration (but remember to stop talking during the demonstration).

**LEARNING THROUGH EXPERIENCE**

As humans beings, we have hundreds of different experiences throughout our life, many of which help to mould who we are as a person. The more we experience something, the more familiar it becomes. Our initial encounters with a new subject help to formulate ideas about the experience and usually attach emotions to it. These emotions will be either positive or negative depending on the outcome of the experience.

Learning through experience is focused around doing and reflecting on what you have done. If you use this as a concept when teaching, your students will gain a deeper understanding of what they have achieved and how they achieved it.

Firstly, you need to setup the desired experience or task and have your student try it. You need to follow this with questions to help guide their understanding of what they just did. It's crucial to match up an appropriate task or experience to the level and ability of the student. Consideration should also be given to the emotional attachment that the student may gain from the experience. If there is the potential for a negative emotion, then careful management or adjustment of the experience will be required.

Put simply, learning to snowboard is just a series of experiences. The more reflective experiences your students undergo, the further they will progress. Utilising experiences that your students have already gained in snowboarding, then adding something new to the experience and reflecting on it, is a basic way to structure experiential learning.

A more advanced form of experiential learning is to relate the task to something the student experiences in their day-to-day life, outside of snowboarding. As the instructor, your job is to take these experiences/skills and transfer or relate them to the snowboarding or, more specifically, the task being performed at the time, through the use of analogies. For example, most children would have experienced squashing something under their feet and most adults would have experienced driving a car. Remember to check that they have experienced what you are talking about however.

An effective variation of this is to find out something that your student loves to do. As humans, we typically do things that we love fairly regularly, so we tend to have a good understanding of how we do these things. Positive emotions are usually attached to these experiences. Relating these positive experiences from other aspects of your students' lives to the task being attempted within snowboarding will speed up the learning process for your students.

It is important to reflect with your students on the experiences you are exposing them to. This is the key to learning from it and will help you to set up effective and purposeful questioning (refer to Chapter 4 on Question-based Learning).

**EXAMPLE****PROGRESSING YOUR STUDENT FROM SIDE SLIPPING TO FLOATING LEAF:**

"You know that by lowering your board toward the snow it begins to slide down the hill. Let's see if we can move left by lowering just the left side of the board, then right by lowering the right side of the board. Then we slow down by lifting both feet like when we did the sideslip."

**EXAMPLE****TEACHING FLOATING LEAF TO CHILDREN:**

"Imagine you are gently squishing a bug to trap it under the right foot and the board will start to move that way. Then try and stop by lifting your feet slowly to let the bug go. What's happening to the snowboard when you do this?"

**EXAMPLE****TEACHING OLLIES TO A SKATEBOARDER:**

"You know how to ollie a skateboard, just go for it here and we'll talk through how to make it better after you've tried it."

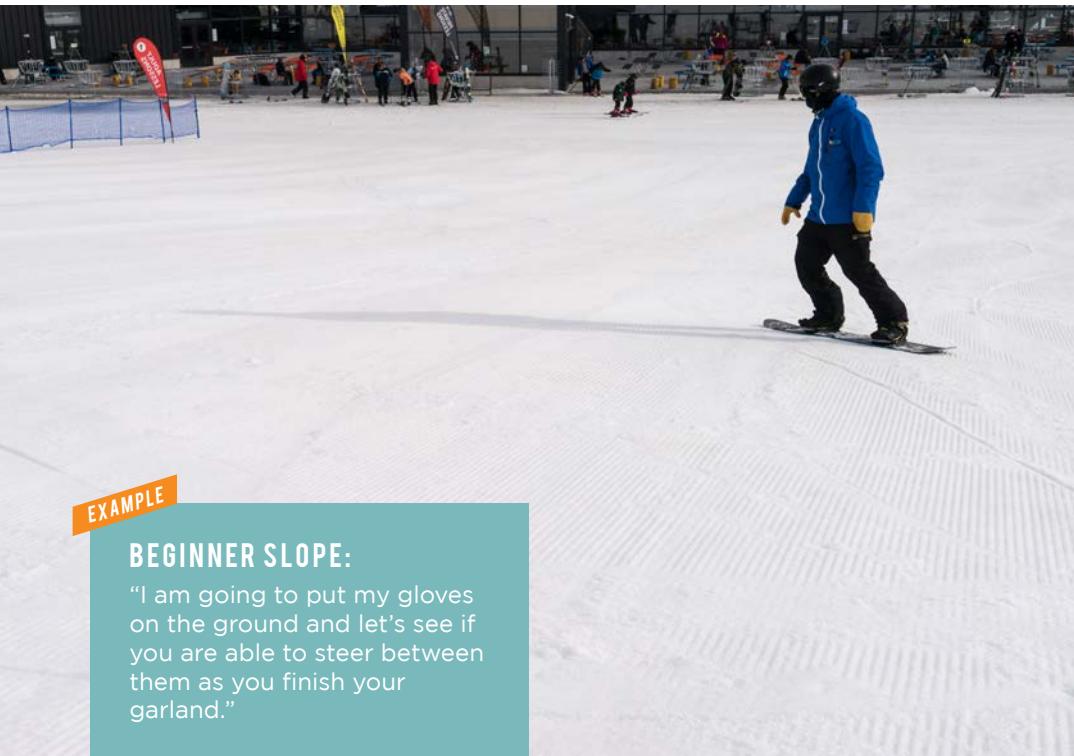
## LEARNING THROUGH ENVIRONMENT



Snowboarding is done in a very diverse environment that is constantly changing through snow accumulation, wind loading, temperature and the influence of people. Because we work and ride in this constantly changing environment we need to be adapting and changing what we do to move efficiently and safely around the mountain. There are also aspects of our environment that do not change, like buildings, lifts, cliffs, trees and the pitch of the slope.

Because of this diverse environment, we are presented with substantial and wide-ranging opportunities when teaching snowboarding. The first step in utilising these opportunities is to increase your awareness of your surrounding environment. If all you see is a snow-covered slope, you will need to look closer.

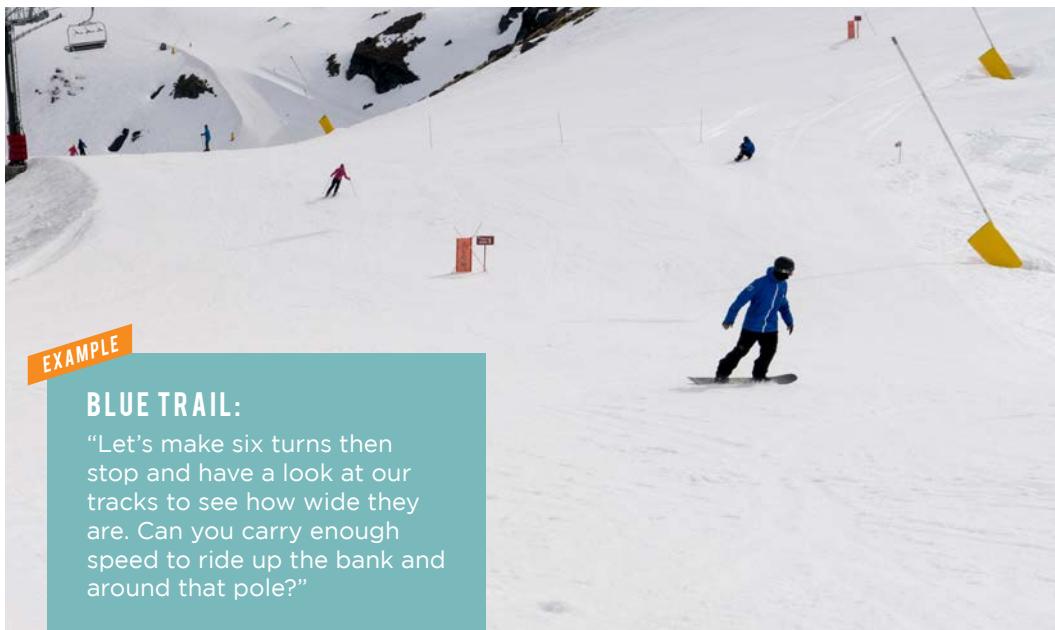
You can practise this by trying to identify at least five different characteristics in your immediate environment. What you are able to see in the pictures below and on the opposite page?



EXAMPLE

### BEGINNER SLOPE:

"I am going to put my gloves on the ground and let's see if you are able to steer between them as you finish your garland."



### BLUE TRAIL:

"Let's make six turns then stop and have a look at our tracks to see how wide they are. Can you carry enough speed to ride up the bank and around that pole?"

A potential hazard in our environment can also present an opportunity to learn. When using this, we must assess what we are trying to learn and make sure that it will not pose a risk to our students or ourselves. The following is a list of commonly found things in our environment that we could use to aid learning through the environment.

#### TERRAIN

Pitch of the slope, rollers, banks, berms, cat tracks, rocks, tussock, trees, bumps, drops, terrain parks.

#### SNOW

Powder, wind loaded snow, ice, crud, slush, fresh groomed, tracked out snow, man-made snow etc.

#### EQUIPMENT

Lifts, buildings, signs, poles and ropes, snowmaking guns, grooming machines and skidoos, boxes and rails, even your own gear. Essentially anything man-made.

#### WEATHER

Sun (shadows) cloud, fog or mist, wind, snow and rain.

More examples of how we can teach or learn through the environment will be presented throughout the manual.

## THE EIGHT MULTIPLE INTELLIGENCES



In 1983 Howard Gardner, a Harvard education professor, published his groundbreaking book, *Frames of Mind: The theory of Multiple Intelligence*. This theory is a positive and inclusive model of intelligence that recognises all of our abilities to learn, understand and create. Not just the academic ones!

By about the age of six, children begin to favour certain intelligences. They use these intelligences to help solve problems and learn new things. This continues throughout our lives to adulthood; however, we typically become much more balanced with our intelligences as we get older.

It is important to understand how to identify and then facilitate learning through these multiple intelligences. While getting to know your group, try to identify one of the preferred intelligences for each student. The following multiple intelligence characteristics can be witnessed...

### LINGUISTIC (WORD-SMART)

These people like to hear stories and enjoy reading/writing. They will usually have a well developed vocabulary. With these students, try to be creative in the way you present information, they will often respond well to analogies.

### LOGICAL-MATHEMATICAL (NUMBER OR LOGIC-SMART)

These people have the ability to reason and like things to have a logical pattern. They may also be into counting things such as the number of runs or chairlifts. When teaching these students you could try using counting exercises or a scale system for explaining things.

### Spatial (PICTURE-SMART)

These people tend to like pictures and images to help process information and will usually like some form of visual art. For these students, try using drawings in the snow, and look at tracks or the spray of snow from the board. An accurate demonstration is important for these people. They usually respond well to seeing video of themselves.

### BODILY-KINESTHETIC (BODY OR SPORT-SMART)

These people have great body awareness. They can feel things in their body to grasp a better understanding. Encourage these students to explore different feelings and sensations of a movement whilst stationary. Finding similarities in movement from one sport to another will be useful.

### MUSICAL (MUSIC-SMART)

These people are tuned into different sounds and understand rhythm. They will usually have an interest in music and possibly play an instrument. With these students you could try humming different tunes to different size turns.

### NATURALISTIC (NATURE-SMART)

These people love to be outdoors, have a real interest in the environment and notice detail or subtle changes within it. They use this awareness to help make decisions. They often have a good understanding for how different animals move. For this student, you could try relating a movement in snowboarding to how an animal moves.

### INTERPERSONAL (PEOPLE-SMART)

These people like to seek the support and ideas of others. They enjoy working through problems with others in the group, will often ask questions and actively contribute answers. For these students, setting up a reciprocal learning environment will enhance their learning. Group activities where everyone is involved will also work well.

### INTRAPERSONAL (SELF-SMART)

These people like to work through things in their own heads and come to their own conclusions. For these students, allow time for them to develop understanding. Try using plenty of individual task practice time to give them the chance to develop their understanding.

All people will have several intelligences that help to process information. We also have intelligences that are not as developed as others. Your students may not respond or learn through these particularly well. The intelligences being used by each individual may vary from task to task.

Have you ever had an experience of trying to teach someone and they just couldn't get it? There is a high chance that you were utilising intelligences that were weaker within that student and that they could not process the new information efficiently. It can be likened to speaking a different language. They simply do not understand what you are talking about.

#### EXAMPLE

### IDENTIFYING AND USING THE MULTIPLE INTELLIGENCES:

Your student had a lesson the previous day and did not really understand what the instructor was trying to get her to do to stop her from falling over at the start of her toe turn. This was because the previous instructor presented accurate but complex explanations, being particularly strong in the logical-mathematical intelligence himself. The new instructor asks her what she does for a living. She tells him she is a musician and plays the clarinet in an orchestra. He adjusts his presentation to suit the student and says:

"Making a turn is like playing a piece of music and all that is happening is you have played a note that is off key. We just need to find the right note (or movement) and when to use it, so that the music (or turn) flows."

When we communicate and, more importantly, teach people, we tend to utilise intelligences that are our own strengths. If you find that a student is not responding well, invest time into finding out some of the intelligences they utilise most. Asking questions like “What is your favourite subject at school?”, “What do you do for a living?”, “What do you like to do in your spare time?”, will provide answers to help to guide your understanding of their intelligences. The table below will also help in understanding the different intelligences.

INTELLIGENCE	LIKES TO...	IS GOOD AT...	LEARNS BEST BY...
VISUAL-SPATIAL	Draw, build, design, create, daydream, watch movies (etc).	Visual arts, puzzles, map, imagining and sensing changes.	Reading, working with images, drawing, visualising.
LOGICAL-MATHEMATICAL	Do experiments, use numbers, ask questions, explore patterns.	Maths, science, reasoning, logic and problem solving.	Working with numbers/patterns, classifying, categorising.
BODILY-KINESTHETIC	Move around, touch and talk, use body language.	Physical activities, sports, hands-on projects.	Using body sensations, creative drama, dance.
MUSICAL-RHYTHMIC	Sing, hum, tap, listen to music, play an instrument.	Picking up sounds, keeping time, remembering melodies, noticing pitches.	Rhythm, melody, songs, dance, background music, sound patterns.
LINGUISTIC	Talk, read, write, tell stories.	Written and oral communication.	Reading, writing, speaking, listening, memorising names and places.
NATURALISTIC	Spend time outside, learn about the environment and other species, do outdoor sports.	Sensing patterns in nature, observing and remembering changes in environment.	Interacting with surroundings, utilising sensory skills.
INTERPERSONAL	Have lots of friends, join groups, talk to people.	Understanding people, leading others, communicating, manipulating, organising.	Sharing, comparing, relating, cooperating, interviewing.
INTRAPERSONAL	Work alone, pursue own interests, reflect on feelings.	Understanding self, focusing on feelings, following intuition.	Working alone and intuitively, individualised projects.

## SECTION A - TEACHING &amp; LEARNING

3

# Lesson Format

PLAY



DRILL



ADVENTURE



SUMMARY



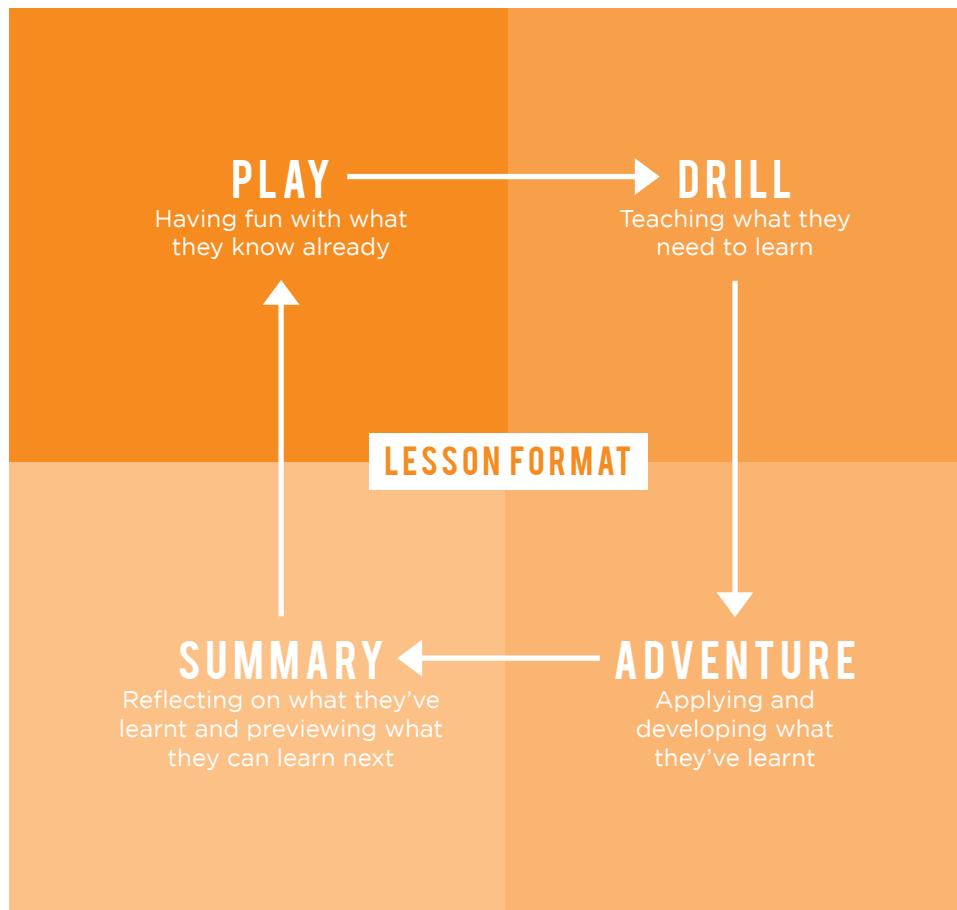
## IN THIS CHAPTER WE WILL EXPLORE...

*How to construct your lessons, put together tasks to build new skills, structure your presentation and delivery of information, check for understanding and provide initial feedback, explore the mountain and continue to develop skills, and, finally, summarise the lesson at the end.*



Structuring your lesson is one of the first things you need to learn as an instructor. Every single lesson that you teach will differ, depending on variables such as the snow and weather conditions, size of group, the level and the goals of the students, how busy the trails and lifts are; the list goes on.

Every lesson should follow the same simple format...



## PLAY



In many respects, we can view our lessons in the same way that we view a story. Every good story has a beginning that sets the tone for the story, a middle that takes the reader on a journey, and an end that wraps it all up.

When teaching snowboarding, the beginning of our lessons provides opportunity to get to know your students, assess their goals and motivations, provide a little background on yourself, build rapport and begin to develop some team spirit; all done whilst slowly assessing their physical abilities, on or off their snowboard.

### INTRODUCTION

All lessons will begin with some form of verbal introduction. This should include names, backgrounds, favourite sports or hobbies, other pastimes or jobs, snowboard experience (if they have any) and reasons why they're taking a lesson.

A positive first impression here is vital. As the instructor, you should make the effort to maintain a professional appearance, show your face, smile and make eye contact where appropriate. A genuine smile helps to put people at ease and lets them know that you are willing to help. An open posture, with hands away from the mouth, arms and legs uncrossed, leaning slightly forward, will portray an image of approachability and openness.

Good eye contact shows that you are interested in your students; however, it is natural to look away from others' eyes from time to time; this helps the person feel comfortable. Note that there are cultural differences about eye contact, awareness of which will help avoid misunderstandings. Goggles, face masks and hair over the face are often a major barrier to open communication.

Using your students' names frequently during this process will help you remember them and will provide a feeling of inclusion. Asking your students questions about their lives will not only give you some useful background detail, but will help them to feel at ease with you as the instructor.

Ensure that you steer the conversation towards snowboarding at a suitable moment. Ask questions that help you understand the stage they are at with snowboarding. Questions such as: "What trails have you been riding?"; "Are you making s-shaped turns on both your heel and your toe-edge?"; and "Have you had a lesson before?" will help you to build a reasonable picture of their riding abilities. This may lead to students revealing their goals for the lesson; however, you should revisit these goals throughout play stage, as you discover their actual abilities.

## WARMING UP AND ANALYSING ABILITIES

The next step depends completely on the ability of your students. You should have a realistic idea of this already, through the previous questioning process.

For first-time snowboarders, a physical warm-up of some sort, off the board, is typically the next step. Simple games can be enough to get the blood moving or a few basic stretches/mobilising of the joints. Be sure to keep any stretches simple and easy to achieve; however, allow your students time to do their own stretches if they so choose. Also, be aware that your students may already be quite warm, especially if it's hotter weather and they have just made the long walk from rentals or the car park in unfamiliar boots, carrying their gear.

While your students are moving around, take note of their strength, coordination and balance, as this will help you to gauge the speed at which you are likely to progress.

For those students that have snowboarded before, it's more beneficial to go and have fun with some riding that they are capable of already. If set up well, this allows time to warm-up the body and provides you, as the instructor, opportunity to assess their snowboarding abilities. When doing this, ensure that you use terrain your students are VERY familiar with. Stick to things they know already, even if it's just a floating leaf, and provide a few small reminders as you go.

If your students are linking turns comfortably already, ensure that you give them time to find their rhythm in the terrain they are comfortable with. This is your opportunity to visually analyse their riding abilities and consider any major inefficiencies they may have (more on Rider Analysis in Chapter 10).

## DETERMINING MOTIVATIONS AND ESTABLISHING GOALS

Understanding the reasons why your students chose to take a lesson is key. Every person in your lesson will have a slightly different motivation and, as a result, the goals that we establish with them may differ too.

At varying points throughout the play stage, we can begin to delve into our students' motivations. Exactly when this happens depends on the situation, ability levels and number of people in the lesson.

For first-time snowboarders, asking a simple question whilst learning everyone's names such as: "What made you want to try snowboarding?", may suffice.

Answers such as: "My wife is crazy about snowboarding", "My Dad wants me to do it", or "I'm going on a holiday to Japan next year and want to keep up with my friends", all help you to build an understanding of why they are in your lesson.

Once we have established our students' most simple motivations, we can combine this with our analysis of their riding/physical abilities to set realistic, achievable and measurable goals. We can set goals that are common to the group as well as the individual. This depends on the similarity of the group's technical ability and the length of time you have with them.

It is often difficult to balance the student's goals with the instructor's goals, e.g. a student who wants to jump (their goal), but cannot turn yet (our goal). The student's goal is not yet realistic, but it is our job to keep them inspired and interested while making small steps toward their goal.

A seemingly unachievable goal can be broken down into a series of smaller achievable goals and adapted to the lesson. For example, your student would like to learn how to turn, but first they must learn to be comfortable with one-footed mobility, stopping on both edges, and moving across the hill, before the overall goal can realistically be achieved.



## ASSESSING TERRAIN AND PLANNING THE LESSON

The play stage offers an ideal opportunity for you as the instructor to consider what new skills you're going to teach and the terrain you would like to utilise when doing so.

Combining your understanding of the student's goals and motivations, with your knowledge of the terrain available, will help you to formulate a plan for the lesson.

We may have one student or six, but we must cater to all. Try to construct a plan that progresses in linear steps initially, but has a degree of flexibility. Keep it simple and pace it according to the group's needs, rather than your own. Be flexible enough to change your plan depending on the individual needs of the group.

If you set strict timelines for your students, you could very well set them up for disappointment if they are not achieved. Discuss what is achievable within the lesson, rather than when they will achieve it.

Terrain choice is extremely important during any lesson. The incorrect choice can easily deter your students from learning, limit their confidence through an increase in fear, or it may simply be unsuitable for what you are trying to teach them. It is essential that you use appropriate terrain, which best suits the level of your students and the exercise you are teaching.

Terrain considerations include:

- ▶ How busy it is.
- ▶ Pitch and width of slope.
- ▶ Snow conditions.
- ▶ Obstacles such as lift towers, snow cannons or natural hazards like tussock and rock.

This stage of your lesson should come to an end when your students are warmed up, relaxed with you as the instructor and other members of the group, and you have a plan for where to go next. Before beginning the drill stage of the lesson, consider where your students are at within the Maslow's Hierarchy of Needs theory (Chapter 2).

### EXAMPLE

#### A LEARN-TO-TURN STUDENT:

Your student is an accountant from Sydney who has snowboarded once before and is confident on her heel edge. You warm up with some heelside floating leaf in the beginner area and encourage her to move up and down a bit to relax and soften the legs. She looks confident with this and you establish her goal is to link turns and do a long green run. Where do you go from here? Which tasks do you do next and on what terrain?

## DRILL



This is the stage of the lesson where you introduce new skills and movements to your students. Consider this to be the foundation for the next adventure they are about to have with snowboarding. You need to establish strong and stable foundations from which to build, but you don't want to spend the whole lesson creating them.

### STATIONARY-SIMPLE-COMPLEX

You already know their ability levels, motivations and goals, and should have an approximate plan for what you're going to teach. All you need is a formula for how to structure the teaching of these new skills. The most simple formula to use is...

#### STATIONARY

**1** Introduce the new movement without forward momentum. This can be done with the board off completely, and/or with one or two feet strapped in. Make sure you choose flat terrain with minimal traffic.

#### SIMPLE

**2** Now try doing that same movement in a very simple task or two, whilst moving slowly with two feet strapped in. Be sure to choose a low traffic zone and keep the speed down so your students have time to think about their movements.

#### COMPLEX

**3** Now it's time to coordinate the new movement within a turn or the full task you're teaching them. Focus on the timing of when your student adds the new movement as this is the key when implementing it during turns.

#### EXAMPLE

#### TEACHING FLOATING LEAF:

Your students can sideslip on both their heel and toe edge. You reintroduce torsional twist to them, showing how flattening the edge angle at one end of the board will help it to drift into the fall line. You have them try this movement on flat terrain with two feet strapped in (stationary).

You take your students back into a sideslip and very gently play with the twist of the board, steering slightly from one side to the other (simple).

You now challenge them to make four smooth zigzags trying to maintain a constant momentum but remaining in control (complex).

## WHAT-WHY-HOW

No doubt you've heard the phrase "It's not what you say, it's how you say it". Teaching new skills is more than just formulating a solid progression.

The information you deliver will not help your students to progress if it is not delivered well. When you present information make it clear, concise and well organised. The students must understand WHAT it is they are trying, WHY they are trying it and HOW they are best to do it. Using analogies can be an efficient way of explaining a particular movement or concept. (See Learning through Experience in Chapter 3.)

Presenting information is more than just the verbal delivery however. Try to appeal to all three main learning styles (see Chapter 3). Verbal descriptions are often best followed up with physical demonstrations of the task. The quality of these demonstrations is just as important as the verbal delivery itself. Ensure that your students are in a position where they can easily see your demonstration and focus their attention on the body part or specific movement you wish them to see.

As you become more experienced, try to use a mixture of teaching styles (Chapter 4) relative to the lesson. However, keep in mind that the simpler the information delivered, the easier it will be absorbed.



## CHECKING FOR UNDERSTANDING

When you have finished presenting the new information, ensure that you check for understanding. It's beneficial to use open and/or clarifying questions like: "Can you show me that movement before we start off?" or "Can you describe some feelings or pressure points from the new movement?".

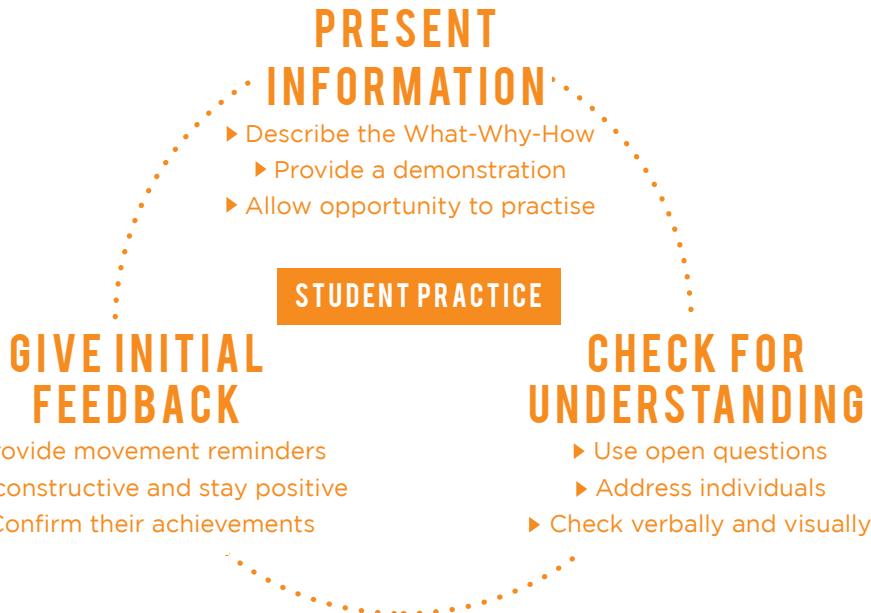
You can even address these questions to specific individuals: "Jane, can you tell me how we use our hips differently when balancing on our toe edge?"

If checking for understanding verbally isn't quite enough, you can always check visually by watching to see if they perform the task you have set up. Ensure you allow some time for initial practice so your students have opportunity to feel the new movements.

## INITIAL FEEDBACK

Once your students have tried the presented task, it's crucial that you provide initial feedback. This should give the student confirmation that they understood and are achieving the task. This can be as simple as: "That's it, you got it first time! Try it again to make sure."

Alternatively, it may be a reminder of something they have missed or could use a little more: "Remember to lead with your knee."



## ADVENTURE



This stage generally takes the longest in a lesson. At the minimum it should be 50% of the lesson time but may be as much as 80%.

The purpose of this phase is to apply and develop the new skills in varying terrain, grow confidence and explore the outskirts of the student's comfort zone. The structure remains completely flexible and should have an element of unpredictability, taking twists and turns along the way, and is often determined by the needs of the student. The adventure stage provides an opportunity for constant guided practice. After all, perfect practice makes perfect!

Here's a few easy things to include:

- ▶ Challenges should be set up during this time, such as: "See how many turns you can make between here and the bottom."
- ▶ Simple games can be utilised to take the focus off the task and allow the movements to become autonomous.
- ▶ As their skills improve, small adjustments can be made. You may even find yourself returning to the drill stage briefly to introduce a new skill.



Changing terrain and adjusting the skills to suit is a valuable part of the adventure stage. The motto "New skills on old terrain - old skills on new terrain" is a useful way to differentiate between the drill and adventure stage. You can also adapt the environment to encourage slight changes in movement patterns, for example: "See if you can make turns using the whole width of the trail".

Throughout this stage, it is critical that we continue to provide feedback. There are varying types of feedback (discussed in more detail in the Delivering Feedback section of Chapter 4), but the most important thing is to keep it positive.

When describing your students' riding use the Prioritise-Simplify-Clarify approach...

**PRIORITISE**

**1** Prior to giving your students feedback you need to prioritise which movements they made and which had the biggest impact on their performance. When describing these movements to your students try not to overwhelm them by telling them everything you saw.

**SIMPLIFY**

**2** While describing the movements to your students it is important to simplify using language that your students can understand. It's very similar to teaching or presenting a task; it's not what you say but what your student perceives. It's also very easy as instructors to place judgment on what you saw. Stick to describing what you saw rather than placing a judgement on it.

**CLARIFY**

**3** It's very important that your students understand what you are saying, so be sure to check for understanding. You can clarify with your students by showing them how the movements can affect their performance.

Ultimately, a well-executed adventure stage will help your students to master the new skills and commit the movements to muscle memory, in their early stages of learning.

**SUMMARY**

Every lesson ends with a summary. Your summary should always recap the lesson briefly and reiterate the most important things for the students to take away. This is likely to differ for each student in your group.

A truly effective summary is more than a brief review of the lesson. When reiterating the key points, try to relate them to the goals you established with your students in the play stage and review how successful you've been in reaching them. This is best tackled with a question-based approach and can even be done during the last run of the lesson, on your way back to the base - a particularly useful tactic when teaching children.

Whether you've succeeded completely in reaching the goals or not, be sure to recognise their own achievements, however small they may be. Offer advice on where and when to practise for the rest of the day, over the coming days or whenever they expect to snowboard next. This can be a good opportunity to re-evaluate their goals.

Ensure that you preview the student's next learning steps and encourage further development. Invite them to return for another lesson and suggest some skills they may learn or improve if, or when, they come back. Remember that retaining them as a snowboarder is more important than retaining them as your student!

## SECTION A - TEACHING &amp; LEARNING

## 4

# Effective Communication

BUILDING RELATIONSHIPS &  
INTERACTING WITH GUESTS

UTILISING DIFFERENT  
TEACHING STYLES

DELIVERING FEEDBACK  
EFFECTIVELY

QUESTION-BASED LEARNING

## IN THIS CHAPTER WE WILL EXPLORE...

*The building of relationships and interacting with guests, a variety of different styles in which you can teach your students, and some considerations for the feedback process.*

*We will also look at the more advanced technique of Question-based learning.*



## BUILDING RELATIONSHIPS & INTERACTING WITH GUESTS



The very nature of a relationship is something born from a natural, genuine connection between two or more people. There is no blueprint or set of instructions that will somehow fabricate a relationship between you and your guests. Therein lies your opportunity for you to find your own way with your own personality and unique style.

The old adage: “*A picture says a thousand words*”, can be a powerful guidance tool when we are meeting our guests for the first time. Challenge yourself to read your guests as they are arriving so you can decide on an appropriate way to open up your conversation with them.

Do they look apprehensive and nervous? Do they look distracted? Are they smiling? Are they walking towards you with their head down? Are they noticeably shaking or shivering? Are they rushing to the meeting area? Were they already there when you arrived? Are they watching other snowboarders on the mountain? Are they looking towards the kids’ meeting area? Are they fascinated with the snow? Are they alone or with others?

Take a moment to observe your guests as they are approaching the meeting area. The above questions are examples of considerations that can help you learn more about your guests before you have even spoken to them. With guests that are smiling, looking around and chatting amongst themselves, you may be able to feed off their upbeat vibe and build on that through a quick, lively introduction. With guests that are running late to meet the group, trying to put gloves and their helmet on as they are approaching or looking concerned with their new environment, you may need to address components of Maslow’s Hierarchy (see Chapter 3) before asking anything else of them and continuing the lesson.

Now that you are physically with your group, the natural step to take from here is to offer your name and begin asking questions in order to get to know your guests. When asking questions we need to be aware that people may have a different opinion of acceptable questions to ask in social scenarios. Ensure that your questions are not too invasive as your guests might not be comfortable to reveal themselves to you or the group. To begin with, start with simple questions that provide an environment for dialogue, such as: “Where are you from?”, or “Do you have any other hobbies and interests?”

Now that conversation has begun, this is where you can strengthen and build your relationship or it can plateau. What happens next will be decided by the way you listen to and respond to the answers that your guests give.

This ability to listen to your guests is where the door to effective communication and building a relationship further opens. It's a simple idea and is one that is often underestimated. By definition, to listen is: to give one's attention to a sound, take notice of and act on what someone says, respond to advice or a request, make an effort to hear something, be alert and ready to hear something.

By considering the above, in order to listen you must be present and in the moment. It requires you to be attentive, focused and exerting effort. In some circumstances it requires you to respond. It could be all too easy to let their responses wash over you, only to have to ask the same question again or even worse let the answer slip by with no acknowledgement.

Quite simply, if you aren't going to listen to the response then why do you ask a question?

If you are focusing whilst listening, it allows you to chat with your guests using their first names, introduce guests from the same countries or cities to each other and create links between those that share commonalities through examples such as hobbies and interests, expectations for the lesson and where to get the best pizza and après in town.



In the early stages of the relationship it's easy to discover superficial facts about your guests with simple questions; however, you've only scratched the surface. You now need to consider how to ensure your relationship is sustained and continues to develop throughout the lesson. This is where it's key to remember that for your guests, it may not be all about snowboarding. In their opinion there may be a whole lot more to life than just snowboarding.

Think about your closest friends. Was it only snowboarding that shaped your relationship or are there other ingredients that forged your bond?

In many cases the strength of a relationship is amplified through the act of sharing. In a snowboard lesson, your guests have entered your world to learn about your passion. It's likely that once they have settled into the lesson and are feeling more comfortable they will begin to open up and reveal more about themselves. Why not reach out and learn more about their world and their passions?

### EXAMPLE

#### ASKING GOOD QUESTIONS:

- “What do you do for a living?”
- “How did you get involved with that?”
- “What’s the main thing you enjoy the most about your line of work?”

### EXAMPLE

#### DELVING DEEPER:

- “You mentioned travelling through South America. When I get to visit, what’s the one thing I should do over there?”
- “What’s the best time of year to do this?”

By choosing to explore more of their world, you are taking a genuine interest in their life. In the examples above, it's possible that you are teaching a mechanical engineer who designs rollercoasters for a living, an avid photographer who documents indigenous tribes in South America and a professional concert musician who has played in the Sydney Opera House. Imagine if you only allow your guests into your world, the stories and experiences you might miss out on are unimaginable. Give yourself a chance to learn something new with every guest you meet.

It takes time to craft your interpersonal skills so be patient. Enjoy talking with your guests and exploring new avenues through which you can make a connection. You'll quickly find ways to enhance your lessons and build lasting relationships that can extend far beyond just one snowboard lesson.

As an instructor, the way in which you present your information can greatly change the experience for your students. It's important to first understand the different teaching styles that are at your disposal, how to implement them, and when to use them for the benefit of your students. The needs of your students, the size of the group and their baseline knowledge can greatly influence your choice of teaching style.

## UTILISING DIFFERENT TEACHING STYLES



A good instructor will adapt their teaching style to suit their audience and help them adjust for other variables such as group size and length of lesson. Here are five distinct teaching styles that instructors should be aware of...

### COMMAND

This is an instructor-centred style of teaching. The instructor will control all variables and set parameters for the task. The instructor chooses when to do the task and is specific with what the task is, where to do the task, how to do the task and why it is being done. The advantage for the student is that the information is very direct and transparent relative to an end result. The disadvantage for the student is that the process can be less inclusive or engaging. This style of teaching can be used for both adults and kids; however, it is best used when the instructor needs to take control of the entire learning process, as the students will likely have a very limited baseline knowledge.

### TASK-PRACTISE

This is similar to command but slightly less instructor-centred. The instructor will still control most variables and parameters for the task. Typically, this will include safety considerations, an introduction to what the task is, how to do the task and why we're doing the task. Where this differs from command is that the student is given time away from the instructor to independently develop their skills. The student will often now choose where and when they want to continue with the task. This style can be used for adults and children in both private lessons and group lessons of all sizes.

The advantages are that students grow a sense of personal achievement through independence. The disadvantages are that the student can quickly forget or adapt inefficient ways to achieve the task. This style of teaching is best used for students demonstrating signs of ownership of a new skill who need an opportunity to gain mileage. To use this style, the students will have a little knowledge of their own to help themselves during times of independence away from the instructor.

#### EXAMPLE

### HELPING A BEGINNER WITH THEIR FIRST TURNS:

Having provided instruction and hands-on assistance, your students now have an understanding of how to turn. Now they can achieve the task with your guidance, it's time to continue the task without your assistance and choose where they want to turn for themselves.

## GUIDED DISCOVERY

This is a more student-centred style of teaching. The instructor has a specific end goal that they will guide their student(s) towards by offering clues or providing options for their students to choose from. The instructor will know what and why the students are striving to achieve; however, how, where and when the students achieve this will be based on their own choices. This differs from command and task-practise by placing the student at the centre of their own development. The student will make choices that result in more efficient riding based on trial and experience within the lesson.

The advantages are that the students are more responsible for their successes and achievements within the lesson. They are still provided with guidance from the instructor but offered opportunities to experience both efficient and inefficient options in their riding. The disadvantages are that with a lack of baseline knowledge, the students can often be confused with the choices they have and potentially choose to develop something inefficient for their riding.

This style of teaching can be used for both adults and kids, but is usually best used for students who are already linking their turns and are looking to discover skills necessary to explore the mountain. To use this style, look for students who have specific and clear goals and/or those who show a good understanding of their own snowboarding.



### EXAMPLE

#### A STUDENT WHO WANTS TO RIDE STEEPER RUNS:

You decide this is a realistic goal; however, when it gets a little steeper the rider has difficulty controlling pressure at the end of their heelside turns as a result of stiff, locked knees, resulting in board chatter. You know that the rider would benefit from progressive flexion through their knees, yet you decide to let your student discover this for themselves instead of being told what to do. You suggest that they ride one run with stiff locked knees when finishing their turns. You suggest on the second run that they finish their turns by relaxing their legs and progressively sinking towards their board by flexing their knees. You then ask for them to decide which method resulted in more efficient snowboarding. It is up to the student to then decide on the more efficient option through personal experience with the options you gave.

## PROBLEM SOLVING

This is another student-centred style of teaching. The instructor presents a problem that needs to be solved by the students. The difference from guided discovery is that in problem solving there are two or more solutions that could solve the problem. As the instructor, you may not even be aware of the solution yourself yet. When presenting this style, the instructor explains what the problem or scenario is, which will indicate to the students why they need to solve a problem. The instructor does not present how, where or when to do the task. These details are upon the decision making of the students. Finally, you will need to share the solutions with each other to open your students' minds to different ways of riding.

The advantages are that this promotes exploration, experimentation and versatility within the riding of your students. The disadvantages could come when offering a problem that is beyond the capabilities of the students to solve, whether it's beyond their knowledge base or skill base. This has potential to disregard the safety of your group.

This style of teaching is best used with students who are confident with their riding within an environment that is comfortable for them. Your students should demonstrate a clear understanding and continued use of the snow responsibility code when riding. These factors will allow them to commit to potentially new and creative ways of riding to solve the problem.

### EXAMPLE

#### FREERIDING WITH A GROUP ON VARIABLE TERRAIN:

They are confident riders, comfortable on the terrain you are riding. At the top of your run you all stop to scope the inconsistent sized and shaped bumps. You turn to your group and offer the following problem: "What's the smoothest and fastest line through this pitch?". It's now up to your students to use their knowledge of their own snowboarding and the terrain in front of them to choose a line that works best for their riding.

For this style to work well, you will need to bring the group together immediately after riding their line, review the problem you presented and ask your students to explain what their solution was, i.e. what was the smoothest and fastest line through the bumps? Without this step, this style of teaching is incomplete as your students will not be able to learn from each other's solutions. One of the riders may have ridden a smooth zipper-line approach with the board in contact with the snow throughout, whilst another rider may have used a larger turn size at a faster speed and gapped some bumps to maximise their flow. The act of sharing solutions will complete this style of teaching and will open your students' minds to more creative riding.

## RECIPROCAL

This style of teaching is also focused on a student-centred approach. The instructor pairs individuals together and assigns what the task is, how to do the task and why we are doing the task. The students have slightly more control over where and when they do the task. The performance of the task, observation and feedback takes place between the individuals working together. This style can be used for adults and children in both private lessons and group lessons of all sizes. It works best in larger groups with a size of even numbers as you can remain available to spread your attention evenly around the pairs.

The advantages are that the students feel more in control of their own development and gain a sense of independence. It can also increase the amount of feedback students are receiving as they are not relying solely on the instructor. The disadvantages can be that students may not trust each other enough to get feedback from each other. You might find that if you delegate a task beyond their capabilities then feedback between students might become inaccurate.

This style of teaching is best used with students who demonstrate a higher understanding and knowledge surrounding the current topic as this will allow them to effectively help each other.

### EXAMPLE

#### A GROUP OF SIX STUDENTS LEARNING TO CARVE:

Your students want ride at a faster speed on those perfect morning groomers. You begin by explaining how to create a thinner track in the snow as an introduction to carving and pair your students up. After your demo, you provide time and space to observe the pairs attempting the task. You see two pairs working well together and beginning to increase their edge angle in the designated task. You see one pair struggling with the task. Having kept yourself available you ride over to check for understanding of the task, offer feedback and offer another demo. You provide time and space again and see that all three pairs are now achieving the task. Time to regroup and consider more mileage, switching the pairs up with a variation of the task or even move onto something new.

## DELIVERING FEEDBACK EFFECTIVELY



Feedback is a way for instructors to offer information to students regarding their performance relative to a particular task. The underlying intention of feedback is to guide students towards improving their snowboarding.

Many instructors are very well practised at delivering stock expressions to their students to ensure they meet an expected framework for delivering feedback. In the same way that students learn in different ways, they also respond and develop at varied rates depending on the type of feedback they receive. Thought and consideration should be given to this to help maximise the effectiveness of your teaching.

Let's take a closer look and explore types of feedback that are prominent in the snow sports industry, some of which you may already use without knowing.



## INTRINSIC & EXTRINSIC FEEDBACK

A great place to build our knowledge base is to understand that it's possible for feedback to be delivered to the student by an external source, such as the instructor and from an internal source, such as our proprioceptors and kinesthetic awareness. These types of feedback are known as extrinsic (external) and intrinsic (internal).

### INTRINSIC FEEDBACK

This is information received by the student as a direct result of producing a movement through the kinesthetic senses such as feelings from muscles, joints and balance.

### EXTRINSIC FEEDBACK

This is information that may not be built into the movement itself but upon delivery is intended to improve the intrinsic feedback loop within the student.

This type of feedback is easier to understand when you consider the simple idea of offering feedback to help improve a movement. Once provided, the hope is that the new movement will be committed to muscle memory through practise and continually successful results (e.g. remaining balanced throughout a toe turn) and measured through intrinsic feedback (e.g. even stability over the balls of both feet).

Building on this knowledge, we can now look at whether the feedback delivered is verbal or nonverbal. It's obvious to understand that verbal feedback is usually in the form of spoken words from the instructor. Non-verbal feedback on the other hand can exist as both intrinsic and extrinsic. Intrinsic feedback by nature is non-verbal. When non-verbal feedback is delivered extrinsically, it is usually observed as body language or gestures. A great example is a thumbs up.

## POSITIVE & NEGATIVE FEEDBACK

When considering the form your feedback delivery takes, one of the most desirable traits is that it should be positive. Think of the positivity of your feedback as a spectrum or a scale. At one end you have positive and the other you have negative.



**NEGATIVE**

**POSITIVE**

It's possible to present any type of feedback in both a positive and negative way. Empathy is a great way to identify where on this spectrum your feedback lies.

Ask yourself: "How would I feel with that feedback?" "Would I feel good and happy with it or would it make me feel inadequate or less than average?"

## INITIAL & DELAYED FEEDBACK

Timing is everything! This expression is highly relevant to delivering feedback, especially in the sporting world. There are two types of feedback relative to timing: initial and delayed.

Initial feedback occurs as soon as your student has finished their performance or upon completion of a task. This could be when your student has stopped sliding or even when a particular movement within their riding is complete. Often, when initial feedback is offered it's very easy for your student to attach it to sensations, responses in their snowboard and hopefully recent successes.

Delayed feedback occurs when there is a period of time between skill execution and delivery of feedback. Depending on this delay your student may not remember the situation you are offering feedback for. It's possible to cause confusion between some similar situations your student may have experienced and worse still, the feedback now has no relevance due to the natural progression of your student.

Much of your time as an instructor will be spent learning, practising and refining how to construct your feedback in order to deliver it to your students with optimal effect. The art of feedback delivery can take time to craft. Start exploring and experimenting with more feedback types outside of this manual and allow yourself to become more creative with your choices to influence the overall sense of achievement that can be enjoyed within your lessons.

One of the most effective ways to practise delivering feedback is to consider how you receive feedback when you are the student. Receiving feedback can challenge the recipient in many ways. It may shatter confidence and trust or it could build abilities and overall stoke. As a recipient of feedback you can't do much about the delivery but you can always consider ways in which it could have been phrased more appropriately to suit your needs.

Remember, however, that when receiving feedback the underlying intention is for a positive end result in order to progress and develop.

## QUESTION-BASED LEARNING



Question-based learning is a style of teaching and learning that revolves around the instructor asking questions of the students with the goal to generate awareness, strengthen knowledge and develop skills within a particular concept or topic. This is a powerful teaching style and learning tool, as use of a question will engage and involve students in the learning process and act as a stimulus to encourage students to pursue knowledge on their own. It is important, however, that when the instructor asks a question, they must have an intended purpose or learning objective for their student.

This style of teaching can be used for all ages and levels but requires the instructor's superior level of skill and knowledge of information being taught for it to be used effectively. The instructor will have to tailor questions appropriately to the age and communication abilities and tendencies of the students. This understanding of your students is an important aspect of question-based learning. You will need to consider if their grasp of the language you are communicating in is sufficient enough to understand your questions. You will need to consider forming simple questions that are easily followed when using this style with children. You will need to determine if your students are responsive to questions or if they prefer a more instructor-centred style of teaching. These are just a few examples to consider before applying question-based learning.



Before you begin to ask questions, ensure that you have fostered an environment where people feel comfortable enough to speak up and voice their opinions and feelings about their snowboarding. For a student that is anxious to attempt their toe turns in case they fall, they might simply be copying the answers of others to avoid your attention. You will need to provide support to your students first to establish trust in your relationship before your questions will draw out honest answers. As the instructor you will also have to decide what type of questions you will use. The most common types that we have at our disposal are open, closed, leading, clarifying, probing and scaling questions.

## OPEN QUESTIONS

An open question is one that allows your students a difference of opinion within a matter that has not been decided. This type of question can create an open environment for dialogue to follow.

The advantages are that the answer will portray your student's perception of a situation, their exact thoughts and even an insight into the complexity of their verbal communication.

The disadvantages are that the answers can vary greatly from person to person and include details that can be inefficient or undesirable toward the end goal.

### EXAMPLE

#### OPEN QUESTIONS:

"Which toe turn felt the smoothest and why?"

"In that toe turn, what part of your body did you move across your board first and how did you move it?"

## CLOSED QUESTIONS

A closed question is one that requires a definitive answer from its direct form, or from a choice of offered options. Once a response is given there is no environment for dialogue, only an option to ask another question or end your line of questioning.

The advantage is that you receive a concise and definitive answer to the question you asked.

The disadvantage is that there is no opportunity for your student to expand upon or offer clarity around the answer given unless prompted by further questioning.

### EXAMPLE

#### CLOSED QUESTIONS:

"Was that toe turn better than your last toe turn?"

"Did you move your leading knee or shoulder into that toe turn first?"

## LEADING QUESTIONS

A leading question is one that is typically closed in structure and encourages an answer that leads your students to your way of thinking. A leading question should have an intended answer in mind and be asked in a way that makes it easier for your student to answer "yes" than to offer a different answer.

The advantage here is that you can guide your student towards the intended outcome and remove the possibilities of undesirable answers, whilst leaving your students feeling like they had a choice.

The disadvantages are that you may not discover something your student is experiencing if it is outside the boundaries or parameters of your question and they can often be seen as manipulative.

### EXAMPLE

#### LEADING QUESTIONS:

“The last toe turn you made was better than the first two, wouldn’t you agree?”

“From here it looked like you moved your leading shoulder across the board first, it would be better to move your leading knee first don’t you think?”

## CLARIFYING QUESTIONS

A clarifying question is one that simply acts as a step to confirm factual information. It can be used effectively to check for understanding.

The advantage is that you can ensure that the information you think you received is actually what was offered in order to establish a plan for your next question.

The disadvantage is that you cannot gain insight into anything other than the facts already been given and if used too much will cause your students to think you are not listening to them.

### EXAMPLE

#### CLARIFYING QUESTIONS:

“Did you say that the last toe turn was the best?”

“To make sure I understand, which body part did you move across your board into that toe turn first again?”

## PROBING QUESTIONS

A probing question is used to encourage your students to think further about specific details from their given answer. A probing question has no intended answer, it simply offers insight into the subjective nature of a given answer.

The advantage is that with effective use, they can ensure that you understand your students’ perception of a situation as a whole.

The disadvantage is that if used too much or applied to irrelevant information they can be perceived as invasive and create a feeling of interrogation.

**EXAMPLE****PROBING QUESTIONS:**

“Can you explain to me why your last toe turn was better than the first two?”

“Could you be more precise with how you know which body part you moved across the board first into your toe turn?”

**SCALING QUESTIONS**

A scaling question is used to quantify subjective information in a given answer. This type of question allows an avenue for your students to set measures on their opinions, emotions and perceptions of a situation.

The advantage is that it transfers opinions and emotions into tangible measurements that can be used for comparison from one task to the next, in order to recognise achievements or to highlight a plateau or regression in your students' development.

The disadvantage is that students may wonder what the relevance of your question and their answer is if the resulting measures given are not used for later comparison.

**EXAMPLE****SCALING QUESTIONS:**

“On a scale of 1-10, 1 being worst and 10 best, how would you rate that last toe turn compared to the first toe turn?”

“On a scale of 1-10, 1 being jerky and 10 smooth, how would you rate that toe turn where you moved your shoulder across your board first compared to the toe turn where you moved your knee across the board first?”

In the real world, our conversations use a combination of question types, often without active thought about which types are being used. It's natural to use a type of question that we feel will obtain us the answer or information we need as quickly as possible. This is where a patient approach to this style of teaching and learning is necessary. As we have explored, there are advantages and disadvantages with each type of question that you ask. It's crucial to be able to adapt and change your question type quickly and effectively when you think it's necessary. It does take time to develop versatility within question-based learning and a great way to practise your skills is to reflect on your lessons and identify moments when you could have implemented this style. Furthermore, challenge yourself to construct one or more types of questions that you could have asked your students to generate awareness, strengthen knowledge or develop riding skills at that moment in the lesson. The only way for you to be able to do this is if you have been focusing and listening to your students throughout the lesson.

No matter which type of questions you choose to use, your role as a facilitator remains consistent throughout. By definition, a facilitator will remain neutral in the learning process, help students understand their goals and assist them along their journey to achieving them. With this in mind, it's important to recognise that the instructor's opinion should not become an influencing factor in this process. This teaching style is all about the student. Based on your line of effective questioning, it's what the student wants to do, how they want to do it and why they want to do it.

In the event that you compromise your neutral position, you will simply adopt a different teaching style. More often than not, a command or task-practise style is the most appropriate failsafe, depending on how much time the student has to work independently. This is identifiable when the instructor uses the phrase "I want you to try..."



The following example demonstrates question-based teaching and learning, utilising a range of question types. The end goal in the mind of the instructor is to have the student realise that they are moving their leading shoulder across their board first to start their toe turn. The instructor would like the student to become aware of this and decide to use their leading knee first, before their leading shoulder.

**EXAMPLE****WORKING EXAMPLE OF QUESTION-BASED LEARNING:**

Instructor - “On a scale of 1-10, 1 being worst and 10 best, how would you rate that last toe turn compared to your first toe turn?”

Student - “I’d say the first turn was a 4 and the last turn was more like a 7.”

Instructor - “For the turn you scored a 4, did you move your leading shoulder or knee across the board first?”

Student - “Shoulder I think.”

Instructor - “And how did the snowboard turn as a result?”

Student - “It didn’t really move much to start with but after a few moments it did turn quite quickly.”

Instructor - “Ok, so would you agree that you would like to snowboard with the toe turns you scored a 7 for more often?”

Student - “Yes, definitely!”

Instructor - “Well for the turn you scored a 7, help me understand, did you move your leading shoulder or knee across the board first?”

Student - “My knee.”

Instructor - “So when you moved your knee across first, how exactly did your board respond differently?”

Student - “It began to turn earlier and felt smoother.”

Instructor - “Sweet, so how will you move across your board to get all of your turns to feel like a 7 or more?”

Student - “I’m going to make sure I move my knee across my board before my shoulder to get them feeling better.”

Reflect on the line of questioning above. For each question, can you identify what the type of question being used is? (Clue: there’s one of each type.)

## SECTION A - TEACHING &amp; LEARNING

## 5

# Teaching Children

**BASICS OF TEACHING CHILDREN**



**PROFILING CHILDREN**



**MOTIVATIONS**



**NEGATIVE BEHAVIOURS**



**THE CAP MODEL**



**CREATIVE LESSON BUILDING**



**EQUIPMENT FOR KIDS**



## IN THIS CHAPTER WE WILL EXPLORE...

*How your lessons will change when teaching children, as one of the major groups of people we teach in snowboarding. We may have different ideas on how to interact with children, because at one time we were all kids ourselves. This chapter presents specific tools, tactics and considerations for teaching and interacting with children.*



## BASICS OF TEACHING CHILDREN



When you first meet a child it is very important that they quickly feel comfortable around you. Greet them openly and smiling. For the younger ones, getting down to their level can help them to feel at ease as you will not look as big.

Ask basic questions to help gain an understanding of their age, who they are here with and if they are excited about going snowboarding. Listen to their replies to gain an understanding of how developed their language skills are. Try and show that you are interested in them and address any concerns they may have about the lesson.

Outline a basic structure of the lesson before you start. Where you will be going, some of the fun things you will be doing and when you will be back to meet their parents. This will allow them to have an idea of what to expect and can help them to feel more relaxed and open to having fun.

The Play-Drill-Adventure-Summary lesson format is your go-to for all children's lessons as well as adults. It should be noted that there are some subtle differences in how we use this lesson format when teaching children.



## PLAY

The word play is even more suitable for teaching children. This stage is still about having fun with what they know already, but remember that what children know and are interested in, is typically very different to adults. Be prepared to delve into fantasy land, explore topics like their favourite animated movie or simple themes such as dragons or spaceships.

## DRILL

This stage of the lesson only differs slightly in the tasks you may use and the way in which you present them. Keep in mind that children's understanding and attention span can be more limited than adults. Use simple language that they are familiar with, ensure you give them achievable movement options and try to relate it to their interests, which you explored earlier.

## ADVENTURE

This stage typically has the biggest difference when teaching children. The purpose is still very much the same - to apply and develop the new skills they have learnt - however the way in which we orchestrate it will be quite different. Prepare to move into imaginary world here. Explore new terrain in a creative way, whilst continuing to develop their skills subtly.

## SUMMARY

Here you will need to establish a three-way conversation between the child, the parent(s) or teacher and yourself. Setting the student up to tell their parent/teacher what they learnt, how much fun they had and why they want to come back is a great way to do this.

Children rely on you as their caregiver to keep them safe, so smart decision making is very important. Taking note of names, what they are wearing and the number of students in your class will help you to keep track of them. Counting your students every time you start and stop, creating a buddy system, setting tangible and visible meeting points as well as a go-to place if they get separated from the group should minimise the potential of losing children. For children aged six or seven onwards a good tactic is to encourage them to take some ownership in this. Have students take turns in picking safe stopping points, checking its safe to go and so on.

By having this approach the children are engaged in the decisions to keep safe and are likely to develop good habits. As their caregiver you will also need to consider some of their other needs are met like going to the toilet, feeling hungry or tired. Younger children may tire quickly so be prepared to take a few rest stops. Teaching children can be hugely rewarding and you will usually get back what you put in.

## PROFILING CHILDREN



Creating a profile of a child that you are teaching helps you to develop an understanding of who they are. This is done through effective and purposeful questioning, listening and further questioning in the form of a conversation (see Chapter 4 on Question-based teaching). You will also gain an understanding of children through observing the way they move, their body language and the equipment they have.

The process of creating a profile is predominantly done through good questioning. It should be an ongoing process throughout the lesson or the duration spent with the student. Question topics may include, but are not limited to: Age, interests and hobbies, sports, favourite subjects at school, family, where they are from, what they want to do in the lesson, and their favourite place to ride.

Listening carefully to the answers you receive will allow you to gain vital information on how to effectively communicate with the student, through the vocabulary they use and the answers they give you. Information can then be delivered in a way that the student will understand, using similar vocabulary and relating the content to things that they are familiar with and like to do.

### EXAMPLE

#### EXAMPLE CONVERSATION FOR PROFILING:

Instructor - “Jonny, do you enjoy doing any other sports?”

Child: “Yes.”

Instructor - “What’s your favourite sport to play?”

Child - “Soccer.”

Instructor - “What is your favourite thing about soccer?”

Child - “Playing with my friends and scoring goals.”

Instructor - “I like scoring goals too! How did you score your last goal?”

Child - “I jumped up and did a header and it went over the keeper.”

Instructor - “Cool, did you win that game Jonny?”

Child - “Yep, we won 3-2. I was really happy.”

The more questions we ask the more we learn about the child. If we stopped at the first or second question it would not have given us very much to work with. The student should also start to feel comfortable around you because you are showing a genuine interest in them.

## MOTIVATIONS



Finding out the individual motivations for being in the lesson is important for all students, but particularly useful when teaching children. It will give insight into what they want or do not want from the experience. Motivations in a children's lesson can be broken into two basic areas:

### INTERNAL

**1** These motivations will be many and varied. They may want to try a new trick, stop falling over or simply have fun. Whatever their motivation it will come with an emotional element that could be positive or negative. The motivation will usually stem from an external source or influence.

### EXTERNAL

**2** Most motivations do not initially come from within. They are created by external influences like media, friends and family, education, competition, fear, excitement and so on. Parents may also have their own motivations for their child to take a lesson. These need to be taken into consideration as they can often be very different from the child's motivation.

Finding out what your student's motivations are can be done through good questioning. This will start when you begin to profile your student and will continue throughout the lesson. Start with questions like: "What would you like to achieve on your snowboard today?"; "Is there something you've seen that made you want to try that or someone that gave you the idea?".

As you go through this process be attentive and listen to the replies. Try to pick up on how they are emotionally responding, i.e. are they happy, anxious or excited. Once you understand what their motivations are and how they feel about them, you will then be able to incorporate them into the way you structure and manage the lesson.

#### EXAMPLE

##### INTERNAL MOTIVATION:

Your 10-year-old student wants to get better so he doesn't hurt his bum anymore when he falls.

#### EXAMPLE

##### EXTERNAL MOTIVATION:

Your 10-year-old student wants to try riding a box because their older brother can do it.

## NEGATIVE BEHAVIOURS



Firstly, we need to understand that there is always a reason for negative behaviour. Children do not just play up for the sake of it. When dealing with children we must never lose our cool with them. We are the adult in charge, they are the child; it is not the other way around. Stay calm and you will have a better chance of dealing with the issue.

Some negative behaviour traits may include bullying, tantrums, sulking, crying, defiance, and so on. Some of the reasons for these behaviours may include boredom, fear, frustration, discomfort, hunger, tiredness.

If we understand that there is a cause and effect relationship with negative behaviour, we will have a better chance of managing it. Here are three simple tactics that may help when dealing with children who show negative behaviour...

### THE DIVERSION TACTIC

**1** Put simply, you try to divert or distract their attention by changing something in the lesson. This could be done by asking the student to lead the group, completely changing what you are doing, or focusing on something fun that they want to do. This tactic is often just a short term fix and may not completely eliminate the issue.

### FINDING THE CAUSE

**2** Start with simple questions to try and find out what is making the child act negatively. Caution should be taken with this approach not to question too deeply, as we may not be equipped to achieve a solution. If you are able to find out what the problem is, then the solution is often very simple. A strong grasp of the CAP model (covered in the following pages) will help you understand the variety of potential causes for any negative behaviours you are likely to come across when teaching snowboarding.

### THE ULTIMATUM

**3** Only use this tactic as your last resort if the child's behaviour is having a negative effect on other students or it is becoming a safety issue. In a calm and non-judgemental manner state that you want them to stay in the lesson but they will no longer be able to continue in the lesson unless the negative behaviour stops. If they leave the lesson they will need to explain why they were not able to continue to their parents or caregiver. Give them the choice, saying that you want them to stay but only if they are good. If they continue to be bad then they will have to leave the lesson, the choice is theirs to make.

However you choose to deal with the negative behaviour of a child, remember to address it in the summary of your lesson with the parent or teacher.

Discretion may be important here, depending on how the child responded to your tactics during the lesson. Ensure that you are empathetic and understanding of the causes, rather than judgemental.



## THE CAP MODEL



To understand how children develop, we can divide their areas of development into three categories: Cognitive (thinks), Affective (feels) and Physical (moves or physical). The CAP model helps to give a greater understanding of children's different stages of development. This helps instructors to have appropriate expectations for each child.

When teaching children, watch the child and develop an understanding of their abilities in the three categories of the CAP model. Keep in mind that each area will be different for each child, as each child will develop differently. Most important is that you let their level of development dictate your lesson plan.

### COGNITIVE DEVELOPMENT

This is the 'C' in the CAP model and it refers to how a child thinks. The instructor needs to be aware of the child's mental capacity and keep the new information simple enough for the child to understand. Just like teaching adults, it is very important to check for understanding. This can be done verbally or simply by watching to see if the child performs the set task.

The different aspects of a child's cognitive development that need to be considered include, verbal capabilities, visual capabilities, specific concepts and understanding, and following directions.

Swiss Child Psychologist Jean Piaget theorised it best with four stages of cognitive development. These four stages are as follows...

### **1 SENSORI-MOTOR - BIRTH TO 2 YEARS**

Children use their senses of touch, taste, smell, sight, and hearing to help them learn and make sense of the world. Allowing your students to simply lay down and play in the snow will help them to assess their environment.

### **2 PRE-OPERATIONAL - 2 TO 7 YEARS**

In this stage children believe that the world revolves around them and what they want to do is the most important thing. They will progressively gain the ability of speech. At about the age of four, children tend to become very curious and to start asking a lot of questions. This is the beginning of their ability to reason. They will learn through play and will be very receptive to imaginary play. The younger children may also have a tough time with spatial awareness and they may run into each other at times.

### **3 CONCRETE OPERATIONAL - 7 TO 11 YEARS**

Children can now conserve and think logically. These abilities are developing fast through the influence of school and the vast array of stimulus children are exposed to today. Children in this stage tend not to believe in fictional characters as much. However, they are capable of hypothetical thinking, such as “you are on a roller coaster and have to stay on the track”. Be aware that older children in this stage may not buy into using their imagination in this way and may prefer to use visualisation techniques of their own riding.

### **4 FORMAL OPERATIONAL - 11 YEARS AND OLDER**

This final stage is when people show the ability to think abstractly and can reason logically. Children in the formal operational stage display more skills in the ability to problem solve. It has been said that some children will never actually ever reach this stage and that they remain thinking in the concrete operational stage.

## **AFFECTIVE DEVELOPMENT**

This is the ‘A’ in the CAP model and it refers to how the child feels and develops emotionally. In order for the instructor to be successful, they will need to understand what that child’s emotional needs are to then enhance their motivation levels throughout the lesson.

We can categorise the affective development into four stages, thanks to American psychologist Lawrence Kohlberg. These stages illustrate how a child’s growing sense of right and wrong affects how they conduct themselves and others. These four stages are as follows...

### GOOD IS GOOD, BAD IS BAD - 3 TO 6 YEARS

**1** In this stage children like to please others and know what is right and wrong in its most simple form. It's good to reinforce good behaviour as well as what Mum and Dad would like.

### CLEVER AS A FOX - 7 TO 11

**2** This tends to be a difficult stage as children may challenge authority, even if they respect and understand it. They believe that they know a better way of doing it and may try to out-wit you.

### ALL IN FAVOUR SAY "AYE" - 12 TO 17

**3** This is where peer pressure with teens is most evident. It is important to be accepted as part of the group. Keep in mind that while all children in this age category will want to be part of a group it is important not to lose their individuality.

### LISTEN TO YOUR CONSCIENCE - 18 TO ADULTHOOD

**4** The individuals here get more involved with creating the rules and they truly understand the process of fairness and equality for the success of everyone in the group.

The different aspects of affective development that need to be considered include identity and self-esteem, humour, social interaction, and moral values.

## PHYSICAL DEVELOPMENT

This is the 'P' in the CAP model and it refers to how a child will move based on their physical growth. The main focuses are a child's centre of mass and their development of motor skills from gross to fine.

Imagine giving a 2-year-old child a crayon. They draw using their whole arm clutching the crayon in their fist. Then you give a crayon to a 7-year-old child; they draw using the movement of their fingers, holding the crayon between their index finger, second finger and their thumb.

There are a number of things to consider within a child's physical development...

### MUSCULAR AND SKELETAL GROWTH

To better understand a child's limitations in movement, we must first explore their muscular and skeletal development. We also need to be aware of the child's centre of mass and where it may be located as they grow.

## CENTRE OF MASS

In young children their head will tend to be larger in proportion to the rest of their body (0-6 years of age). This places their centre of mass near the top of their torso. Children may use a different stance in an effort to find their balance. These younger children may balance by moving their hips over their back leg. When children reach the age of about seven or eight, their centre of mass will tend to move down closer to their belly button. This will allow them to use a more efficient stance.

## SKELETAL GROWTH

Young children will develop from the torso outward. This means they will generally utilise larger muscle and bone structures to perform different tasks. Children from aged three to six will have a tendency to stack themselves upon their skeleton in an effort to help keep themselves upright. They will often brace themselves against their boots or high-backs, meaning children typically have more success with heel edge tasks than toe edge.

## COORDINATION

Coordination can be divided into three stages: initial, elementary and mature. In the initial stage (ages two to three) the child is just focused on whether movement is happening or not, rather than the quality of the movement. At this stage you may see your students looking down at their feet to see if the movements are happening. In the elementary stage (ages three to eight), children learn more about their bodies by exploring new terrain and reacting to the environment around them. In the mature stage (ages eight to adulthood), the child has more muscular and skeletal development, and begins to make well coordinated movements.

Rider: Cam Melville-Ives  
Photo: Keith Stubbs



## LOCOMOTOR, NON-LOCOMOTOR AND MANIPULATIVE MOVEMENTS

The development of movements can be divided into three different types. The first movement is locomotor. These are travelling movements such as walking, running and jumping. Then there are non-locomotor movements, which are stationary movements such as bending and twisting. Finally there are manipulative movements, which are movements that use other objects such as balls and racquets. By understanding these three movement types, we can create a lesson plan utilising a step-by-step progression, starting with a non-locomotor movement, working on flexion/extension. Then you could use a locomotor movement, such as flexion/extension in a traverse. Finally you could add a manipulative movement to the flexion/extension, such as rotation, to create turns around specific points or objects.

## CREATIVE LESSON BUILDING



Being a creative children's teacher comes naturally for some and has to be worked on and developed in others. A lot of the best creative lessons are those that are spontaneous and created on the fly. They are usually fun and engaging and fully captivate the student's attention. A good creative children's lessons should still follow the Play-Drill-Adventure-Summary model as outlined in Chapter 2.

## SPIDER WEBBING

Spider webbing is a formula for building creative lessons. You take ideas, language and concepts from different aspects of the students' lives outside of snowboarding, then adapt and transform them into what you are teaching, to help achieve a desired outcome. Essentially, we are learning to speak the students' language so that they will understand and enjoy what we are presenting. It can be a very effective way of teaching for both children and adults.

There are four roles we go through when using the spider webbing technique. These are as follows...

### THE EXPLORER

**1** This role is to collect raw material for creativity. As the instructor you should constantly be asking questions, talking to the group/individual and processing as many ideas as possible.

It is important to ask open-ended questions about your students' interests outside of snowboarding. These may include sporting activities, hobbies, favourite school subjects or their job. With the information received you will be able to brainstorm with formulating a lesson plan, whilst gaining an understanding of your students' knowledge.

With a child who likes painting, you could ask the following questions: “What types of pictures do you enjoy painting the most?” “Tell me about the kind of brushes you use, are they thick and thin brushes?” “How do you create texture with the paint and what effect does that have on the picture?”

As an instructor you can develop your Explorer by rediscovering the fun of finding things out. Read different books and watch different movies. Gain different perspectives by talking to lots of different people.

### THE ARTIST

**2** This role is to transform the ideas and understanding gathered in the Explorer stage into actions or ways to move on a snowboard. As the instructor when you present the information to your students, you should aim to use terminology that relates to what they understand and know.

When presenting information to a child who enjoys painting, you could use language such as: “Let’s imagine that the mountain is our canvas and we are going to paint a series of pictures. Thinking of the snowboard as a paintbrush, we are going to make different brush strokes on the snow. We can explore making thin and thick paintbrush marks, making our turns smooth like painting with runny paint, or stopping quickly like sticky paint. We can draw arcs around the nose of your board.”

If you are having difficulties at this stage it is usually because you did not gather enough information and may need to revisit the Explorer stage. As an instructor you can develop your Artist by writing down new ideas as they come to you. The most efficient way to create new ideas is by having fun and playing. Let your imagination run wild and visualise new possibilities.

### THE JUDGE

**3** This role is to decide which actions are best and should be continued with. This decision considers the student’s abilities, inefficiencies and goals. Thought should also be given to creating progressive steps that build towards the skill you are developing but utilises the ideas and concepts created in the previous phases.

When teaching a straight run and J-turn to first-time students who like to paint, you might explain this by using sentences such as: “First we will use our snowboard like a paintbrush to make a nice straight line. Standing in our ready-to-paint-stance so the brush doesn’t make a wobbly line and stays nice and smooth.” “Now let’s try to make a curved brush stroke by slowly and gently leaning on the brush. It helps to look and point where you want your brush to go. That was a very thin brush stroke, try leaning a little less and see if you can make a thicker brush stroke.”

## THE WARRIOR

4 This role is to put the ideas into action on the snow. To be successful with this, you need the ability to incorporate the theme or concept into a task or progression, creating strong understanding for the student whilst still achieving your desired outcome. At the completion of the lesson, hopefully your students have had such a great experience that they return for another lesson, or at least continue to snowboard. As an instructor, you can develop your Warrior by being courageous. In order to make things happen, you will need to let go of self-doubt and conquer the fear of failure.

Spider webbing is a formula for creative teaching that aids understanding and helps establish ownership of new skills. Do not be afraid to work through a bit of trial and error here as it may take time to become effective at creative teaching. With practice, you will be presenting fantastic lessons and fuelling the STOKE of your students. Remember it is not about what you know. It's all about what they know!



## RIDER ANALYSIS FOR KIDS



As instructors, we are constantly analysing our students' riding and looking for ways to improve any inefficiencies they may have (see Chapter 10 on Effective Rider Analysis). Movements that children are able to make often differ from movements that adults make. This is because children may not have fully developed muscular strength, skeletal growth, coordination or balance.

Our main objective here is to create efficiency in their riding in a realistic way, helping them to progress their skills and achieve their goals. We are also trying to create comfort within their snowboarding and the environment, which will help them to conserve energy so they can ride for longer. This, in turn, will create confidence from within and fuel their STOKE for snowboarding.

When introducing new and more efficient movements to children, we should be continually assessing their physical ability to make these new movements and deciding whether the movements are realistic or not.

There are three steps you can use to do this...

### BOARD OFF

**1** See if the student can physically make the required movements with their board off. This should be done on flat terrain. Do they have the strength, coordination and range of movement required? For example, can the student flex through their front ankle and knee whilst in their boots?

### BOARD ON

**2** Now try the same movements with their board on. Again, do this on the flat. Can they create the relevant board performance? Which movements are working for them when they do achieve the necessary performance?

### IN MOTION

**3** Now have them try to make the same movements whilst in motion. Have the student use these skills through some simple exercises on the relevant terrain, like the floating feaf or garlands.

This process will highlight any limitations the student may have when making these movements and creating board performances. For example, if they are unable to twist their board using their ankles, it may be necessary to use another body part.

## REAL VS IDEAL

It is important to understand that your students may not ride with a perfect basic stance, be able to use the same range of movement as yourself or perform the movements in the necessary order. However, if they are able to achieve the task by compensating with another body part and are having FUN, then we as the instructor should continue regardless, and adjust our lesson or expectations accordingly.

Always remember that if you attempt to take away a movement, you must replace it with an alternative one first. For example, if the child is initiating turns with their upper body (which works but is slow and takes a lot of effort), the instructor should introduce an alternative means of initiating the turn. Various options include: twisting the board by focusing on pushing buttons under the lead foot, rotating the knee by imagining it is a joystick, or using the lead hand to reach towards the nose of the board. These options should be trialed before eliminating the initial problem as you may take away the student's only means of turning.



The following table contains a few common issues that often occur as children progress in their riding. It also includes some example games and analogies that you can use to help create more efficient movements and outcomes.

INEFFICIENCY	TIPS / GAMES / ANALOGIES
Trouble initiating turns due to weight being on the back foot.	<p>“Imagine you have an orange under your front foot and need to squeeze the juice out.”</p> <p>“Imagine holding a wand or light saber in your hand and you want to point it down the hill.”</p> <p>“Your front knee is a joystick or has a light on it. Move into first gear to start the turn or shine the light in the direction you want to go.”</p>
Bouncing or chattering on edges due to straight legs.	<p>Experiment with tall-as-a-house and small-as-a-mouse to feel the extremes.</p> <p>Get low like a duck going through a tunnel.</p> <p>“Imagine your legs are like bike shock absorbers. You need to get low to have a smooth ride.”</p>
Trouble closing turns due to lack of steering.	<p>Play cat and mouse making closed turns in front.</p> <p>Point an imaginary laser at snow guns on sides of the slope.</p> <p>“Imagine driving a racecar around a track, keep steering the car around the corner. You have your front hand on the steering wheel and it is attached to your front knee/hip - the more we turn the more closed the turn will be.”</p>
Over-flexed at the hips.	<p>Toeside: “Imagine you’ve just eaten a huge dinner and have a big belly. Feel your shins touch the front of your boots and gently squeeze them forwards.”</p> <p>Heelside: “Imagine you are sitting in a chair. See how we need to bend our knees more?”</p>
Riding with an open stance.	<p>Encourage a stance like in karate, or a sumo wrestler ready for action.</p> <p>“Imagine balancing an egg on a spoon over the nose and tail of your board without dropping it.”</p> <p>“Imagine a beach ball on the nose of your board, put your hand on top of it and roll it in the direction of your new turn.”</p>

## EQUIPMENT FOR KIDS



Equipment is essential when teaching children. Here we will consider the necessary personal equipment, such as boards and bindings, as well as external and manipulative equipment.

### BOARDS

This is where you tend to see big and heavy snowboards on smaller children. There are some great options these days with reverse-camber, softer boards that children can flex easily. Be aware of boards that are too long and stiff, as these can be tricky for children to use. This is particularly relevant for children going through growth spurts with long limbs and limited muscle mass. Also, be aware of boards that are too wide or too narrow.

### BOOTS

If the boots are too small most children will let you know right away. However, if they are too big or too loose children won't usually say anything as they feel comfortable. Check that the children's boots have been done up tightly, just like you would with adults. Also, check to see if their inner laces are drawn tight. As most children play a sport they will understand that their boots should have a similar tight fit to their other sports shoes.

### BINDINGS

For smaller children, ensure they have bindings that are easy to use, as they don't have the strength and coordination to use the more elaborate bindings. For teenagers, make sure that the straps are extended long enough to fit their larger boots. Bindings should be centred on the board with the boot having equal distance over the edges. Utilise some forward lean to encourage flex in the ankles and knees. Make sure you check angles and stance width.



## HELMETS

Most ski schools make it compulsory for children to wear helmets in lessons. This should also be encouraged by you as the instructor. Snowboarding is considered an extreme sport and, as you are aware, it doesn't take much to catch your edge and hit your head. Helmets should be snug and fitted with the strap done up under the chin at all times.

## EYEWEAR

Eye protection is always necessary in snowy mountain environments, whether it be goggles or sunglasses. The UV rays are intensified from the reflection on the snow which can cause long term damage to unprotected eyes. Parents often forget this when preparing their children for their first snowboarding lesson. Ensure that any children you teach have some form of eye protection, even if it means obtaining some from your resort's lost property box.

## WRIST GUARDS

There are various types of wrist guards, including styles that are worn over the top of gloves, lower-profile models worn under gloves and even ones that are built into the gloves directly. Either way, you need to check that they are fitted correctly and are on the right hand. It is important to note that some wrist guards are very bulky, making it difficult for children to do up their bindings. Children with or without wrist guards should all be shown how to fall safely, regardless of their use of wrist guards.

## APPAREL

Children frequently turn up to lessons wearing inappropriate clothing. This includes both outerwear such as jackets and gloves, as well as the layers underneath. For example, children dressed in jeans, wearing only a t-shirt under their jacket on a cold day, or simply forgetting their gloves. Needless to say, their clothing needs to be appropriate for the environment. Ask if they are feeling hot or cold several times throughout the day. You may have to remove a layer or go inside to warm up. You can also search the lost property box for gloves, scarves, beanies or hire from the resort rental shop.

## EXTERNAL EQUIPMENT

These are items of equipment we find around the mountain. They include lift towers, snow guns, signs, fences, ropes, poles, snow mobiles and grooming machines, terrain park features, these are generally man-made and can be different at each resort. It is important that we make children aware of these and explain the reason that they are on the mountain, as well as ways to stay safe when we are around them. External equipment can also be used to aid us in a lesson. For example, a lift tower or snow gun could be used as a focal point to ride towards or as a stopping point when the visibility is limited.

## MANIPULATIVE EQUIPMENT

This is equipment that can be used by you as the instructor to create fun games and challenge new skills that the students have learned. Examples of manipulative equipment are cones, poles, foam noodles, hula hoops, brushes, and coloured liquid to leave marks in the snow. Really, anything that is safe can be used. Your choice is limited only by what you have available at your snow sports school and your imagination. For example, a pole can be buried in the snow for the children to see if they can ride a flat board over the top of it. This will help build skills required for a 50-50 on a box and give the sensation of sliding on a man-made feature.



## SECTION B - A TECHNICAL UNDERSTANDING OF SNOWBOARDING

## 6

# The Snowboard Turn

TURN SIZE AND SHAPE



TURN PHASES



TURN TYPES



TURN FORCES



## IN THIS CHAPTER WE WILL EXPLORE...

How snowboarders can alter their path down the mountain by making turns of different shapes and sizes. Alongside this, we will look at the different phases of the turn which are particularly useful when communicating the sequence of events throughout a turn to your students. We will also explain the variety of turn types that can be used and consider the forces that impact the turn.

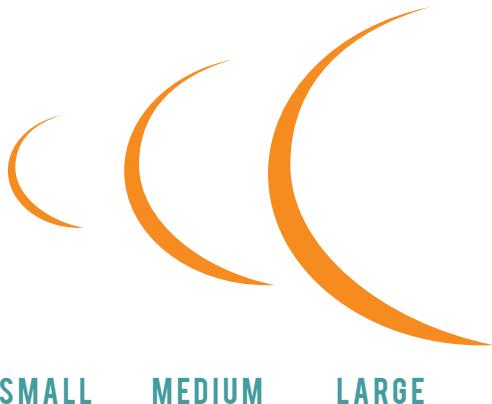


## TURN SIZE AND SHAPE



Put simply, the longer the board spends in the fall line or the more gradually a rider applies movements, the larger the turn becomes. When we define the size of the turn we consider the length and radius of the arc: small, medium or large.

The size of your turn will vary depending on terrain, snow conditions and the type of turn you choose to make.



A rider's rate of descent down the mountain is controlled mainly by the shape of their turns relative to the fall line.

The shape of these turns can be described as open (unfinished) and closed (finished). A closed turn is where the rider completes the turn across the hill, steering the snowboard perpendicular to the fall line. This type of turn will easily allow the rider to control both their forward momentum and rate of descent. Closed turns are used on steeper pitches, or firmer snow conditions, to keep forward momentum down.



OPEN

CLOSED

An open turn is where the rider chooses to use less completion in their turn, where the snowboard does not steer perpendicular to the fall line. Open turns are used on flatter pitches, or slower conditions, to maintain forward momentum. Open turns are a handy technique that snowboarders use on cat tracks or through flat areas.

## TURN PHASES



In order to develop an understanding of how a snowboard turn is comprised, it's best to break the turn down into three main phases: the initiation (or beginning); the control (or body); and the completion (or end) phase. We will also consider the point at which the snowboard changes edge and when a rider should prepare for the following turn.

Note that the different turn phases are very apparent in slower, low level turns but become very blended and more difficult to see as the turns become smaller and speed increases.

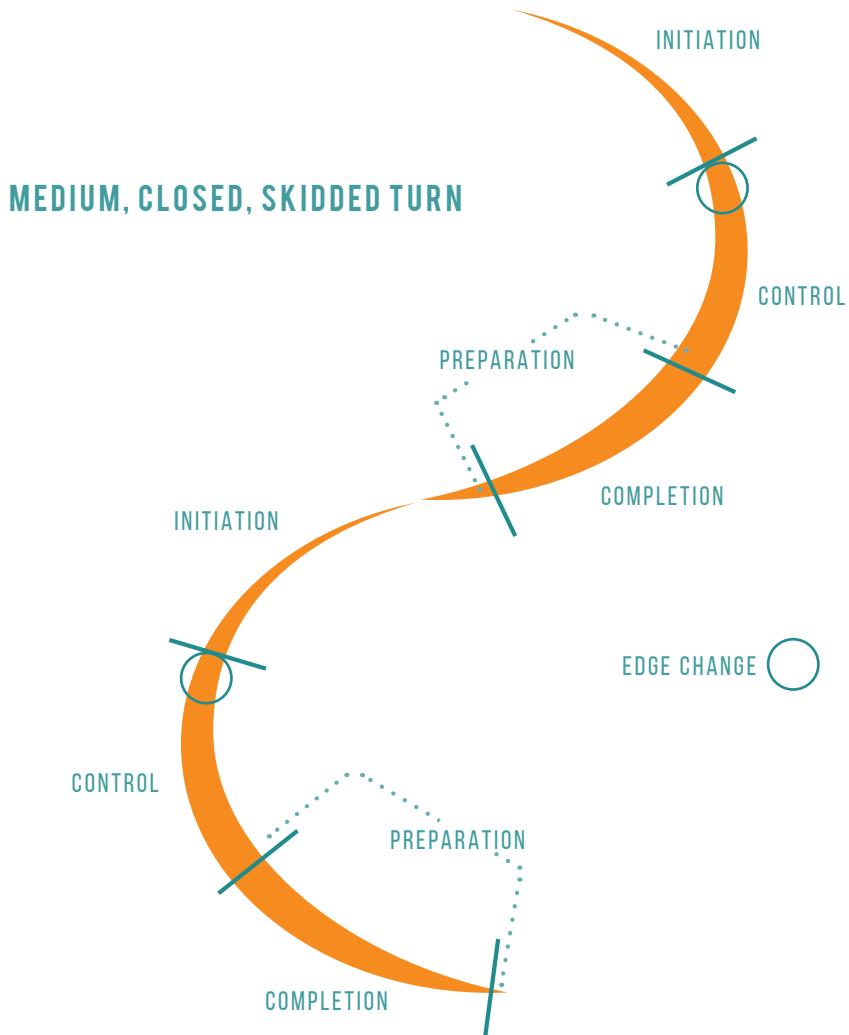
**The Initiation Phase** is at the beginning of the turn. Here, the uphill edge is released and gravity pulls the rider into the fall line. There will always be a lateral movement here to allow edge release, whether this is a direct movement straight across the board or a sequential movement to create torsional twist. Using smaller levers closer to the board is a more efficient and faster method of doing this; conversely, using larger levers is slower but can be more powerful. Other movements that may or may not occur here include extending or flexing to aid unweighting, and rotational movements to aid steering (see Chapter 7 for more understanding on the different movements).

**The Control Phase** refers to the body of the turn, where the snowboard is guided into and through the fall line. There will always be an edge change at some point during this phase. Movements here help to create progressive edging and pressuring, along with some initial steering, to resist the increasing forces acting on the rider and guide the board towards the intended direction.

**The Completion Phase** is where the rider is completing the present turn while preparing to initiate the next turn. Movements in this phase are focused on steering to help create the desired turn shape, whilst also maintaining progressive edging and regulating pressure.

**The Preparation Phase** is focused on preparing for the following turn. This can include movements to help find a neutral position from which to initiate the next turn, or it may simply be verifying the line choice and/or checking for hazards/people. Preparation movements include looking down or across the hill at the approaching terrain and potentially rotating the upper body in the new direction (see Separation and Anticipation under Rotational Movements in Chapter 7).

The edge change always occurs at the start of the control phase. It is the transition point in which we move from maintaining control on our old edge and establish some control on our new edge. The exact timing at which this happens depends on the speed of the rider and the turn size/shape.



The timing of the edge change is not the only thing that changes with different speeds, turn sizes and shapes. The exact timing and length of all the elements above are also dependent on the turn type and terrain. We will look at how these factors change once we have considered the varying turn types.

## TURN TYPES

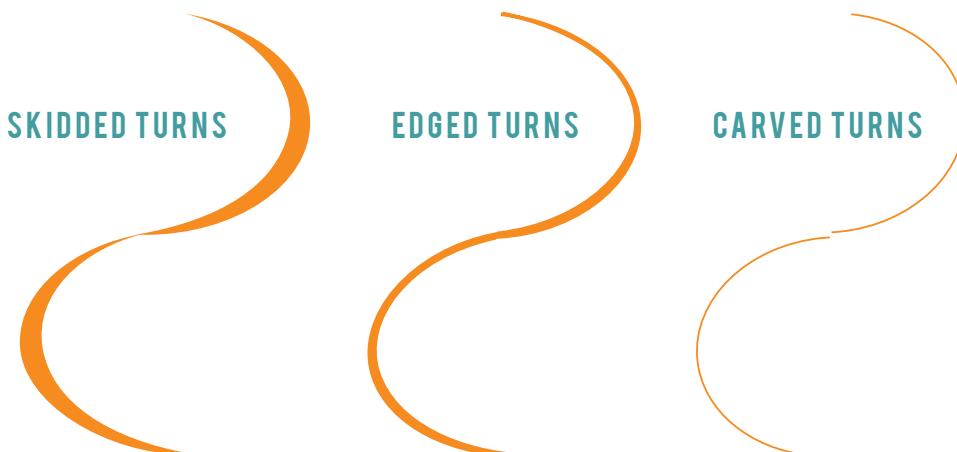


There are a number of factors we can consider when defining the type of turn being used. These include how skidded or carved the turn is, and the method in which we unweight or manage pressure under the snowboard (see Chapter 8 for more information on How the Snowboard Performs).

**Skidded Turns** refer to the amount of edge or snowboard tilt being used within a turn, in combination with the amount of pivot or steering. All turns require a degree of edging otherwise the snowboard will remain flat; however, the amount of edge a rider uses depends on the speed they are travelling and the terrain/snow they are riding on. Beginner snowboarders should be encouraged to create skidded turns, with a particularly low edge angle and smooth steering movements. Skidded turns will also be used by intermediate and advanced riders in situations where they need to keep their speed down or maintain balance.

**Edged Turns** refer to a higher degree of edge or tilt, yet still using some pivot. The resulting track left in the snow is typically narrower than a skidded turn but not pencil thin. Edged turns are often used as a stepping stone to full carving but can also be utilised to create more edge grip in forgiving snow conditions off-trail (see Understanding Steering Angle in Chapter 8 for more information on the combination of edging and steering).

**Carved Turns** refer to a higher degree of edge angle or tilt of the board, along with zero pivot or skid. The resulting track is pencil line thin throughout the turns, which allows the rider to maintain their forward momentum. Note that rotational movements are still utilised within carved turns but not necessarily to create pivot in the snowboard (see Rotational Movements in Chapter 7 for more information).



When making a turn there are two general ways to release pressure as we move towards an edge change: we can either extend vertically and move laterally or flex vertically and move laterally.

The first way a rider can release edge pressure is by extending, meaning the rider will be at their most extended at edge change. This is known as up unweighting. The second way a rider can release edge pressure is by flexing, meaning the rider will be at their most flexed at the edge change. This is known as a down unweighting movement pattern but can also be in the form of retraction turns.

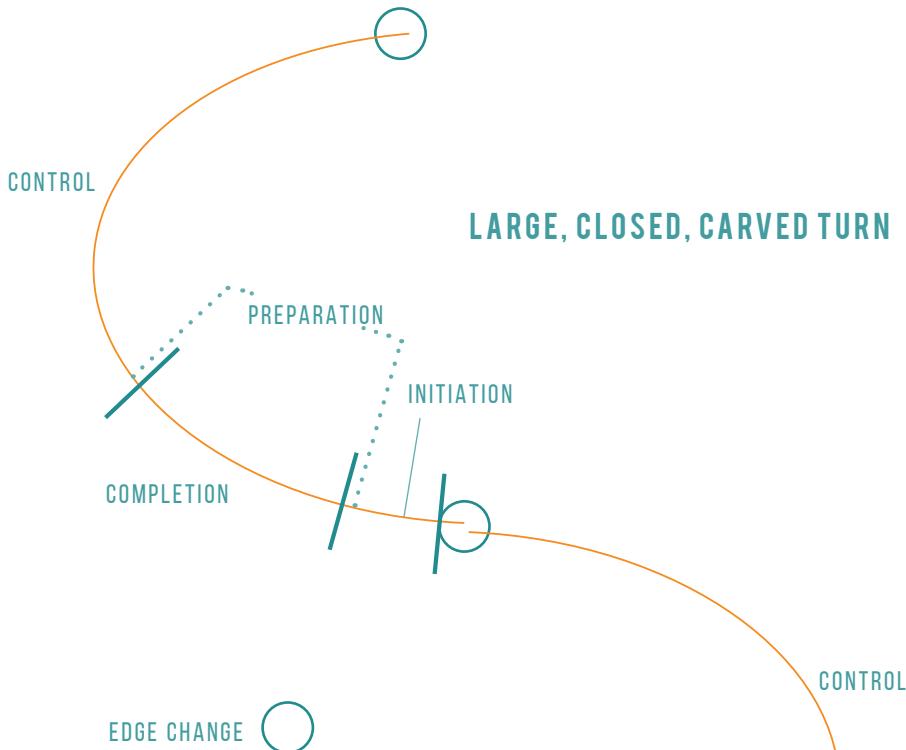
**Up Unweighted Turns** are where the rider extends to release edge grip at the initiation of the turn. The rider is at their most extended as the edge change occurs. While this turn type is commonly used to introduce turning to first time snowboarders, it can also produce and manage large amounts of pressure at high speeds. Up unweighted turns also place the rider's centre of mass (COM) low and stable at the control and completion phase of the turn. For these reasons up unweighted turns are commonly used for large high speed turns on-piste and in race disciplines. Up unweighted turns can be a variety of sizes and shapes.

**Down Unweighted Turns** are where the COM is lowered towards the board to decrease edge grip. Like the up unweighted turn, the down unweighted turn has very controlled smooth movements. However, in a down unweighted turn the rider is lower and stable at the initiation phase of the turn. These turns are often used to make turns in rough terrain that threatens the rider's balance.

**Retraction Turns** are similar to down unweighted turns, where the rider is flexed at edge change but with retraction turns the board is physically retracted towards the COM, by pulling the legs in, as opposed to bringing the COM down to the board. This turn provides a very quick and stable initiation and edge change; it is typically useful for small turns, riding powder, bumps and other terrain where quick direction changes are required.

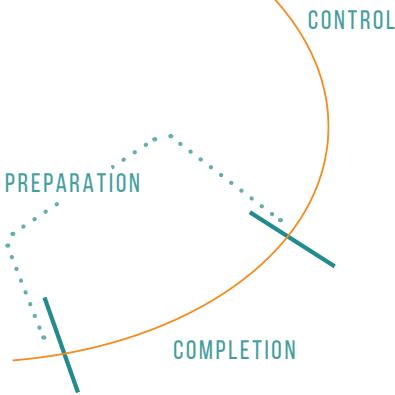
**Terrain Unweighted Turns** are when the legs are softened as terrain features are ridden (e.g. a bump), causing the legs to flex or extend under the COM. Terrain is used to decrease edge grip (and can truly unweight the snowboard) enabling the edge change to take place. It is important to note that terrain unweighting can place the rider either flexed or extended at edge change. If terrain is dropping away at initiation the rider will be extended at edge change and need to flex through the control phase. However, if the terrain is rising at the edge change then the rider can use the terrain to create a flexed position at edge change and then extend through the control phase. Terrain unweighted turns are most commonly used in the bumps but also necessary when managing any changing terrain to maintain flow down the slope like a banked slalom or a boardercross course.

When we combine the aforementioned turn types with a variety of sizes and shapes, the phases of the turn often change as a result. For example, a large, closed, up unweighted carved turn will have a shorter initiation phase, but longer control and completion phases.

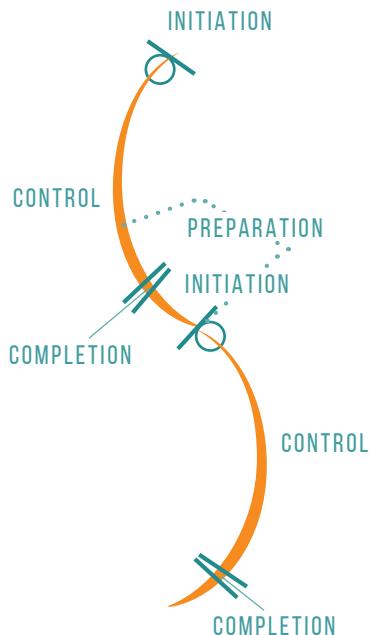


A medium closed, skidded, down unweighted turn in the off-piste will have fairly equal length phases, but the edge change will happen earlier in the turn when we compare it to an up unweighted version of the same size and shape turn that a beginner typically makes.

A small, open retraction turn also has a shorter initiation phase, but a longer control phase and virtually no completion.



## SMALL, OPEN, RETRACTION TURN



### TURN FORCES



Snowboarding is unusual in that, unlike other sports, where speed and forward movement is attained by internal, muscular strength and forces, the main source of speed and forward motion in snowboarding is gravity. An efficient rider knows this and works with gravity rather than against it to travel down the mountain. As a snowboarder rides down a mountain, his or her descent is modified by the terrain ridden. If they allow gravity alone to dictate their descent, they will take the most direct route down the hill, which is down the fall line. To alter this path, they apply forces using their body and board.

When their board is placed on edge, they are able to apply force through their body towards the centre of the turn. This is centripetal force. The higher the edge angle, the stronger the platform they create, thus the greater the centripetal force that can be applied. The force pulling a snowboarder towards the outside of the turn is centrifugal force. If edge angle is low and speed is high during a turn, centrifugal force will cause the board to lose its grip on the snow and wash out.

Looking at it simply, at the beginning of the turn the forces acting upon the rider pull them into the turn and they must be patient and move with these forces. At the end of a turn, the forces combine to pull the rider out of the turn. Here, the rider must be correctly aligned and balanced over the edge to resist these forces to help maintain control and create the desired turn.

## SECTION B - A TECHNICAL UNDERSTANDING OF SNOWBOARDING

## 7

# The Movements of Snowboarding

## IN THIS CHAPTER WE WILL EXPLORE...

How snowboarders balance and move on their equipment, the different movement options, and the methods in which these movements can be applied. As an instructor it is important to understand how to balance and move efficiently in order to achieve specific outcomes.

### STANCE & BALANCE

BASIC STANCE



ACTIVE STANCE



HIGH PERFORMANCE STANCE



### MOVEMENT OPTIONS

FOUR DIRECTIONS OF MOVEMENT



APPLYING MOVEMENTS



QUANTIFYING MOVEMENTS



### VERTICAL MOVEMENT

FLEXING & EXTENDING



UP UNWEIGHTED PATTERNS



DOWN UNWEIGHTED PATTERNS



### ROTATIONAL MOVEMENT

UPPER & LOWER BODY ROTATION



WHOLE BODY & COUNTER ROTATION



SEPARATION & ANTICIPATION



### LATERAL MOVEMENT

MOVING ACROSS THE SNOWBOARD



ANGULATION VS INCLINATION



BALANCED INCLINATION



### LONGITUDINAL MOVEMENT

MOVING FORE & AFT



BLENDING WITH VERTICAL



FORE/AFT PERFORMANCE



## STANCE & BALANCE: BASIC STANCE



Every first-time snowboarder needs to find a position on their snowboard that they feel comfortable standing and balancing in. This will often be a reflection of how they have learned to stand and balance in everyday life.

As the instructor, you are trying to encourage a position that your students can easily move from and back to, once they are in motion. This is known as basic stance. It is slightly lower and more flexed than a normal standing position, with the feet spread at a typical binding's width. The result of an efficient basic stance will put your student's centre of mass in balance.

The Centre of Mass (COM) is a three-dimensional balance point of a rider. Gravity acts on our centre of mass, constantly pulling us towards the centre of the Earth. The COM is not a fixed point. It will alter as the rider moves and changes their position on the board.



### EXAMPLE

#### CENTRE OF MASS:

Imagine that your COM is a small ball inside you moving in a perfectly smooth path, and that you are constantly moving around the ball and adjusting your position to keep the ball on its perfect path.

An efficient basic stance consists of:

- ▶ Even weight distribution over both feet.
- ▶ Ankles, knees and hip joints all relaxed and slightly flexed.
- ▶ Hips and shoulders in alignment with the position of the feet and the contact edge of the board.
- ▶ Torso upright with the arms relaxed by the sides.
- ▶ Head turned and eyes looking in the direction of travel.

This neutral position shown on the previous page will change if the rider is balancing on their toe edge or heel edge as the COM will have shifted.

To balance over the heel edge the rider will need to:

- ▶ Shift the hips and COM towards the heelside.
- ▶ Keep an even flex in the knees and hips to maintain balance, and use less flex in the ankles.



To balance over the toe edge the rider will need to:

- ▶ Shift the hips and COM towards the toeside.
- ▶ Use more flex in the ankles and knees, and less flex in the hips to maintain an upright position and balance over the edge.



It should be noted that all individuals are unique and, for this reason, everyone's basic stance will be slightly different with differing amounts of flex in their joints.

## STANCE & BALANCE: ACTIVE STANCE



Once a rider has started to develop a little confidence making turns on a green slope, they will be ready to begin exploring more of the mountain and develop as a rider. As they explore this new terrain, go faster or learn their first tricks, they will have less time to react and gain balance. This is due to the increased forces they are dealing with and how rapidly they occur. To be able to maintain a balanced position they will need to become more reactive with their stance and movements. Essentially they will have to make faster and more precise adjustments to remain balanced and stay in control.

**Reactive Balance** is the term used for this. It is an automatic response that creates movement to keep the rider's COM stable and stop the rider from falling over. Reactive balance only improves with practice and experience.

An active stance includes:

- ▶ A little more flex throughout all joints.
- ▶ A slightly lower COM than with a basic stance.
- ▶ Stronger use of muscles, yet staying loose in the joints.
- ▶ Similar positional differences between the toe and heel edge.

Time is needed to explore and develop effective positions from which to start and finish turns. The most effective position can change slightly depending on the task or terrain, but having an efficient stance to move from and come back to is key.

Being strong, yet remaining relaxed, will help the rider move more quickly to maintain balance and deal with the increase in forces. (See Turn Forces in Chapter 6.)



## STANCE & BALANCE: HIGH PERFORMANCE STANCE



At this level a rider should have developed a strong stance on both edges and show the ability to be reactive in their response in managing the increased forces. They are now ready to explore the whole mountain and develop new stance options that will enable them to ride more challenging terrain at faster speeds and with higher performance. They will also need to become more proactive, rather than reactive, to deal with this.

A high performance stance will allow the rider to create effective movements in any direction, to help increase or regulate performance, whilst maintaining a constant smooth and balanced path with the COM. As discussed earlier, the COM changes as the rider moves into different positions on the board. A high performance stance allows us to become more proactive with our COM.

**Proactive Balance** is the term best used to describe this. Being a proactive rider focuses on assessing and understanding the problems before they happen, rather than reacting as they happen. Anticipating what is about to happen gives you more time to adjust your responses accurately and effectively. The outcome is the most efficient and fluid riding for an individual, in any specific situation. A high performance stance helps to achieve this.



A high performance stance will be slightly different for all riders and tasks. It is constantly moving and adjusting, and includes the following:

- ▶ A lower COM and more flex throughout all joints, including the spine.
- ▶ The hips and shoulders in a more rotationally open position, often aligning to the same angle of the front foot.
- ▶ Allowing the hips to move slightly over the back foot, ensuring that the front knee and ankle both stay flexed.
- ▶ Maintaining strength through the back leg, yet suppleness in the front leg.



This rotationally open position allows the rider a greater range of movement through the whole body. This enables the rider to create more edge, be more powerful with steering, and regulate pressure faster, without having to shift their COM too far inside the arc of the turn.

This position also allows the possibility of creating different angles through the shoulders, to align them to the pitch of the slope. When used appropriately, this can aid stability at high speeds and help to maintain pressure when riding with increased edging. This is not only beneficial in carving, but also in many aspects of freestyle and freeriding.

## MOVEMENT OPTIONS: FOUR DIRECTIONS OF MOVEMENT



Snowboarding is an active sport that requires constant movement to maintain balance and control what the board is doing. To understand this further, the movements are broken down into the four directions that we are physically able to move in, in relation to the board.

**Vertical** - moving the body or parts of the body up and down.

**Lateral** - moving the body or parts of the body (COM) across the board toward the toe or heelside.

**Rotational** - turning the body or parts of the body around an axis.

**Longitudinal** - moving the body or parts of the body (COM) towards the nose or tail of the board.



**EXAMPLE**

We will very seldom use only one movement on its own. Instead, there are usually several or all the movements happening in unison.

**WHEN DOING AN OLLIE:**

When doing an ollie, the rider needs to move vertically to get low and longitudinally to load the tail for more pop.

**MOVEMENT OPTIONS: APPLYING MOVEMENTS**

As an instructor, your understanding of movements should extend beyond the four directions. You will need to know how each movement (and blend of movements) affects the snowboard to achieve a specific outcome or level of performance.

On top of this, understanding of the specific body parts that are moving will help to give clarity to what you are trying to achieve with your students. Once you have established the best movement option to get the desired outcome and board performance, you will need to consider how these movements are best applied.

Here are three ways to think about the application of movements:

- ▶ How LARGE or SMALL is the movement that my student needs to make?
- ▶ WHEN and for HOW LONG should the movement happen?
- ▶ How much EFFORT or FORCE should they put into the movement?

The three questions above can be thought of as:

- ▶ The RANGE of movement that is needed.
- ▶ The TIMING of the movements.
- ▶ The amount of POWER being applied to the movements.

**EXAMPLE****WHEN DOING AN OLLIE:**

The rider needs to use a medium range of vertical movement combined with a lesser range of longitudinal movement, then time the pop so the front foot lifts off the snow before the back foot. As the board bends, the rider needs to push with a degree of effort or power to get the board in the air effectively.

## MOVEMENT OPTIONS: QUANTIFYING MOVEMENTS



This is the ability to effectively measure the range of movement (or range for short), timing or power required or being used with a specific movement. This will not only help with measuring the amount of movement that is needed, it will also allow us to gauge any inefficiencies that are occurring.

Simply put, if any of the following three principles are not used appropriately, the task and/or performance of the board will be inefficient. For example, your student may be using the necessary movements but there may have been too much movement in one direction, or the movement happened too fast or with too much force.

### RANGE

This is the amount of movement or blended movement a rider is using or has access to. It can also be used to describe the amount of movement being used in a specific part of the body. Range of movement can vary greatly from person to person, and is influenced by many factors. Fitness levels, flexibility, strength, experience and being warmed up, are all relevant here. All riders have extremities within their range. Although it is good to explore these extremes, you should encourage movement within a range that is comfortable for each student yet also suitable for the task. Too much or too little, and the performance or balance of the rider will be compromised. Range of movement needs to work alongside timing and power to be effective.

### TIMING

This is when a movement happens and how long it lasts for. There are two aspects to consider here:

#### DURATION (how long a movement or position lasts for)

1 Any movement made over a short duration will occur faster than the same movement made over a longer duration. The duration a movement lasts has a direct effect on the performance of the board and balance of the rider. For example, rotation of the hip and knee over a short duration will create a more open turn. A longer duration of the same movement will create a more closed turn. Sometimes the duration of a static position needs to be considered. For example, a tail press that lasts for two seconds when the rider needed it to last for three seconds to get to the end of the box.

#### SEQUENCE (when a movement happens)

2 This defines when a movement occurs in relation to another movement, or a phase of the turn/trick. If a movement is out of sequence then it becomes very difficult to create the desired performance and the rider will have to compensate in some way to stay in balance.

## POWER

Power, or the amount of physical effort/force used to move, will deeply impact the result and performance of the board. Power can be applied to movements in a subtle and gentle way, or with strong and even explosive force being used. For example, when making a medium closed skidded turn on smooth snow the rider will need little effort with gentle movements. On sticky, slushy snow the same turn will require more strength and physical effort to steer the board. In every aspect of snowboarding, power needs to be applied appropriate to the desired outcome and performance aiming to be achieved. Too much or too little power and the outcome will be very different.

### EXAMPLE

#### CHANGING THE SEQUENCE OF VERTICAL MOVEMENT IN A TURN:

When changing your vertical movement from extending to flexing at the edge change, your up unweighted turn can become a down unweighted turn. If you change the duration in which the vertical extension is made, your turn will change in shape and/or size. If you then add more force to this extension, you can create a large spray or the board may rebound when it is unweighted again at the next edge change. Using an appropriate amount of range vertically is crucial to both the timing and power.

Power, timing and range are constantly present and linked together in all aspects of snowboarding, from first-timers to the most experienced riders. Using this as a tool to quantify movements will take time to perfect.



Rider: Keith Stubbs  
Photo: Richie Johnston

## VERTICAL MOVEMENT: FLEXING & EXTENDING



Vertical movement happens any time a rider moves part of their body up or down. This is achieved through flexion or extension movements in one or more joints within the body.

The main joints that are used in these flexing and extending movements are the ankles, knees, hips and spine. Efficient vertical movement is needed to maintain balance on a moving board. It is also used in everything from turning to jumping.

Vertical movements are used to help manage the amount of pressure in or under the snowboard. Flexing and extending movements work similar to shock absorbers on a mountain bike to help give you a smoother ride. You may have experienced the lack of efficient vertical movement that resulted in the board chattering or bouncing (inefficient pressure management).

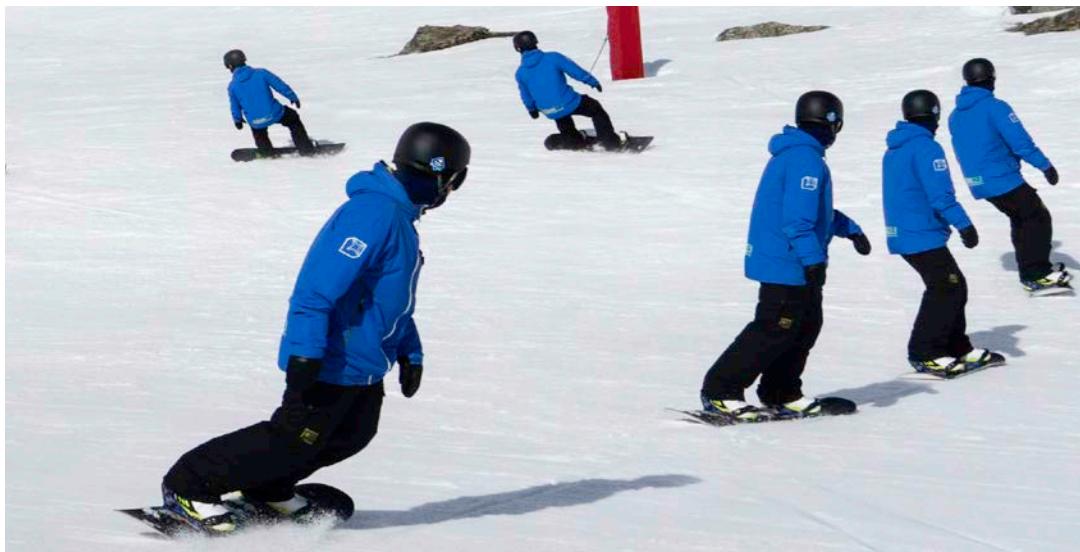


## VERTICAL MOVEMENT: UP UNWEIGHTED PATTERNS



An up unweighted turn consists of an extension movement to help the rider flatten the board and move to the new edge. During this extension, pressure will begin to decrease as the edge's grip on the snow is released. Then the rider will begin to flex down helping to increase edge grip and manage the pressure building up in the board through the control and completion of the turn. (See Turn Types in Chapter 6.)

Once a student is able to make flexing and extending movements in this way, with appropriate timing, they can start to explore the amount of vertical movement and the parts of the body that they are able to use. They will also be at a stage where they can experiment with faster, slower or independent vertical movement to match up with the terrain, task and speed they are riding. As a general rule, the further away from the board the movement is, the slower it is; however, it can be more powerful. Ankles are typically fast but with limited power. Knees and hips are slower but with more power.



Vertical movement is also used as a blending tool and will often be needed to help make other movements work effectively.

## VERTICAL MOVEMENT: DOWN UNWEIGHTED PATTERNS



A down unweighted turn has the opposite vertical timing to that of an up unweighted turn. The rider now flexes through the initiation of the turn to help decrease edge grip and/or release pressure and flatten the board at the edge change. They will then begin to make an extension movement to increase edge grip and create/regulate the pressure under the snowboard throughout the control and completion of the turn.

This turn type allows the rider to make much faster and more controlled flexion movements to change edges. Being in a lower position as they change edge provides balance at the most critical part of the turn. The rider is able to use gravity, rebound from the board and/or the terrain to help bring their COM closer to the snowboard. In this way riders can utilise the build-up and release of pressure to help the initiation of a turn. This is why it becomes the more effective option in a lot of upper level riding.

How the rider chooses to create and regulate the pressure under the board will change the outcome. An efficient rider understands this and will make adjustments in their vertical movements through timing changes, the amount of range used within specific body parts, and the way they apply power. These decisions help to create the outcome they are trying to achieve.

## ROTATIONAL MOVEMENT: UPPER & LOWER BODY



Rotational movement happens any time a rider moves part of their body by turning it toward the toe or heel edge, around an axis. There are two main areas of the body that we can rotate or turn:

### THE LOWER BODY

**1** This is essentially the legs, through the ankles, knees and hip joints. It includes the front leg/knee, back leg/knee, or both legs/knees, rotating around the ankles and hip joints.

### THE UPPER BODY

**2** This includes the hips, spine, shoulders and head. Upper body rotation is when one or all of these joints turn around the spine.



The image to the left shows a larger upper body rotation, with a smaller amount of lower body rotation.

As an instructor, you should be encouraging beginner snowboarders to use smaller movements from the lower body when learning to make their first turns. This is complemented with gentle and smooth movements of the upper body to maintain rotational alignment to the direction they are travelling in.

Note that hips are the point where the upper and lower body are technically divided and can be included as either upper or lower body, depending on whether you're referring to the movement out of the hip joint, or the hips themselves rotating around the spine.

Rotational movement is needed to pivot and steer the snowboard throughout a turn. It is also used in a lot of freestyle maneuvers. Most rotational movements need to be blended with vertical movement, or at least come from a comfortably flexed position, for them to work effectively. Rotational movement is also influenced by lateral and longitudinal movements. A board that is flatter to the snow will pivot more easily and if you shift your weight toward the nose or tail the pivot point will move along the length of the board.

## ROTATIONAL MOVEMENT: WHOLE BODY & COUNTER ROTATION



Efficient rotational movement is a combination of the body parts and how much they are rotated, mixed with appropriate vertical, lateral and longitudinal movements. By changing any or all of these, pivoting and steering the board (and spinning in the air) will also change, creating a different outcome.

As a rider progresses and attempts more challenging terrain or tasks they will need to increase their use and awareness of rotational movement by mixing and blending upper and lower body rotation with the other movements. They will also need to change the timing of these movements making them faster, slower, sooner or later. Rotational movement can also be utilised as a whole body rotation and a counter-rotation movement.

**Whole body rotation** is to rotate the entire body, from ankles to head, at the same time yet potentially with varying degrees. This happens to a small degree in the majority of turns made; however, it is more commonly used as riders increase their forward momentum and use of side-cut.

**Counter-rotation** is when the upper and lower body move in opposite directions rotationally, at the same time. This form of rotation is commonly used in freestyle and in making fast adjustments; however, it is also often seen in self-taught riders as a means of turning, which is less effective.

Rider: Ollie Midgley  
Photo: Keith Stubbs



## ROTATIONAL MOVEMENT: SEPARATION & ANTICIPATION



As a rider progresses into steeper, more challenging terrain, or more advanced freestyle riding, their need for rotational movement options will increase.

By this stage, they should have the ability to blend the other three movements efficiently or understand how they interact with the rotational movement being applied. The rider is now ready to explore other ways to utilise rotational movements of the upper and lower body, in the form of separation and anticipation.

These rotational movement options allow the rider to create, store and apply power and performance effectively. This is done through muscular tension in our core, with the rotation happening around the spine.

### SEPARATION

This is when the upper and lower body have a different rotational alignment. This can be described as keeping the upper or lower body in an open or closed position to the board. These separated positions are used to create specific outcomes for different tasks and terrain, utilising energy or tension within the core, or for the purpose of balance when riding at high speeds (see High Performance Stance earlier in this chapter).

### EXAMPLE

#### IN A BOARDSLIDE:

Separation between the upper and lower body allows the shoulders to remain in line with the feature (even though the board is at 90 degrees to it), so the rider can exit with the nose of the board pointing down the landing. To do this effectively, the rider must keep some tension in his/her core muscles.





### EXAMPLE

#### RIDING STEEP TERRAIN:

Small, closed, powerful turns are typically necessary when riding steep, off-trail terrain, to control speed. Utilising anticipation movements through the preparation phase of the turn will help to initiate the turn quickly, with a powerful rotational force throughout the rest of the body.

### ANTICIPATION

This is a form of separation that allows the rider to build and store energy through muscular tension and timing of the movement appropriate to the turn or feature. It is commonly used in all mountain situational riding by making an early rotational movement of the upper body as a preparation movement into the next turn, or at the take-off from a feature. This causes tension to build in the core muscles, which can benefit the following turn or trick. The energy in the core is then released to aid the initiation and steering/pivoting of the snowboard or spin in the air/off the end of a rail or box.



*Rider: Richie Johnston  
Photo: Keith Stubbs*

## LATERAL MOVEMENT: MOVING ACROSS THE BOARD



Lateral movement happens any time a rider moves part of their body across the board. These movements can come from the whole body or just a specific part of the body. For a lateral movement to be efficient the rider will need to blend in vertical and, often, rotational movements. Efficient lateral movement is needed to balance and move from edge to edge. Snowboarders use lateral movement to help tilt and torsionally twist the board.

**Tilt** of the snowboard refers to edging or the degree of edge angle being created. This is described in more detail in Chapter 8 on How the Snowboard Performs.

**Torsional twist** of the snowboard is used to help initiate a turn. One side of the body is used independently from the other (sometimes referred to as independent lateral movement). This is most efficient when it is created through the front ankle, knee and hip. It is used to help start the turn by releasing edge grip at the nose of the board. For it to work well, the rider should move the lead knee and hip across the board, whilst moving vertically.



## LATERAL MOVEMENT: ANGULATION VS INCLINATION



Efficient lateral movement is having the ability to move across the board whilst keeping the COM in balance. To be able to do this the rider must understand that there is a blend of vertical and lateral movements required to create tilt and stay in balance.

As a rider begins to explore steeper blue terrain and travel faster they will need to learn how to tilt their board on edge more. This can be achieved through a balance of angulation and inclination.

**Angulation** is to create angles within your joints by flexing vertically with the ankles, knees, hips and spine. It is possible to angulate without inclining.

**Inclination** is to shift the COM further away from the edge by inclining the whole body to the inside of the turn. You can incline without angulation.



For any balanced turn there needs to be both inclination and angulation to allow the COM to move to the inside of the turn efficiently. If a rider inclines excessively, however, they will be more vulnerable to falling, as their COM is too far away from their base of support. If the rider does not incline enough, the board will skid and lose grip on the snow, or they may even fall to the outside of the turn. This is where angulation is needed. The rider is able to flex their ankles, knees and hips, to tilt the board on edge, whilst keeping the COM balanced over and closer to the base of support.

## LATERAL MOVEMENT: BALANCED INCLINATION



As a rider starts to develop stronger edging and further performance, and travel faster in more challenging conditions, the amount of inclination and angulation required will need to adapt. This will depend on the terrain, snow conditions, speed and ability of the rider. The timing of how inclination and angulation is applied will also need to be adjusted.

As the performance increases, so do the forces acting on the rider. This can be used to the rider's advantage however. Using the whole body as a large lever when inclining can create a lot of power in a turn, whilst maintaining a particularly high edge angle. Lots of forward momentum and good snow conditions are both necessary to achieve this; however the timing of when inclination blends with angulation is crucial.

### EXAMPLE

#### TIMING INCLINATION WITH ANGULATION:

A down unweighted movement allows the rider to make very fast and stable lateral movements at the initiation of the turn. The rider is now at their lowest point vertically and is able to apply considerable power through extending laterally and vertically, creating the required edge angle by adjusting inclination and angulation throughout the turn. The amount of movement (or range) used and duration (timing) over which it is applied must be specific to the conditions and outcome they are trying to achieve.

Other movements can also be blended into this balanced inclination, to create more power within the turn or provide additional balance. (See High Performance Stance earlier in this chapter.)

Rider: Richie Johnston  
Photo: Keith Stubbs



## LONGITUDINAL MOVEMENT: MOVING FORE & AFT



Longitudinal movement, or fore-aft, happens any time a rider moves a part of their body along the length of the board. This is achieved by using flexion and extension movements in one side of their body. There may also be a rotational movement added depending on the task the rider is attempting. Fore and aft movement is required to maintain balance on a moving board. It is also used in everything from turning to jumping.

First-time snowboarders should be encouraged to keep equal weight over both feet, to maintain longitudinal alignment. This will keep the managed pressure in the centre of the board. By moving towards the nose or tail the rider will change where the pressure is being applied. This movement will be needed for tasks like tail presses and ollies.



## LONGITUDINAL MOVEMENT : BLENDING WITH VERTICAL



As a rider progresses and begins to explore different terrain, simple tricks and riding at speed, they will need to distribute pressure to different parts of the board for specific purposes. This is done by actively moving the COM along the length of the board or through moving the board longitudinally underneath the COM. The rider is able to blend their longitudinal movement with vertical movement to create a form of independent vertical, utilising different amounts of flexion and extension within each side of the body. This helps to keep the rider's COM in balance.

As a rider begins to fine-tune which specific body parts they are using to blend the longitudinal and vertical movements together, they can be more precise with their pressure distribution. This will allow the rider to store and release pressure in the snowboard.

Longitudinal movement can also be blended with lateral movements to aid edge grip, or with rotational movements when performing tricks like a butter.

### EXAMPLE

#### HOLDING A PRESS:

If you flex your back leg and hold that position you can create a tail press. The further toward the tail you move, the bigger the tail press becomes but the further back your COM also moves. Blending vertical movement efficiently will help to keep your COM in balance and release the pressure quickly to create an ollie.

### LONGITUDINAL MOVEMENT: FORE/AFT PERFORMANCE



Once a rider has learnt to blend longitudinal movement with vertical, rotational and lateral, they are ready to explore how power and timing can be applied to increase performance. As discussed earlier, the stance a rider is using is relative to the level of performance.

A high performance stance enables a large range of longitudinal movement through the lower body, whilst maintaining a stable upper body. The rider can now move from a longitudinally centred position, shifting aft to pressure the tail and increase edge grip through the control and completion phases of the turn, then begin to re-centre again through the preparation phase.

Timing this longitudinal movement with turn phases is a technique that can be utilised in any turn; however, the power and range must also be adjusted depending on the outcome the rider is wanting to achieve.

By understanding how all movements are constantly being blended and regulated, experienced snowboarders are able to make quick and often powerful fore/aft movements in most situations they ride. From slashes in powder and technical butter combinations, to the subtle adjustments required to deal with sticky slush.



Rider: Will Jackways  
Photo: Keith Stubbs

## SECTION B - A TECHNICAL UNDERSTANDING OF SNOWBOARDING

## 8

# How The Snowboard Performs

## IN THIS CHAPTER WE WILL EXPLORE...

*The outcomes of blended movements through use of timing, power and range, and how the snowboard performs with edging, pressuring and steering. As well as the various movement options an instructor needs to understand how the snowboard should perform for specific tasks and outcomes.*

### BOARD PERFORMANCE



### EDGE-PRESSURE-STEER SEQUENCE IN TURNS



### UNDERSTANDING STEERING ANGLE



### CREATING & MANAGING REBOUND



## BOARD PERFORMANCE



Board performance refers to the actual outcome within the snowboard or what is physically happening to it during a turn or trick. As explored in Chapter 7, when you move your body laterally, rotationally, vertically or longitudinally the board is manipulated to tilt onto its edge, torsionally twist, pivot around an axis, or flex and bend (otherwise known as cambering and decambering).

The edging of the snowboard is affected by tilting and torsionally twisting the board, predominantly through use of lateral movement. Pressure is created and managed as the snowboard flexes and bends, both from nose to tail and cambering/decambering, through a combination of vertical and longitudinal movements. Steering is created through rotational and lateral movements primarily, and is a balance between the amount of pivot and tilt used.

By understanding the way a snowboard performs, an instructor can accurately describe what should happen or what is actually happening to the board in any given task.

### BOARD PERFORMANCE

#### EDGE



Tilt & Twist

#### PRESSURE



Flex & Rebound

#### STEER

Pivot & Spin



Rider: Ollie Midgley  
Photo: Keith Stubbs

To fully understand how edging, pressuring and steering work in relation to the turn or a trick, it is necessary to have a knowledge of the side-cut, length, camber profile and flex of a snowboard (see Snowboard Equipment in Chapter 22).

## EDGING

Edging is used to increase and decrease grip on the snow surface. During the initiation of a turn, edging in the snowboard must decrease, or flatten to allow it to change edges. In effect, this is the edge angle of the board reducing to a flat base before increasing again on the new edge. This may occur as torsional twist to flatten the snowboard at one end before the other, or it may be tilt through the entire running length of the board. Edging of the snowboard will then continue throughout the completion phase of the turn.

The angle and the rate that the board is twisting or tilting will greatly affect the path the snowboard will take, as well as the performance, unless influenced through pressuring and steering.

Here are some key points about edging the snowboard:

- ▶ Higher edge angles will create more edge grip and, with momentum, the result is less skid and an increase in speed as the board starts to carve.
- ▶ Lower edge angles will generally result in skidding of the board through less grip on the snow (see Understanding Steering Angle later in this chapter for more about this).
- ▶ As a board is torsionally twisted, edge grip will be released and the nose of the board will seek the fall line. The amount of twist used, and rate at which it is applied, will affect the release of edge grip at the start of the turn.



The amount of edging required, and the rate at which it is applied, is dependant on the terrain, snow conditions and task the rider is trying to achieve.

It should be noted that edging of the board may need to be completely eliminated at times, especially when riding boxes and rails.

## PRESSURING

Pressuring is used to create, manage, distribute and release flex and bend in the snowboard. Within a turn, pressure is generally released in the initiation phase to allow for an easier edge change. As the board moves onto the new edge, pressure can be applied from somewhere within the control phase (where exactly depends on the turn) through to the completion phase. Pressure is then released again through the initiation phase.

Pressuring of the snowboard during a turn has a direct relationship to edging. The faster the board travels and the higher the edge angle, the more the board will bend or flex through the forces acting on it (see Turn Forces in Chapter 6). Pressure can also be distributed to different parts of the board, such as the nose, the tail, the centre or throughout the whole board. This is used in many freestyle aspects but can also be applied in turns.

Once pressure has been applied to the snowboard, at some stage it will have to be released. How the pressure is released will affect the overall outcome. Most snowboarding relies on efficient, progressive management and regulation of pressure to suit the task and terrain.

At times, pressure will be the only performance being utilised. For example, in an ollie or nollie, where there is no edging or steering required, just creating a large increase in pressure, flexing the tail of the board, then a rapid release (or rebound) of pressure.

Here are some key points about pressuring the snowboard:

- ▶ Managing pressure through the centre of the board will bend the entire running length, enabling even edge grip.
- ▶ Distributing more pressure towards the nose of the board will make the tail lighter. Using twist to initiate a turn may become easier as a result.
- ▶ Directing pressure towards the tail when riding through the completion of a turn can help to increase edge grip. Pressure should always be increased and decreased as smoothly as possible, relative to the terrain, turn or trick.



## STEERING

Steering is used to help direct the snowboard in the desired direction of travel. During a turn, it is best applied once edging and pressuring of the snowboard have begun. Steering is most prominent from the control through to the completion phase of a turn.

The amount of steering that is needed, or can be applied, is directly related to the degree of edge and pressure in the snowboard. In most cases steering begins in the leading half of the snowboard, around the front foot, with the back half following.

Here are some key points about steering the snowboard:

- ▶ A lower edge angle will enable the board to pivot easily, allowing a smaller turn, if desired. Creating a small turn with a higher edge is only possible with an appropriate increase in rotation (see Understanding Steering Angle later in this chapter).
- ▶ As the edge angle increases and pivot becomes minimal the board's side-cut has a greater effect on the steering.
- ▶ Distributing pressure along the length of the board also has a significant effect on steering. Pressure towards the nose will make steering easier, whilst pressure towards the tail makes steering harder or less efficient.

The aim in most turns is to remain centred to enable efficient steering. The timing and amount of steering needed will vary depending on the task and terrain being ridden. In some situations there may be a need to eliminate all edging and pressuring whilst steering, like in a boardslide on a box or rail. In this situation, steering is better referred to as pivot.



## EDGE-PRESSURE-STEER SEQUENCE IN TURNS

The edge-pressure-steer sequence is utilised in most balanced turns and can help to create understanding around the chain of events that occur. It can be seen as a series of decisions made by the rider (consciously or unconsciously) to achieve a particular style of turn and can also be used to help identify inefficiencies in the performance of the board, if this sequence is altered.

**First decision (edging)** - In any turn a rider must first make movements to create the edge change. The rider makes a decision as to how quickly the board should flatten (be it with tilt and/or twist), when the edge change should occur, and how quickly they apply tilt on the new edge.

**Second decision (pressuring)** - Once on the new edge, the rider must decide how much pressure they can apply to the edge, how quickly they are going to apply it, and where within the snowboard to distribute that pressure. They must also choose whether they are making an up unweighted or down unweighted movement pattern to achieve the above; however, this decision begins earlier during the preparation phase and is a continuous adjustment to allow for changes in terrain and snow conditions.

**Third decision (steering)** - Whilst pressure is being applied to the new edge, the rider chooses how much steering to apply and which parts of the body they will utilise. This depends completely on the size and shape of the turn being created, but is affected greatly by the amount of edging and pressuring already being used. Whilst steering through the completion phase of the turn, the rider begins to plan for edging and pressuring movements in the following turn - this is known as the preparation phase.

Note that whilst this can be seen as a series of decisions, humans do not possess the ability to make ALL of these decisions completely in the moment. Many of the factors described above happen unconsciously or as a reaction to the previous decision. They can, however, be seen as a domino effect of decision making that may lead to a positive performance outcome or a potential inefficiency (see The Domino Effect in Chapter 10 on Rider Analysis).

### EXAMPLE

#### RIDING STEEP, OFF-TRAIL TERRAIN WITH VARIABLE SNOW CONDITIONS:

You're making small, skidded, down unweighted turns. You choose to change your edge early in the turn using a little torsional twist but moving across the board quickly to a platform on the downhill edge. When on the new edge you begin extending a little too fast, putting your COM further inside the turn and creating a high edge angle with lots of pressure. This, in turn, limits your steering and makes it hard to close your turn and control your speed.

The timing, power and range used within the sequence will dramatically affect the overall performance outcome within the board.

The edge-pressure-steer sequence should be specific to the task and can be applied to freestyle as well as turns.

**EXAMPLE****A FRONTSIDE 360 ON A SMALL PARK JUMP:**

As you're taking off from an edge, the amount of edge angle used here is crucial. Too much edge and you end up leaning too far over your heels, not enough edge and you have no platform from which to pop. In this example, pressure is actually about regulating it throughout the transition and the steer is now a spin. As you leave the lip of the jump there is an automatic release of pressure, allowing you to get your board in the air. A strong and well-timed rotation movement creates the right amount of spin; however, if you try to rotate (i.e. steer) too early, before the pop, the spin will turn out poorly, and will be under or over-rotated.

**UNDERSTANDING STEERING ANGLE**

The steering angle of the board is measured through the path the nose and tail take on the snow surface. Put simply, a perfect carve has a steering angle of zero because the nose and tail are taking the same path. A skidded turn will have a degree of steering angle, because the nose and tail are taking different paths. The larger the steering angle applied, the more skid will be present.

The tracks left in the snow will allow you to see how steering angle increases then decreases throughout a turn unless it is a pure carve. The width of the track left and where it increases and decreases shows the amount of steering being used, when it was used and the duration it was used for.

By understanding steering angle the instructor can use edge-pressure-steer to quantify and describe what is or should be happening with the performance of the board. This knowledge is then applied in relation to the snow conditions and terrain.

## CREATING & MANAGING REBOUND



Utilising the rebound created in the snowboard is a vital part of high level riding. Essentially, rebound is the stored energy created through pressuring (bending and flexing) the snowboard. What a rider chooses to do with this energy will affect the overall outcome of the task.

Rebound can be stored anywhere from the nose to the tail of the board, as well as directing it to the desired edge, if required. Creating rebound for high performance tasks takes time and practice. Timing is crucial to creating rebound, however the amount of range and power applied can also greatly alter the result.

That being said, creating rebound is often the easier part. How the energy in the board is released and managed is actually the more valuable skill. Rebound can be regulated to release the stored energy at different speeds, slowly or quickly. For example, in a smooth progressive high performance carve, the rebound can be released quickly resulting in a snappy, aggressive edge change with the board leaving the snow. Alternatively, it can be released with more patience and strength, resulting in a slower, more progressive edge change, whilst maintaining contact with the snow.

Rider: Richie Johnston  
Photo: Keith Stubbs



## SECTION B - A TECHNICAL UNDERSTANDING OF SNOWBOARDING

## 9

# Basic Biomechanics

JOINTS



CONNECTIVE TISSUE



MUSCLES



INJURY PREVENTION



## IN THIS CHAPTER WE WILL EXPLORE...

A brief overview of the basic biomechanics utilised when snowboarding. This will help to create an understanding of some of the movements needed when riding. In turn, it will help you to present the most efficient movement options when teaching and train your eye to really pinpoint the origin of movements when analysing snowboarders. Additionally, it will give you a better understanding of your own riding and help you to progress to that next level.

Snowboarding, like most sports, relies heavily on balance. This can be broken down into stationary balance and dynamic balance. Stationary balance refers to the rider's position over the snowboard or natural equilibrium, with the centre of mass remaining equal between the edges, and the nose and tail of the board. Dynamic balance is considered the action of finding equilibrium via making reactive movements to the forces acting upon the rider's body or board's performance.

When learning about basic biomechanics of snowboarding, we need to consider the main joints that are used and how the muscles, tendons and ligaments interact with these joints.

## JOINTS



There are three main types of joints, but many different variations of these...

### BALL-AND-SOCKET JOINTS

These are joints that have the ability to flex and extend as well as rotate. Examples of these are the hips and shoulders.

### HINGE JOINTS

These are joints that can only flex and extend in a single direction. An example of this is the elbow joint. The knee is also a type of hinge joint, referred to as a modified hinge joint. It flexes and extends, glides and has a minimal amount of rotation.

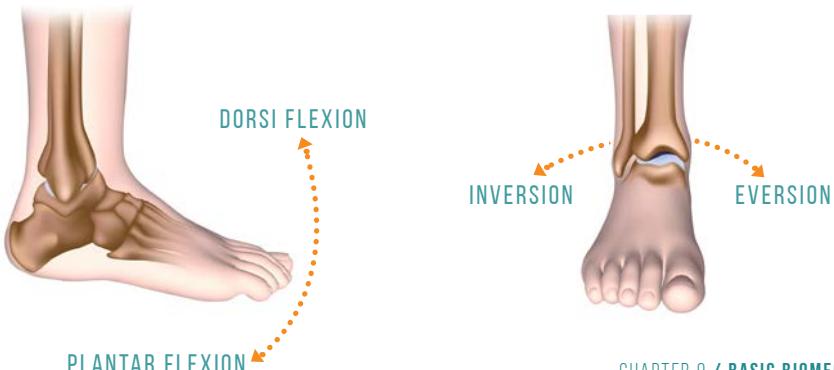
### GLIDING JOINTS

In these joints the bones slide along their smooth surfaces with a limited amount of motion. This joint allows for movements in a rolling fashion as well as gliding. The foot and wrist are examples of these.

## ANKLE JOINT

This is the key to the success of a snowboarder and their ability to create lateral movements on their snowboard. It can also aid in vertical movement, when used with other joints. These movements are known as dorsi and plantar flexion, which can produce lateral movements of the body over the board.

Plantar refers to the opening of the ankle joint, when the toes are pushed down or away from the shin. Dorsi flexion is the opposite, when the toes are lifted and move closer to the shin. The ankle is a complex joint and can make other movements such as inversion and eversion. These movements can aid a rider's ability to move longitudinally on their board. Inversion is when you roll your ankle to the outside of your foot pointing your soles towards each other. Eversion is the opposite, when you roll the ankle to the inside of the foot pointing your soles outward or away from one another.



## KNEE JOINT

The knee is a modified hinge joint and the most commonly mentioned joint in snowboarding. It has a large impact on riding as it manages two of the larger levers, controlling the femur (the large bone in our thigh) and tibia/fibula (the two main bones in our lower leg). The knees help snowboarders create lateral, longitudinal, and vertical movements. Due to the large range of movement in the knee, a rider can utilise this joint to create powerful movements.

## HIP JOINT

As a ball-and-socket joint, snowboarders benefit from being able to create both flexion/extension, as well as rotation, through our hip joints. The width and flexibility of hips will greatly change the riding style of each individual snowboarder.

Generally speaking, women tend to have slightly wider hips. This can be measured by the difference in males' versus females' Q-angle. Another

typical difference in hip structure between males and females is what is known as Anterior Pelvic Tilt. This is where the pelvis is actually tilted forward on the top and the bottom is tilted back. This generally shifts the centre of mass more over the heel edge, making it more challenging to create pop.



## SPINE

This complex set of joints consists of 33 vertebrae. There is very limited movement between each of the vertebrae; however, when they all work together the result is a much larger range of movement, allowing flex in all directions, as well as rotation. There are many muscles that surround and protect the spine. This is why we get a more powerful, yet slower result when we make larger movements through the upper body. That said, the spine can be quite useful when we choose to create these more powerful movements, especially when acting upon larger forces.

## CONNECTIVE TISSUE

To help us get a better understanding of joint movement, we can look at how they are connected, through three different types of connective tissue...

**LIGAMENTS**

**1** These connect our bones together. Their tightness can determine that person's range of movement.

**TENDONS**

**2** These connect muscles to bones and create movement by transferring forces created by muscle contractions to the bone that it is connected to. This, in turn, causes that bone to move using the nearest joints to that bone.

**CARTILAGE**

**3** Essentially this is a cushion between our bones. This is often a cause of pain when it gets worn down through overuse or age.

**MUSCLES**

Muscles are bands of soft tissue fibres that contract or relax. They are attached to bones through tendons and are responsible for moving those bones through one's joints.

Generally speaking, muscles make three different types of contractions, based on muscles working with and against one another as they contract or relax...

**CONCENTRIC MUSCLE CONTRACTION**

**1** This is where the muscle shortens when contracting. A snowboarding example of this is when you pull up your toes (dorsi flexion), moving through the ankle joint. Here we make a concentric muscle contraction in the tibialis anterior (the muscle beside your shin), reducing the length of it as it tenses.

**ECCENTRIC MUSCLE CONTRACTION**

**2** This is where the muscle lengthens when contracting. For concentric contraction to work, the muscle must be paired with another muscle that works in the opposite way. In the example of dorsi flexion in the ankle, it is the gastrocnemius (the calf muscle) that works eccentrically, increasing in length as it stretches.

**ISOMETRIC MUSCLE CONTRACTION**

**3** This is where the muscle does not change in length when contracting. This happens when two opposing muscles contract at the same time. An example of this would be holding a static position where our body is tense but has limited movement, like a stance used in martial arts. Another example is when you tense in your abdominal muscles (stomach) before you are about to be punched in the belly. Isometric muscle contraction is used much more regularly in snowboarding than most other sports. Even the basic stance requires a degree of isometric muscle contraction.

## HOW MUSCLES WORK

The brain sends messages to the muscles to relax or contract, which in turn will move a bone in a joint. The more time that is spent sending this message to the same muscle group the quicker reactions become. This is also known as muscle memory. Even though muscles don't have their own memories, the messaging pathway will become more efficient with more frequent use.

Muscles also have proprioceptors, which are like little sensors in the muscle fibres to measure when muscles are contracted and flexed or relaxed and stretched. This provides confirmation for the brain that the body is actually making a movement, for example: that we are pulling our toes up inside our boots. When movements are made using muscles that a rider is less accustomed to using, these proprioceptors are not as quick to deliver the message. This is why your students tend to look down at their feet to make sure that the movement is happening.

## INJURY PREVENTION

Snowboarding is physically demanding. Both riders and instructors should be prepared to cope with the increased demands on strength, endurance and general fitness, using appropriate pre-season training, morning warm-ups and end-of-day stretching. There are a number of specific muscle groups used in snowboarding that should be focused on to reduce the risk of injuries...

### CORE MUSCLES

These are situated in and around your pelvis and abdomen. They work like a **1** corset to protect your spine from repetitive stress and aid our snowboarding by creating a stable platform from which to produce powerful movements with our limbs. Activating your core muscles helps you to maintain the alignment of your spine when both riding and lifting students. It also promotes correct loading through your spine and limbs which, in turn, helps to reduce the risks of injury from repetitive stress or sudden over-loading when you fall or jump.

### LOWER LIMBS

Leg strength is a necessity in all aspects of riding. To help maintain a long **2** career in snowboarding, it's important to make sure there is no major muscle imbalance in our lower limbs. The shin and calf muscles work together to control our ankle joint. The quadriceps muscle and hamstring muscles in our upper leg work together to create vertical movement through our knees. The hip flexors and gluteal muscles work together to enable movement through our hips. All of these muscle groups have to be active to maintain an active stance. Tightness or weakness in any of these muscle groups can increase the risks of injury.

## UPPER LIMBS

**3** Our upper limbs are used predominantly for balance when riding; however, they often take more of an impact when we fall. Shoulder dislocations and broken wrists account for more than half of the injuries in snowboarding. Whilst it is important to teach students how to fall correctly and use protective gear, it is also very important to maintain strong muscles in the shoulders and arms to aid joint stability and minimise risk of injury.

## PRE-SEASON TRAINING

A healthy lifestyle with regular exercise is the most important snowboard training you can do. Resistance training and lots of stretching will help to reduce the risks of injury and prepare you for a full winter of riding. Yoga is also an excellent cross-training activity for snowboarding. If you get injured during the season, seek medical help as soon as possible before it becomes a chronic injury.

## WARMING UP

Pre-riding warm-ups play a big role in injury prevention. Before putting your board on, take the time to warm up by doing some dynamic exercises to mobilise the joints, get blood flowing into the muscles and the cardiovascular system. Some good examples are leg swings, lunges, squat jumps, trunk twist and arm swings. On your first run, focus on activating all major muscle groups by doing simple tasks that explore range of movement. Tasks that focus on the core muscles are particularly useful here. When teaching, encourage your students to warm up in whichever way they know how. This may be with the board off or on. Do not encourage your students to stretch in ways that are unfamiliar to them.



## AFTER RIDING

Many injuries occur when riders become fatigued or start to think about other things, such as the journey home. When your mind begins to wander, recognise this fact and simply call it a day. Your final run should be done with a much lower intensity to help the body begin returning to its resting state. At the first opportune moment, perform some static stretches to prevent stiffness and reduce the chance of delayed onset muscle soreness. Foam rollers are an especially good tool for loosening the muscles later in the evening. When teaching, encourage your students to do the same. Keep this within their current knowledge and experience, however, unless you happen to be a yoga teacher, physiotherapist or personal trainer.

## SECTION B - A TECHNICAL UNDERSTANDING OF SNOWBOARDING

10

# Effective Rider Analysis

INTRODUCTION TO RIDER ANALYSIS



ANALYSING STANCE



ANALYSING MOVEMENTS



UNDERSTANDING CAUSE & EFFECT



PRIORITISING INEFFICIENCIES



THE DOMINO EFFECT



## IN THIS CHAPTER WE WILL EXPLORE...

How to effectively analyse your students' riding. This chapter will provide useful information for what analysis is, why we use it and guidance for how you can develop your analysis skills.

Within the world of instructing, the skill of analysing a student's riding is essential to their future progression and achievements.

If you wish to provide the most effective feedback and a suitable lesson plan which will bring out efficient changes in your students' riding, firstly you need to be able to make an accurate analysis of their riding.

## INTRODUCTION TO RIDER ANALYSIS



To establish an accurate analysis, it's necessary to remain objective throughout the entire process. This objectivity should remain consistent outside of individual biases, feelings or interpretations.

Simply put, analysis begins with an observation based on fact.

As you develop your analysis skills, there are some simple considerations that can help you discover your preferred or most reliable way to gain an accurate analysis. Below are just a few examples of analysis methods, including visual, audio and kinesthetic - much the same as the aforementioned Learning Styles (Chapter 3).

### VISUAL ANALYSIS

Watching your students ride is the most effective form of analysis. It allows you to clearly see how they stand over their snowboard, how they move and what their snowboard is doing. Within visual analysis you have some decisions to make for the method in which you will gather your information. Get creative and explore the considerations below:

**The Vantage Point** you use when watching your students is your first consideration. You can choose whether you remain in a fixed location or continually moving.

If you choose to remain in a fixed location, you can consider the following choices:

- ▶ You can go down the hill and watch them ride down to you.
- ▶ You may want to watch them ride away, staying where you are and giving them a point to ride to.
- ▶ You might prefer to go halfway down the hill and have them ride to you and past you to a predetermined point.

If you would prefer to keep moving for your visual analysis, you can consider the following choices:

- ▶ You may want to follow and ride behind your students.
- ▶ You can ride next to your students on either their toeside or their heelside.
- ▶ You can ride in front of your students ensuring you look back throughout.

Whichever vantage point you choose to watch them from, be aware that each one carries its own strengths and weaknesses. Can you think of one strength and weakness for each option above?

**The Focal Point** in which you focus your attention initially, is your next consideration.

For you to take in a complete picture of your students' riding you can choose to look at your students:

- ▶ From their head down to their board.
- ▶ From their board up to their head.
- ▶ From their centre of mass outwards.

When watching the body of your student, there are more options available to you. You can specifically look at:

- ▶ The upper body.
- ▶ The lower body.
- ▶ The peripherals such as the head, arms or ankles.
- ▶ The core and hips to see where the centre of mass is moving.

The equipment your student is riding on should also be considered. Here, you can choose to look at:

- ▶ The snowboard and target or focus on specific board performance(s).
- ▶ The student's boots to see if they allow for appropriate movements.
- ▶ The placement of their bindings on the board to assess stance width or lateral binding placement.
- ▶ Any protective equipment such as a back protector or impact shorts that may be portraying an image of inefficiency.

The environment is your final visual consideration. Looking beyond the actual rider at the environment, current conditions and how your student interacts with their surroundings is a useful tool. Here, you can look at:

- ▶ The width of the tracks left in the snow.
- ▶ The amount of traffic on the run.
- ▶ Where snow is being sprayed and distributed through the arc of the turn.
- ▶ When and where the edge change is occurring.
- ▶ Any obstacles, man-made or otherwise, that interrupt flow in your students' riding.

## AUDIO ANALYSIS

This form of analysis can be useful to gain an insight into how much experience they've had, when, where and what they achieved, and whether or not they've taken a lesson. It typically occurs in the early parts of a lesson, but may continue throughout. Through questions and conversation you can discover what their skill base is and begin to develop a mental image of their riding and the way they stand over their snowboard simply based on their age, sex, physical makeup and fitness. Be aware that with audio analysis it's possible that the description of their capabilities may not be as accurate as you would like. For this reason, it's essential to back this up with a visual reference for clarification.

## KINESTHETIC ANALYSIS

To help further understand the way your students balance and move, it's possible for you to experience similar sensations within your own riding. There are many options available for you to explore. You could:

- ▶ Copy your students' movements to understand how much they are moving.
- ▶ Follow their line to become aware of the timing of their movements.
- ▶ Ride at their speed to understand the forces they may be experiencing through their body in a specific phase of a turn.

With these considerations you have many tools at your disposal to gain a very clear analysis of your student.

### ANALYSING STANCE



As you know, standing on your board in an efficient stance is a baseline from which to make all movements in snowboarding. As an instructor, it's up to you to identify the difference between a stance that will result in efficient movements versus a stance that will cause your student to make inefficient movements. To do this, it can be as simple as having a mental image or picture in your mind's eye of a rider stood in an efficient, relaxed stance and comparing that picture to what you see in your student. You can then decide how they differ and what would need to change to make your student's stance and riding more efficient. To make this more precise, you can focus on specific body parts and joints when comparing those pictures.

Be aware that your student may be standing in a certain position as a result of temporary or permanent injury, inadequate equipment or even as a misunderstanding of your guidance. Ensure that you know the limitations of your student and make an allowance for this in your analysis. It's sometimes helpful to simply ask yourself: "*Is their stance stopping them doing this?*" or "*Is their stance making them do something they aren't wanting to do?*"

Questions like this can help you consider how good your student's stance really needs to be to have fun snowboarding. Good enough for their intended goal is perhaps more appropriate and will allow your students to keep riding and enjoying their time with you.

Just remember that a strong stance is the foundation of efficient riding, so an efficient stance maintained throughout their riding is beneficial. Challenge yourself to decide if your student's stance looks efficient consistently throughout their riding or if there is somewhere more obvious in their riding that their stance becomes inefficient. Ideally, your student is in their efficient stance before they begin to make movements for a new turn. From this efficient starting position, you should look for signs of stance inefficiencies that occur after they've initiated a turn as your baseline from which to begin your analysis and as an indicator to start looking at their movements.

## ANALYSING MOVEMENTS



Now you are looking more closely at the way your students stand on their board, it's important to take in the complete picture to build your analysis of their movements. A similar approach to analysing stance can be applied to analysing movements.

Comparing the image in your mind's eye of the way an efficient rider moves versus the real-time riding of your student is a useful tactic here. Using this simple approach, challenge yourself to analyse each of the directions of movement as quickly as you can. To help you with this, you can begin by asking yourself: *"Is my student moving efficiently vertically/rotationally/longitudinally/laterally?"*

To develop your eye within each of the movement directions, you can ask yourself: *"What body parts and joints is my student using within each direction of movement?"*

These simple questions will help you build a clearer understanding about the way your student is moving. More specifically, you'll know which body parts and joints are being used and how.

### EXAMPLE

#### **YOUR STUDENT IS MAKING SMALL SKIDDED TURNS ON A BLUE GROOMER:**

Questions you could ask yourself that relate to common inefficiencies include...

*"Did the way my student move their leading knee within their lateral movement benefit the task?"*

*"Did the way my student move their hips within their rotational movement cause a problem in the task?"*

*"Did my student's stiff ankles in their vertical movement cause them to lose their balance in the task?"*

*"When my student moved their hips towards the tail of their board, did it help them start their new turn?"*

Questions like this will offer you an avenue to understand how your students are applying their movements in their riding, relative to the power, timing and the range of movement they are using.

With this approach you can now compare the movements you are seeing to the movements you were hoping to see, following your instruction. This deeper understanding of how your student moves will allow you to think in more detail about the resulting effect of their movements on their snowboard.

## UNDERSTANDING CAUSE & EFFECT



With more of a focus on the relationship between body movements and how the snowboard responds, you can easily communicate this information in terms of a cause and an effect. The cause is the movement the body makes and the effect is the response within the snowboard or the turn/trick itself. When applied accurately, this can be a very effective method of analysis to establish efficiency of movements and desired performance of the snowboard. Take the time to build a strong understanding of the movements possible on a snowboard and how these movements differ between the toe and heelside turn. This will help you identify if the snowboard is edging, pressuring or steering as a performance response.

You can continue to work systematically through your student's movements to ensure that you take in the complete picture and identify which of the snowboard's responses are evident. When you spend more time practising this, you will find that tying movements (cause) and snowboard performance (effect) together becomes second nature.

Here are some simple examples of questions you can ask yourself to help develop this skill:

- ▶ “Did my student's vertical movement create desirable pressure management or distribution?”
- ▶ “Did my student's rotational movement help to create desirable steering?”
- ▶ “Did my student's lateral movement create desirable edging, be it tilt of the board or torsional twist?”

You may find that when you answer these questions your answers reveal that there is not enough performance in the board, or that the performance is used too quickly or slowly, or even that the performance is used too gently or powerfully. This additional information allows you to consider the application of each board performance when riding a task.

When you can confidently establish cause and effect it will leave you with a deeper understanding about the efficiency of movements being used and whether or not they create a desirable board performance. When you start to question whether or not the effect is desirable for the task being ridden, you are now challenging your analysis skills beyond simply looking at movements.

With a rounded and thorough understanding of cause and effect it's probable that, through self questioning, your answers will reveal that it is more than one board performance that is not as desirable as it could be for the benefit of the task. Now you have the enjoyable challenge of deciding which of those cause and effect relationships you think is more important for the benefit of the task being ridden.

## PRIORITISING INEFFICIENCIES



Prioritising inefficiencies is a vital tool within your analysis skill set. It allows you to decide which cause and effect within your student's riding should be made more efficient and desirable first. Perhaps, more importantly, you will be able to offer reasoning behind the chosen priority to provide purpose and this will often reflect the most effective way for your student to reach their goals.

There is no single way to develop the skill of prioritising inefficiencies; however, there are specific tools that can help to get you started. Be aware that this skill set within analysis is one that is more open to subjective, or individual opinion from you as the instructor. It's important to recognise that whilst there is often no right or wrong answer for deciding on a priority, there are still more and less effective priorities which will affect the overall experience in a lesson.

### STANCE INEFFICIENCIES

**1** More often than not, there is a stance inefficiency that is apparent throughout your student's riding that appears consistently in their riding around the mountain. As you know previously from analysing stance, an efficient stance is the foundation of efficient riding. Look at stance in more detail in Chapter 7 to determine if your student would benefit from a basic stance, an active stance or a high performance stance. Stance should be the priority within any lesson if your student is standing in a way that will hinder their progression or influence inefficient movements.

### FALLS AND MOMENTS OF IMBALANCE

**2** One of the most obvious clues that will lead you to prioritise an inefficiency is the evidence of falls, the use of hands touching the snow to keep balance, abrupt interruptions to riding flow or any combination of the above. The same issue may occur repeatedly at the same point in a turn or on similar terrain, for example cat tracks or bumpy variable snow conditions. In spite of this, you need to be realistic with your decisions here, it might be that your student is riding their first slope since last year and needs some time to get warmed up.

### PRIORITISING TOE OR HEEL TURNS

**3** Prioritising which turn to focus on first can be a tricky decision. Begin by asking yourself: are they using relatively evenly shaped heel and toe turns? Then consider where the rider looks more tentative; is it initiating the toe turn possibly? Look for movements that are more forced than others; are they pushing the back leg around on the heelside?



**EXAMPLE****ON STEEPER BLUE TERRAIN:**

Your student is using a large upper body rotational movement to start their toe turn but their snowboard is also losing some balance in their heel turn. You watch them ride for twenty turns total to allow ten toe and ten heel turns. You count eight toe turns with the large upper body rotation and five heel turns with the loss of balance. This shows that the rotational movement into the toe turn is a higher priority for this rider.

**INEFFICIENT MOVEMENT PATTERNS**

**4** With riders that have a reasonably efficient stance, it can help to look for an inefficient movement pattern that is occurring consistently, or more times than other inefficiencies you have noticed. To help you break this down, you can choose two inefficiencies that you are unsure of prioritising and count how many times you see each within one run or a set number of turns.

**BOARD PERFORMANCES**

**5** Another useful tool is to recognise how your student is trying to get their snowboard to perform. As a Level Two instructor you should be able to identify that their snowboard needs to perform in a more efficient way within edging, pressuring or steering. From there you can focus more on analysing their movements relative to the way the board is performing.

**TERRAIN CHANGES AND RIDING SPEED**

**6** Finally, take a look at the riding speed of your student and consider changing the terrain or situation. Ask yourself: is their speed under control ensuring that they are able to use efficient movements, or is it continually increasing without intending to? This can quickly highlight whether your student is choosing their riding speed through deliberate turn sizes and shapes, or not. Another approach to this would be to closely watch your students when they are riding on flatter terrain at slower speeds. When travelling slowly a rider needs to be more patient and precise within their movements to keep riding smoothly. However, be careful not to bore your students with terrain or riding that is too easy.

The best way to develop the skill of prioritising requires teaching experience to trial the above tools and others that you discover along the way. Only through teaching can you begin to link your prioritising eye with tangible benefits in your student's riding.

It's possible that these benefits will occur in multiple areas of your student's riding. If so, this will begin to shift your attention to what can happen sequentially from one turn phase to the following turn phase, or even from one turn to the next.

## THE DOMINO EFFECT



The domino effect is a concept used in more advanced analysis, that helps you to identify that an original or root inefficiency can go on to cause subsequent issues in your students' riding. If you think of the way dominoes fall, you need to establish if the identified issue is the first domino in the chain, a domino in the middle, or the last domino to fall. By asking yourself what happened prior to and after the most obvious issue in your students' riding, you will develop a larger overall picture of where to prioritise your correctional focuses.

Consider each domino to be an occurrence in a chain of events, each occurrence causing or resulting in the next. This chain of events could occur across different phases of a turn where a movement in the initiation of a turn, results in another movement during the control phase, which then affects the board in the completion of the turn. The same concept can be applied from one turn to the next or even from decisions made earlier in the run.

### TURN PHASE DOMINOES

In this application, each domino represents a different phase of the turn, working continually from one turn to the next:

- ▶ One Domino - The root cause is found within the previous phase to the identified effect.
- ▶ Two Dominoes - The root cause is found two phases prior to the effect.
- ▶ Three Dominoes - The root cause is found three phases prior to the effect.

#### EXAMPLE

### YOUR STUDENT HAS CHATTER IN THE COMPLETION OF THEIR HEEL TURN:

You were watching closely and determined that it was not a result of inefficient pressure management through heelside completion in the steep variable terrain you're riding together. The actual root cause was earlier in the same turn, during the initiation phase. Your student used an inefficient sequence of edge-pressure-steer, unintentionally changing it to steer-edge-pressure. The excessive steering in the initiation of the turn allowed them to get on the new edge and back across the fall line very quickly but without much edge grip on the snow. This then created a sudden increase in pressure for them to deal with at the end of the turn.

In the example above, without much experience considering the domino effect, your analysis may suggest that your student would need to use their vertical movement more progressively through the turn to eradicate chatter. By applying the domino effect you can identify that original cause is in the initiation of the turn, and that the lack of edging through the control phase contributed to the sudden pressure increase in the completion, which resulted in chatter.

## ATTL DOMINOES

This concept can also be used effectively within freestyle when considering how your student's approach affected their takeoff, or perhaps how their takeoff has subsequently affected their trick or landing. (See the ATTL Model in Chapter 17 - Intro to Park.)

An easy way to apply the domino concept to ATTL is as follows:

- ▶ One Domino - The root cause can be found in the Trick phase.
- ▶ Two Dominoes - The root cause can be found in the Takeoff phase.
- ▶ Three Dominoes - The root cause can be found in the Approach phase.

Within freestyle it is rare to find a root cause within the landing phase of ATTL. The landing is often a by-product of the overall efficiency through approach to takeoff to trick. No matter what your experience of freestyle analysis might be, if you see an inefficiency within the landing of a trick, challenge yourself to identify other inefficiencies earlier in the approach, takeoff or trick phases.

### EXAMPLE

#### YOUR STUDENT IS LANDING TAIL FIRST OVER A SMALL PARK JUMP:

You have been watching on the downhill side of the jump for the last two attempts and your analysis is that your student is extending their back leg during their landing phase. You decide to watch from the side as the same issue keeps happening. Now you can see their approach and takeoff, you notice that your student is not extending their back leg at takeoff and is simply coasting off the lip in an increasingly aft position. Now you understand why your student keeps landing tail heavy thanks to the domino effect.

## BIG PICTURE DOMINOES

The same domino concept can be applied to multiple turns or a whole run. This is when you might need to consider more than just two or three dominoes. When teaching advanced snowboarders, a large percentage of knowledge that is passed on from teacher to student is about decision making and tactics. Experienced snowboarders understand that decisions they make at the top of a precarious, off-trail situation, or when riding the first features in a full park lap, can affect their ability to maintain performance further down the face or on subsequent features in the park.

Although the domino effect can be essential in finding the root issue in many riding situations, remember that some issues can be improved with no consideration of the domino effect. This is where your experience within analysis will help you decide if the domino effect is needed and if so, how far back should you look to find the root issue. A great way to develop this aspect of decision making within analysis is to ask for another instructor's analysis of the exact same riding situation. This is where the use of videos can help us share our analysis decisions in an objective environment.

## SECTION C - PATHWAYS AND PROGRESSIONS

11

# Using, Adapting & Creating Progressions

IN THIS CHAPTER WE WILL EXPLORE...

How student ability levels match up with the NZ snowboard teaching system; the different pathways in which to develop your students' skills and improve as a snowboarder; and some progression-building methods that are available to you as an instructor.

STUDENT LEVELS & DEVELOPMENT OPTIONS



COPYING SAMPLE PROGRESSIONS



CHOOSING & ADAPTING PROGRESSIONS



CREATING PROGRESSIONS



## STUDENT LEVELS & DEVELOPMENT OPTIONS



Snowboard schools around the world use a variety of level systems to define student abilities. This is necessary for the assigning of instructors and the management of class sizes and ability splits.

In New Zealand, most schools operate on a four or six level system. Within SBINZ, we use six written descriptors, rather than numbers. These are:

- ▶ First Timer
- ▶ Learn to Turn
- ▶ Exploring the Turn
- ▶ Exploring Carving / Freeriding / Freestyle
- ▶ Advanced Turns
- ▶ Advanced Carving / Freeriding / Freestyle

## BEGINNER SNOWBOARDERS

As a newer instructor, the most common level of student that you will teach is beginners. Beginner lessons make up the vast majority of teaching in almost every snowboard school. A beginner student will have zero or limited experience on a snowboard. It may be their first time on snow or they may have snowboarded a day or two previously.

### FIRST-TIMERS

Some first-time snowboarders will be feeling a lack of confidence and will need time to adjust to the new environment. Their movements are likely to be jerky and uncoordinated. First-timers should be taught in safe, learner-specific areas on the mountain.

### LEARN TO TURN

Beginner students with some previous snowboarding experience are likely to be more confident on one edge than the other, typically the heel edge. They may have attempted turning from one edge to the other, but they may not have begun to link these turns together. Students of this level should be starting to explore all green trails and be learning to ride chairlifts.

Whilst some people may progress through the beginner fundamentals of snowboarding in just one day, many people take two or three days to learn these basics as some of the movements are fairly unnatural to some people.

## INTERMEDIATE SNOWBOARDERS

Intermediate students typically have had a few days of snowboarding at the minimum; however, they may have been snowboarding for a number of years.

### EXPLORING THE TURN

A lower-level intermediate will be beginning to develop rhythm and control on green and blue terrain, and potentially be utilising a variety of turn shapes and sizes. Their movements will be starting to blend but their diversity of skills may still be limited. Confidence levels will vary depending on the student and the conditions.

### EXPLORING CARVING / FREERIDING / FREESTYLE

A strong intermediate snowboarder will be more stable at speed and be confident riding on groomed blue terrain. They will be experimenting with some freestyle, basic carving skills or exploring some easy off-piste terrain. Most people will require a number of weeks' snowboarding to progress through this phase. The skills taught at this level are diverse and people generally need multiple periods on the snow, over time, to allow them to develop the necessary movement patterns.

## ADVANCED SNOWBOARDERS

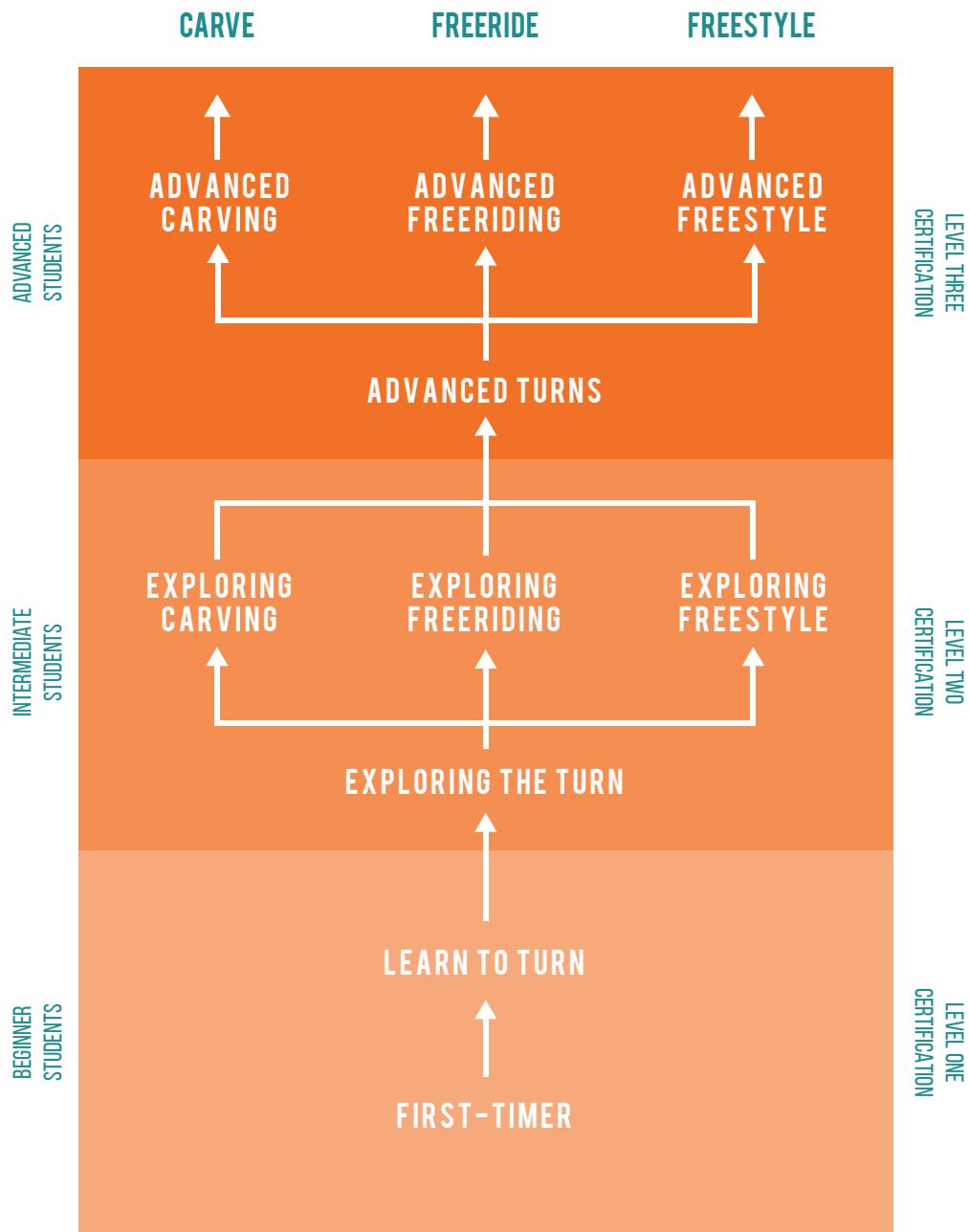
A student of this level will usually have been snowboarding for a number of years and have riding experience from different resorts.

### ADVANCED TURNS

Advanced students will be exploring varied terrain, and performing various freestyle and carving skills. They will be comfortable riding at speed and have the ability to ride most terrain on the mountain. At this stage they will require a more diverse range of turn types to help them deal with the varied situations they are encountering and develop within advanced carving, freeriding and freestyle.

### ADVANCED CARVING / FREERIDING / FREESTYLE

Strong advanced snowboarders, with the ability to mix up their turn types, will generally be looking to diversify their riding by learning new skills or refining the movements they already have. This phase of snowboarding is never-ending. Refining and improving one's riding skills at this level should be a continuous and ongoing process.



## COPYING SAMPLE PROGRESSIONS



Instructors use the term “progression” in reference to a student’s development through a pathway, or as a series of stepping-stone tasks and exercises that develop a particular skill. In the following chapters you will read many different example progressions. These make up the framework for the SBINZ sample progressions covering all phases of development from beginner to advanced. To be an effective instructor it is important to understand skill development and how to put a series of tasks together to teach movement patterns.

An SBINZ Level One instructor should begin teaching with the sample progressions provided within this manual. Whilst it can be beneficial to copy the verbal descriptions initially, to help you learn the content, it is much more meaningful if you learn to rephrase each description in your own words.

### EXAMPLE

#### IT'S LIKE BAKING A CAKE...

Consider the sample progressions within this manual to be a recipe for baking a chocolate cake. There are multiple ways to go about baking chocolate cakes; however, you’ve chosen to begin with the SBINZ recipe. You have the key ingredients, an order in which they are best added and a selection of methods for how to mix them together. The temperature you use to bake your cake (i.e. how quickly you move your students through the progression) and the dish you choose to bake it in (i.e. the terrain you select for each step) depends on the taste buds of those eating the cake (i.e. your students) and how good your oven is (i.e. your environment and conditions).

## CHOOSING & ADAPTING PROGRESSIONS



As outlined in the previous chapters, people learn in varying styles and at different paces. Students who develop faster may be capable of skipping certain tasks in a progression and still achieve the same goals. Other students may need to spend more time on tasks in order to achieve their goals. As a Level Two instructor, your job is to choose and adapt the most suitable tasks or progressions for your students. When choosing and adapting progressions, it is important to consider whether your student needs a corrective-focused progression or a developmental-focused progression.

**Corrective Progressions** are intended to change and improve movement patterns with the goal of making the student’s riding more efficient.

**Developmental Progressions** are intended to build and create new skills that are completely new to your student.

**EXAMPLE****CORRECTIVE EXAMPLE:**

A series of steps to get the student centred on their board and steering more with the front knee, with the goal of reducing the big back foot kick in their turns.

**EXAMPLE****DEVELOPMENTAL EXAMPLE:**

A series of steps created to teach a frontside 180 for a student who can ollie comfortably, ride a little switch, but hasn't tried to spin in the air yet.

The bulk of progressions within this manual are developmental progressions. However, many of the same tasks can be used to change current movements when used within a corrective progression. The purpose for each task may differ and the way you present it will undoubtedly alter; however, the task itself may remain the same.

**CREATING PROGRESSIONS**

Instructors sometimes speak of their “bag of tricks” when referring to the number of teaching tools they have stored in their memory. Whilst having a memory bank packed with tools and tasks is certainly beneficial, the ability to create your own progressions is a much more valuable skill. This gives you the ability to adapt quickly and adjust for conditions/needs, and move beyond the stock progressions that may not be ideal for the terrain available or with a physical/mental limitation you have just discovered in your student.

When creating your own progressions it is vital that each step has a logical increase in difficulty and that all the steps build towards the same end goal. The following three steps can be used to create your own progressions:

**1 Identify** the directions of movement that need to be addressed and the board performances that these affect. Now consider the specific body parts and individual movements that need to be improved. Ensure that you consider any physical or equipment limitations that may be present.

**2 Isolate** movements and body parts in separate tasks, and consider how best to facilitate each task based on your student's preferred learning styles (VAK and Multiple Intelligences) and experiences (both past and present). Ensure that you quantify each movement using range, timing and power.

**3 Implement** the tasks into a logical progression that utilises the environment appropriately. At this level the stationary-simple-complex concept is not necessarily used in a linear format. You may decide to begin with a number of simple steps, come back to a stationary step, then bring it together with a complex step. This is a skill that comes with time but should be practised and experimented with when progressing towards the SBINZ Level Three standard.

## SECTION D - TEACHING BEGINNER SNOWBOARDERS

# 12

## First-Time Snowboarders

EQUIPMENT INTRO, BOARD MOBILITY & BASIC STANCE



SKATING, GLIDING, CLIMBING



STRAIGHT RUNS & DIRECTION CHANGES (J-TURNS)



TWO-FOOTED ORIENTATION



SIDE SLIPPING



FLOATING LEAF



LIFT RIDING



### IN THIS CHAPTER WE WILL EXPLORE...

An example progression for first-timers. All first time lessons should begin on flat terrain, with as much space as possible and minimal traffic.

Generic goals for any first-timer lesson include: staying safe whilst becoming familiar with the snowboard, learning how to move around on flat ground with one foot strapped in; learning how to stop and change direction on both the heel and toe edge.

The order of the following exercises will change relative to the available terrain and snow conditions, and your students' physical ability, age and fitness. All of these exercises may not be needed in every lesson so make sensible decisions to maximise the students' learning time.

## EQUIPMENT INTRO, BOARD MOBILITY & BASIC STANCE



### WHAT, WHY, HOW

Getting to know the equipment (board, boots and bindings etc.), strapping the board on with one foot to get used to how it feels, and introducing an action-ready stance to use when snowboarding.

To understand how to use equipment safely, to get comfortable balancing and moving around with the snowboard attached to the leading foot, and to build a stable position to move from when snowboarding.

#### EQUIPMENT

- ▶ Start by checking everyone's boots are tight enough.
- ▶ Hold the snowboard nose up so that the bindings are facing the group and introduce the nose and tail, toe and heel edges, then turn the snowboard over, base out, and explain the side-cut and edges.
- ▶ Introduce the highbacks, straps and ratchets, ensuring that you cater for all binding types.
- ▶ Introduce regular/goofy, and allow the opportunity to try both if unsure.

#### BOARD MOBILITY

- ▶ Stand or kneel behind the snowboard and place the front foot in the binding. Ensure the heel is pushed back into the heel cup and there is no gap between the boot and binding. For bindings with two straps, tighten the ankle strap first, then the toe strap.
- ▶ Stand with the back foot on the snow (either toesside or heelside) and slide the board backwards and forwards to see how easily it glides.
- ▶ Tip the board up onto its toe edge by stepping across the board and bending the lead ankle and knee. Notice how the toe edge grips the snow.
- ▶ Now tip the board up onto its heel edge by stepping across the other side of the board and bending the lead knee and hip. Notice how the heel edge grips the snow.
- ▶ Lift the board and turn around the grounded leg to get used to its weight. If students want to they could try an indy/mute/nose/tail grab.

#### BASIC STANCE

- ▶ Stand on the snowboard with the back foot on the stomp pad or up against the back binding.
- ▶ Feel for even pressure over both feet and relax through your ankles, knees and hips.
- ▶ Keep the hips and shoulders aligned with the feet, the back upright with arms relaxed and by the side.
- ▶ Look in the intended direction of travel.



## TECHNICAL DESCRIPTION

### LATERAL

Movements made laterally with one foot strapped in should be done with the COM over the grounded leg to ensure stability is not lost. Care should be taken when stepping across the snowboard to ensure that the lateral movement is smooth and purposeful as the grounded leg will have to lift.

### VERTICAL

Continual use of lightly flexed ankles, knees and hips will help with stability for your students in their new environment. Encouragement of a larger range of vertical movement through the ankles, knees and hips through board mobility will be beneficial for all students provided they are able to do so.

### LONGITUDINAL

The focus throughout these early stages is to keep the COM longitudinally centred to promote balance. The only time this will be further explored is within board mobility when the board is moved and slides underneath the COM, essentially moving the COM along the length of the snowboard.

### ROTATIONAL

The focus throughout these early stages is to maintain whole body alignment when rotating. Slow and steady use of rotational movements should be encouraged during board mobility to maintain balance with the grounded leg.



## TERRAIN & CLASS HANDLING

Make sure the area for these early stages is flat and groomed so students can comfortably stand while they are introduced to the equipment, board mobility and basic stance. Choose quieter areas on the available teaching terrain to reduce risk of interruptions from passing traffic.

These early stages of snowboarding can be tiring at the best of times. Be aware that when there is fresh snow, or even if it's a hot slushy day this can make these early stages even more exhausting. Before helping your group get comfortable with their equipment, it can be useful to take a few minutes to smooth over or clear deeper snow in a small area for you to teach in. It's always key to be aware of increasing tendencies to fatigue in these conditions. Just be sure not to let this early fatigue negatively affect your students' opinion about snowboarding.



## SELF REFLECTION

*"Did I tailor my descriptions for the ages of my students and their ability to communicate in English?"*

*"Did I give too many details for these early steps and cause boredom?"*



## EXPERIENTIAL TEACHING EXAMPLE:

Like anything new in life, it's important to understand what it is and how it works. This natural, curious approach with equipment should be encouraged and time should be given for your students to figure out their own equipment, alongside your instruction. Merging some of the steps in this part of the progression can help achieve this. For example, introducing the parts of the board with the front foot strapped in will allow them to experience the purpose of the edges.



## ENVIRONMENTAL TEACHING EXAMPLE:

Encourage your students to create lines, shapes and patterns in the snow using their edges during this early stage of their snowboarding journey. This will promote focus towards using more precise movements with one foot strapped in.



## DETECT & CORRECT

Student struggles with balance during board mobility:

- ▶ Encourage your student to keep their eyeline up to help with balance.
- ▶ Ensure that the terrain you are on is as suitable as possible (flat and groomed) given the current snow conditions.
- ▶ Encourage gentle, smooth movements.

## SKATING, GLIDING, CLIMBING



## WHAT, WHY, HOW

To get used to skating around, sliding on the snowboard in a basic stance and to climb up or down a slope all with one foot strapped in.

This is to get around on-snow with one foot strapped in and to get to and from the different types of lifts.

### SKATING

- ▶ Place the rear foot on the heelside of the snowboard on the snow, no further forward than the front binding.
- ▶ Gently push forwards with the rear foot, feeling the board slide underneath.
- ▶ Keep the rear foot in between the two bindings.
- ▶ Take small, slow steps forward, keeping the nose pointing in the direction of travel.
- ▶ Repeat this action with the rear foot on the toeside and choose which one is preferred.



### GLIDING

- ▶ When comfortable skating, push a little harder so the board glides faster and place the rear foot on the stomp pad or next to the back binding.
- ▶ Glide until the snowboard comes to a natural stop. If there is a need to or want to stop earlier, drag the toe slightly over the toe edge, or the heel slightly over the heel edge as a foot brake.



### CLIMBING

- ▶ Face up the slope with the rear foot on the toeside of the board.
- ▶ Ensure the board is across the slope to prevent it from sliding down the hill. Tilt the snowboard so the toe edge is gripping the snow and not slipping. It will help to bend the lead ankle and knee and feel the shin resting on your boot.
- ▶ Take a small step with the rear foot, then lift the entire snowboard up and grip it in the snow again behind the rear foot.
- ▶ Now repeat the movement or replicate it going down the hill.



## TECHNICAL DESCRIPTION

### LATERAL & VERTICAL

Small amounts of vertical and lateral movement will be required to keep your COM centred and in balance. This comes in the form of constant adjustments in and out of balance, as the student develops the skills to remain upright.

### LONGITUDINAL

Longitudinal movement in these tasks is minimal. The COM will move no further fore than the front binding and no further aft than the back binding; however, some weight will change from foot-to-foot as your student skates.

### ROTATIONAL

Rotation is only necessary when the students pick their snowboards up and turn around. Movement will revolve around the vertical axis of the front leg.



## TERRAIN & CLASS HANDLING

Begin on the same flat terrain used for the previous steps. Ensure that the students' speed remains at walking pace, as awkward falls can occur with only one foot strapped in. As your students explore, be aware of the space you and your students are taking up as not to get in the way of other mountain users.



### SELF REFLECTION

*"Did I challenge more athletic students to keep them interested and developing their own balance?"*

*"Have I spent too long trying to perfect these steps when I could have been moving on?"*

*"Was my terrain suitable and clear of possible obstacles or distractions?"*



### EXPERIENTIAL TEACHING EXAMPLE:

These stages of snowboarding can be likened to skateboarding or using a scooter where the rear foot is used to push the rider in their intended direction.



### ENVIRONMENTAL TEACHING EXAMPLE:

You can take full advantage of the tracks left in the snow from your snowboard for your students to follow. This can even be used for climbing as the tracks left can be seen as "rungs on a ladder" or "stairs on a stairway". When developing from straight running to J-turns you can use the snow to make snowballs to turn around for example.



### DETECT & CORRECT

Student's snowboard not sliding in intended direction when skating:

- Focus on pushing the nose of the board in the desired direction with the outside of the leading foot.
- Have students explore skating with the unstrapped foot on both toesside and heelside to discover their preferred method of skating.

Student makes erratic and jerky movements:

- Reinforce the fact that smooth, gradual movements will aid their balance.
- Get them to focus on breathing or counting for relaxation.
- Have your student take their time and make slower movements.

## STRAIGHT RUNS & DIRECTION CHANGES (J-TURNS)



### WHAT, WHY, HOW

Getting comfortable sliding down a gentle slope, nose first with one foot strapped in and changing direction.

To build confidence and balance whilst sliding downhill for the first time and develop good movements to make turns. One footed turns will also help with the exits on different types of lifts.

#### STRAIGHT RUNS

- ▶ With the snowboard across the slope, climb up a gentle hill until the desired height is reached.
- ▶ Keep the weight on the rear foot and turn the snowboard, nose first around the front foot until the nose is pointing straight down the slope.
- ▶ Place the rear foot on the board between the bindings, stand in the basic stance and let the board glide down the slope.
- ▶ Drag the rear foot and use it as a foot brake to control excess speed, like in gliding, just make sure to keep half the foot on the board.
- ▶ Repeat one or two more times to make sure students are balanced before starting direction changes.

#### DIRECTION CHANGES (J-TURNS)

- ▶ Heelside: Keep the rear foot against the back binding, gently move the hips over the heels and feel pressure move towards the heels of the feet.
- ▶ When the board begins to turn towards the heel edge, smoothly turn the whole body and head in the intended direction of travel.
- ▶ Toeside: Keep the rear foot against the back binding, move the hips over the balls of the feet and rest on the shins of the boots.
- ▶ When the board begins to steer towards the toe edge, smoothly turn the whole body, from the leading knee up to the head, in the direction of travel.





## TECHNICAL DESCRIPTION

### LATERAL & VERTICAL

When straight running, encourage your students to remain balanced over their base of support (board). Any movement laterally away from the board may result in an edge catch, a slip and/or a fall. Focus on even flexion of ankles, knees and hips with an upright upper body to ensure that there is no inefficient lateral by-product of their use of vertical movements in their lightly flexed basic stance. When changing direction for the first time, a slow and progressive lateral movement of the lower body is required, focusing on the ankles, knees and hips to make the board tilt. A subtle lowering of the COM vertically will help here.



### LONGITUDINAL

Within both tasks, a longitudinally centred stance is the focus to provide stability and efficient longitudinal alignment. Longitudinal range can be explored during straight running to challenge students. When making turns with one foot strapped in, it's important to remain longitudinally centred so that the entire effective edge is gripped evenly.

### ROTATIONAL

The focus within both tasks is to maintain rotational alignment with the snowboard and the direction of intended travel. When rotational movements are required for turning tasks, the focus is to use whole body rotation smoothly and progressively.



## TERRAIN & CLASS HANDLING

For this step, move your students to a slight bank or pitch to allow a little more momentum. Ensure you have a good run out on flat ground. As this is the first time your students are beginning to use gravity to help them snowboard, offer hands-on assistance to everyone for their first go. The riding speed should be no faster than walking pace to build comfort with balance in motion. For J-turns, separate regular and goofy riders so that they can turn away from each other. This effective use of space will allow regulars and goofys to ride at the same time to increase mileage.

During overcrowded times or busy learners' areas, there might not be enough room to make a J-turn as big as you would like. In this circumstance, ensure you still take time to develop balance over an edge from which to create a steering angle (skid).

You can use a smaller area, even one without an ideal slope. If the area is too flat then you can rely more on the skating power of your students. If the area is slightly too steep then you can start with the board pointing more across the fall line and allow the rider to essentially traverse slightly before turning their body to turn the board all the way across the fall line.



## SELF REFLECTION

*“Did I climb too high in the straight runs and are my students travelling too quickly?”*

*“Are my students comfortable enough with straight running before moving on to direction changes?”*

*“Have I made my students do too many toe or heel J-turns in the search of perfection?”*



## EXPERIENTIAL TEACHING EXAMPLE:

To help your students visualise making lateral and rotational movements to steer their boards, have them imagine a tall sail boat that needs to lean its mast over to one side and then turn its steering wheel to help turn the boat. You can relate the mast to the whole body and the hips and leading knee to the steering wheel.



## ENVIRONMENTAL TEACHING EXAMPLE:

Draw a target (circle or square) in the snow for your students to steer into for their direction changes. This will challenge their ability to judge when to start edging and steering their board.



## DETECT & CORRECT

Leaning back towards the tail:

- ▶ Increase the pressure in the front leg and under the sole of the front foot. Reach out with the front hand over the nose of the board.
- ▶ Modify your terrain selection or starting point for straight runs and J-turns so that less momentum is gained. This can build confidence in your student and allow them to remain longitudinally centred when sliding.

Student leans whole body to create edge angle:

- ▶ Focus on flexion movements in the ankles and knees on the toeside.
- ▶ Focus on flexion movements in the knees and hips on the heelside.
- ▶ Have your student think about lightly sinking down into the feet and towards the edge when making a direction change.

## TWO-FOOTED ORIENTATION



### WHAT, WHY, HOW

Strapping both feet in the bindings, getting up and moving around with both feet strapped in.

To become balanced and comfortable on the snowboard with both feet strapped in and to be able to get up independently.

- ▶ Strap both feet into the bindings.
- ▶ Get up from a seated position on the heel edge by grabbing the toe edge with one hand and pushing up with the other. If this is too tiring, lie down with one leg bent and one stretched out and roll onto the stomach. It may help to grab behind the knee of the bent leg and roll it over the straight leg. It should be easy to push up onto the feet when on the knees like this.
- ▶ Shuffle the board from nose to tail underneath the body to know what it feels like to stand in the middle and move along the length of it.
- ▶ Move up and down over the board and if comfortable make a small hop. If comfortable, turn the body and try hopping around in a circle. Gently move the hips (from edge to edge) to roll from flat feet to the balls of the feet, back over to the heels and back to flat feet.
- ▶ Finally, move the left hip, knee and ankle over from a flat left foot to the ball of the foot and to the heel. Repeat with the right hip, knee and ankle. Notice how the board twists. This will be very useful when making turns.
- ▶ If you feel like you might fall when riding, lightly close your hands into fists, get as low to the ground as you can and stay as relaxed as possible.



### TECHNICAL DESCRIPTION

#### VERTICAL

When exploring vertical movements start by keeping the snowboard on the ground and focus on even flexion of the ankles, knees and hips. When encouraging students to hop for the first time, have them focus on keeping their hips level when moving up and down to create the hop. It's very easy for students to use an inefficient blend of extension from their joints and create a lateral by-product when they hop upwards causing a loss of balance.

#### LONGITUDINAL

Create opportunity to explore the moving of the COM from nose to tail and also moving their snowboard underneath them in a shuffling motion. This will develop slower and more powerful movements along with faster, weaker movements when they are finding the longitudinal centre of their snowboard.

**ROTATIONAL**

Rotational movements at this stage can be fully explored to understand personal limits of flexibility and range. Encourage exploration of upper body rotation and highlight the benefits of rotational alignment when appropriate. With more athletic students, pair rotational movement with vertical to challenge aerial rotations of 90 and 180 degrees.

**LATERAL**

Introduce use of the lower body to create tilt, focusing on the ankles and knees so that the upper body can remain as stable as possible. You can then develop this by introducing independent lateral movements to create twist efficiently. Once again, this can be focused on with the ankles, knees and hips.

**TERRAIN & CLASS HANDLING**

Ensure that you select the flattest terrain available so your students do not slide away. If you have enough space, have your group circle around you so everyone can see what you are doing and how you are moving. Be prepared to unstrap and move around your group to help people stand up when needed. If the ideal terrain is not available due to slope conditions or traffic then get creative. Feel free to use a quieter but sloped area and partner your students up to provide hands-on assistance to each other. This way your students can explore vertical, rotational and longitudinal over both edges. This will have a beneficial focus on developing their lateral balance too.

**SELF REFLECTION**

*“Was my terrain selection the best option available to me?”*

*“Did I make the movements suitable for the athletic abilities of the group?”*

**EXPERIENTIAL TEACHING EXAMPLE:**

A creative approach to this step is to use your snowboard as a palette knife. Provide details for how the knife will react when you move. You can create sharper lines when moving laterally to cut the snow. You can use a palette knife for vertical and longitudinal movements to bend the knife and lift it off the snow. You can rotate your palette knife to spread the snow with rotational movements. You can also twist the palette knife as it's thin and can bend.

**ENVIRONMENTAL TEACHING EXAMPLE:**

After standing up, have your students look around at their environment for markers and obstacles to aim for. They can even use each other. Play a simple game of Simon Says to get students to move specific body parts or parts of the board towards different markers. For example: “Point the nose of your board at the person opposite you.”



## DETECT & CORRECT

Student struggles to get up on the heelside:

- ▶ Show students how to get up on the toeside so they have options to use for the rest of their time on snow.

Student loses balance easily when moving laterally on flat ground:

- ▶ Ensure that care is taken in your instruction to create gentle movements with appropriate range of movement.
- ▶ Encourage light flexion in the ankles, knees and hips to lower the COM for increased stability.
- ▶ Focus on movements in the ankles to “roll” from edge to edge, to avoid big movements of the upper body.

## SIDE SLIPPING



### WHAT, WHY, HOW

Sliding down the fall line on one edge with the snowboard across the slope.

To learn how to stop with control on both edges and begin to develop some edge awareness.

#### HEELSIDE

- ▶ Stand up in a comfortable and relaxed stance, balancing the hips gently over the heels to feel the boots pressing softly against the legs.
- ▶ To begin sliding, gently move the hips and knees more on top of the snowboard and gently lower the toes. It may help to rise up slightly.
- ▶ To slow down and stop, move the hips further over the heels and gently lift the toes in the boots. It may help to relax and bend the knees a little bit.
- ▶ Continue to move further in this way to stop.

#### TOESIDE

- ▶ Stand up in a comfortable and relaxed stance, balancing the hips over the balls of the feet, feeling even pressure from the boots on the shins.
- ▶ To begin sliding, gently release a little pressure from the shins against the boots by moving the hips more on top of the snowboard. It may help to rise up slightly.
- ▶ To slow down and stop, relax and bend the ankles and knees, and move the hips further over the balls of the feet. Feel an increase of pressure again from the boots against the shins. Continue to move further like this to stop.

#### BOTH

- ▶ Repeat several times over each edge to increase comfort, confidence and the sliding distance.



## TECHNICAL DESCRIPTION

### VERTICAL & LATERAL

These movements are used to keep the body in balance over the edge and adjust the edge angle of the board. Lateral movement will vary depending on the pitch of the slope. If the slope has only a slight gradient, less lateral movement is needed, compared to that on steeper pitches. Vertical movement is subtle and blended with lateral. When teaching side slipping in any terrain, the key is largely in the ankle joint. The ankle joint should remain more flexed than extended. If the ankle joint becomes too extended on the toeside, less of the soles and balls of the feet are available to balance over resulting in quick losses of balance, increase in muscle tension and fatigue. If the ankle joint becomes extended on the heelside, the snowboard will release grip and slide downhill, as the COM quickly moves laterally further uphill and away from the snowboard. This results in loss of balance, falls and fear of independence.

### LONGITUDINAL

A centred stance with even pressure on both feet is necessary to help keep the snowboard across the fall line. Small movements longitudinally help the rider adjust back to the centre of the board as the fall line changes.

### ROTATIONAL

A rotationally aligned stance with your snowboard is beneficial to help keep your snowboard across the fall line as you are sliding.



## TERRAIN & CLASS HANDLING

Move your students from the flatter terrain used for the two-foot introduction to something with a gentle slope. A slightly steeper pitch can be useful when teaching side slipping as the students have less chance of catching their edge.



When teaching side slipping, always offer hands-on assistance and, even if your student declines, walk alongside them for the first few metres just in case. If giving hands-on consider assisting from uphill or downhill as you will be able to manipulate their lateral movement easily to avoid edge catches. Standing uphill on the heelside allows your student to see more of where they are going and on the toeside allows them to hold your hands to begin with to build confidence. Standing downhill on the heelside allows you to use eye contact and natural face-to-face conversation to calm any nerves and on the toeside allows you, with consent, to apply light pressure to the small of your student's back to maintain an upright stance.

Be aware that there are pros and cons to standing uphill, downhill and even to either side and students will tend to move towards where you are standing. Encourage those that are comfortable to help each other up and even assist to get each other sliding. This can be a useful way to maximise riding time with bigger groups. Ensure that students are checking their blind spots when side slipping on their toe edge.



## SELF REFLECTION

*“Did I offer help to everyone for their first slide?”*

*“Are my students sitting around too much and not riding enough?”*

*“Is there a lot of traffic here that might make my students nervous?”*



## EXPERIENTIAL TEACHING EXAMPLE:

Your student is a builder so you decide to liken their snowboard to a finishing trowel. They flatten the trowel to smooth out the plaster and create a smooth, finished surface. If the trowel has too much edge it will leave cuts or marks in the plaster and the customer won't be happy with the finish. Focus on being consistent with the tilt of the trowel to make a nice smooth surface.





## ENVIRONMENTAL TEACHING EXAMPLE:

Have you students look at their tracks in the snow once they have stopped sliding. You can show them a nice smooth, skidded track versus a track that has sharp lines randomly spaced out. This is a valuable self check tool for smoothness of vertical and lateral movements.



## DETECT & CORRECT

Student catches downhill edge:

- ▶ Practise smooth lateral movements with the lower body to develop a more controlled and predictable use of tilt to remain over the uphill edge.
- ▶ Encourage the use of more vertical movement to help start sliding to ensure that the lateral movement of the COM is not too fast and direct.
- ▶ Offer hands-on assistance to boost confidence and offer instant instruction and feedback if needed.
- ▶ On the heel edge, focus on keeping the hips laterally over the heel edge with slightly flexed knees. This will encourage your students' COM to remain over the uphill edge.
- ▶ On the toe edge, focus on keeping an upright basic stance with the hips laterally over the toe edge with flexed ankles and knees. This will encourage your students' COM to remain over the uphill edge.

Student experiences fatigue while side slipping or floating leaf:

- ▶ Ensure boots and bindings fit well.
- ▶ Change between toe and heel to rest relevant muscles, and take breaks.
- ▶ Offer hands-on assistance to apprehensive students to boost confidence and minimise increasing levels of muscle tension.

Student is broken / over-flexed at the waist:

- ▶ Reinforce the basic stance encouraging a strong core.
- ▶ Encourage your students to stand up more with a straighter back and look ahead on the heelside. On the toeside, simply ask your students to stand up and to look uphill.

Student falls back uphill:

- ▶ Have your student look in the direction of travel and offer hands-on.
- ▶ Take your student to a flatter slope, if lacking confidence on steeper terrain.
- ▶ On the heel edge, check for sufficient highback forward lean on bindings.
- ▶ On the heel edge, encourage your students to increase edge angle by feeling for their toes in the roofs of their boots.
- ▶ Over the toe edge, encourage students to feel for pressure under the balls of their feet to encourage a more stable platform to balance over.

## FLOATING LEAF



### WHAT, WHY, HOW

Sliding down the fall line over one edge to the left and right from forwards to switch, and switch to forwards.

To learn directional control while sliding down the fall line over one edge.

#### HEELSIDE

- ▶ Start in a heel edge sideslip at a comfortable speed. Feel even pressure over both heels and the boots gently pressing into the backs of both legs.
- ▶ To change direction to the right, gently move the right knee and hip more on top of the right foot and lower the toes slightly. You'll feel the right side of the board instantly begin to slide more downhill.
- ▶ Hold this position to drift smoothly to the right and to stop drifting to the right, move the right knee and hip back over the right heel to return to even pressure over both heels. You can drift to the left by making the same movement with the left knee and hip.



#### TOESIDE

- ▶ Start in a toeside sideslip at a comfortable speed feeling both shins evenly against the boots.
- ▶ To change direction to the left, gently release a little pressure from the shin of the left boot by slightly straightening the left knee and moving it towards the outside of the left foot, whilst lowering the heel slightly. You'll feel the left side of the board instantly begin to slide more downhill.
- ▶ Hold this position to drift smoothly to the left and to stop drifting to the left, bend the left knee and ankle to return even pressure to the shins of both boots.
- ▶ You can drift to the right by making the same movement with the right leg.

#### BOTH

- ▶ Repeat several times on toeside and heelside, spending more time on the weaker edge.



## TECHNICAL DESCRIPTION

### VERTICAL & LATERAL

Through the leading side of the body, lateral and vertical movements are used to create twist in the board and to initiate movement of the snowboard in that direction. Options for creating twist efficiently include a lateral movement of knee and hip, or extension blended with lateral to shift the COM up and over the leading foot. Be aware that ankle extension/flexion (flattening the foot) can be effective but encourages students to use ankle extension which can be detrimental to stability and levels of fatigue in snowboarding.

### LONGITUDINAL & ROTATIONAL

Very slight rotational and longitudinal movements in the direction you want to drift can aid lateral movement and initiation of direction change.



## TERRAIN & CLASS HANDLING

It is typically best to stay on the same terrain chosen for side slipping; however, you may decide to progress your students onto a longer section to allow more practice time. As your students naturally develop their riding skills at different rates, ensure that those riding on their toe edge are aware of their blind spots. Encourage your students to turn their head when riding to ensure that they can anticipate any obstacles, moving or otherwise, that may enter their line of riding. As with side slipping, encourage students to help each other up if needed and if they feel that they want to ride without you then let them do so to maximise mileage.





## SELF REFLECTION

*"Did I allow for a larger range of longitudinal movement to help my younger students create twist?"*

*"Is my student confident or do they still need some hands-on assistance?"*



### EXPERIENTIAL TEACHING EXAMPLE:

Most ball sports can be related well to floating leaf. A rugby player can imagine travelling towards the sidelines to pass the ball to his winger. A racquet sports player can be in their action-ready position ready to receive a serve to the left or to the right. A basketball player can be hoping to dribble around a defender to shoot a hoop. An ice hockey player can be ducking to the left or to the right. There are endless variations that require travel to the side to help people visualise their path.



### ENVIRONMENTAL TEACHING EXAMPLE:

Once signs of ownership are appearing, use your environment as an arena to explore. Allow your students the chance to explore the learners' zone using their floating leaf. They now have the skills to change direction, let them travel the width of the run and navigate around obstacles and people when appropriate.



## DETECT & CORRECT

Student's snowboard pivots very quickly around the nose and tail sequentially creating a swinging motion causing quick loss of balance and loss of control:

- ▶ Encourage student to move as smoothly as possible when creating twist in their snowboard and remind them that they only have to move a small amount to create a big direction change.
- ▶ Remind students to keep their upper body stable and quiet when creating twist in their snowboard to aid balance.
- ▶ Ensure you choose terrain with a single fall line so that terrain changes do not over-challenge students.
- ▶ Encourage your students to start in and come back to a sideslip to help boost their comfort levels before committing to a direction change again.

## LIFT RIDING



### WHAT, WHY, HOW

Introduce or discuss the types of lifts students will use.

To understand the different types of lifts and what it's like to ride on them.

- ▶ Static practice is important before attempting to get on a lift. Some resorts will have a practice platter lift, T-bar or chair, so you can demonstrate to your students in a safe, controlled environment prior to using the real thing. Pay attention to the way your students are standing while practising and alter any inefficient stances.
- ▶ Lift riding can be great for practising basic stance and balance. When riding a platter lift or T-bar, be careful not to rotate the hips so that the nose of the snowboard turns out or away from the lift line. Encourage students to practise an action-ready stance as they ride the lift.

### HANDLE TOWS

- ▶ With all lifts, adhere to the correct procedure and take instructions from the lift operator. At the direction of the lift operator, move out into the lift line and point the nose of the board forward, looking back as the handle tow approaches. Reach behind for the tow and slowly grip it as it moves past, to ensure there is no jolt by grabbing it at the last minute. Place the back foot in front of the rear binding and let the lift pull your student forward along the track. Remind them to stand in an action-ready position as they travel up the slope. Ask students to move away from the exit point to a safe meeting place once they get off the lift. Snowboarders will face either towards or away from the lift depending on if they are goofy or regular.

### MAGIC CARPETS

- ▶ Magic carpets can be ridden either carrying the snowboard, or with it attached to the front foot. When stepping onto the lift, be careful as the lift is moving at a constant momentum. If attached to the foot, ensure your student has most of their weight on their rear foot which is free from the binding. This will avoid slipping backwards on the carpet. When ready to exit the carpet, the student should be encouraged to walk/glide off the carpet and clear the unloading area.

### PLATTER LIFTS (E.G. POMA, BUTTON)

- ▶ Look behind as the lift approaches. Take hold of it and place it in front of the body, moving it quickly either between the legs or under the back armpit. Stand upright and look forward. Move well away from the unloading zone once at the top.

## CHAIRLIFTS

- ▶ With direction from the lift attendant, move out onto the loading area, keeping the back foot on the toeside of the snowboard. Look behind for the chair and sit down as it reaches you. Keep the nose of the snowboard pointing forwards. Pull the safety bar down once snowboards are clear of the snow. As the top approaches, lift the safety bar and point the nose of the snowboard forwards. Once the board touches down, place the rear foot in front of the rear binding and slowly stand up in an action-ready position. Look ahead and glide down the exit ramp. Move clear, so as not to be in the way of other riders exiting the chair.



## TECHNICAL DESCRIPTION

### LATERAL, VERTICAL, LONGITUDINAL & ROTATIONAL

No matter what type of lift being used, there will be a strong reliance on the basic stance. This will highlight the need for neutral alignment within all directions of movement to keep the COM over the top of the board. This is a comfortable position that can be moved to and from in the lift lines, when riding on stand up lifts and even when exiting.



## TERRAIN & CLASS HANDLING

Set a specific and easily visible meeting area for students to wait at the top of the lift. Ensure that all of your students have loaded the lift before you and that you have adhered to the resort/school's lift policy. Ride with the more nervous students so you can talk them through the experience and even offer hands-on assistance. On chairlifts, even in a busy resort, do not be afraid to ask lift attendants to keep a spare seat on your chair to allow space to move into when exiting the lift. On chairlifts, group regular and goofy riders together to avoid equipment getting tangled during the load or exit.



## SELF REFLECTION

*"Are my students clear on what to expect when exiting the lift?"*

*"Do my students know what to do if they fall off the lift?"*



## DETECT & CORRECT

Rider falls when getting off lift:

- ▶ Reinforce techniques and ask the operator to slow the lift if possible. Offer hands-on assistance and ride with students on chairlifts to offer help.
- ▶ Exercise thoughtful class management and group regular riders together and goofy riders together when possible on chairlifts.
- ▶ If possible, do not fill the chairs completely to allow room for your students to move into when exiting a chairlift.
- ▶ Review the exit procedure and provide expectations for exit speed, exit ramp pitch, space to ride into and clear visual cues your students can look for. Apprehension of the unexpected can cause a lack of confidence here.

## SECTION D - TEACHING BEGINNER SNOWBOARDERS

## 13

# Learn To Turn

SKIDDEN TRAVERSSES



GARLANDS



C-TURNS



LINKING SKIDDEN TURNS



## IN THIS CHAPTER WE WILL EXPLORE...

An example progression to help your students make their first turns, building upon the skills in the First Timer progression and working towards linking turns. These exercises should be carried out in a groomed beginner area or a gentle green slope. Generic goals for any learn-to-turn lesson include safe stopping; moving across the slope on both edges; speed control; and turning.

Keeping your class safe is your responsibility, so stop them on the sides of the runs and in places that will not cause problems for other beginners. Keep referring back to previous exercises that you have already done with your class. There are only small changes from exercise to exercise, whether it be an added movement or a timing change.



## SKIDDED TRAVERSSES



### WHAT, WHY, HOW

Travelling across the full width of the slope from one point to another, balancing over the uphill edge.

This introduces balance while moving across the fall line and reintroduces riding with the favoured front foot leading, i.e. in your forwards direction.

- ▶ Begin the traverse by twisting the board using the ankles and leading knee, similar to the floating leaf, to guide the nose slightly into the fall line.
- ▶ Once moving, focus on balancing evenly on both feet and looking across the slope, maintaining a stable and aligned stance.
- ▶ To stop at the other side pivot the snowboard gently back into a sideslip.
- ▶ Repeat in the other direction by rolling over and starting on the new edge, and continue doing so until comfortable.



### TECHNICAL DESCRIPTION

#### VERTICAL & LATERAL

Movements within the vertical and lateral directions have the same focus as with the floating leaf when starting or stopping. However, during the middle of the traverse we must maintain even tilt under both feet.

#### ROTATIONAL

Slight rotational movement is required to align the stance to the end point of the traverse. Rotational movement back up the fall line is required to pivot the snowboard and stop at the end of the traverse.

#### LONGITUDINAL

A slight fore movement at the initiation can help but we must be centred throughout the traverse to ensure grip is maintained over the entire edge.





## TERRAIN & CLASS HANDLING

A traverse is simply an extended version of a floating leaf but is always nose first. Always remind your students to check up the hill before crossing the slope. Terrain similar to what was used during the floating leaf is suitable; however, a wider run is ideal and flatter slopes can be utilised.

Begin by encouraging the student to let the board slide as they move across the slope, but ensure that the board does not travel directly down the fall line. The first traverses should be slow and controlled. You can then change the focal points so speed is increased as confidence is gained. Looking in the direction of travel is an important skill to develop here, so encourage your students to pick a point with their eyes across the hill during each traverse. With slower snow conditions, a slightly steeper angle down the hill will be necessary to maintain momentum. In faster, icy snow conditions, be sure to take very slight angles across the hill.

You may find your students naturally want to turn at the end of a traverse, because they have watched other snowboarders do this. Go with it. Don't hold your students back if they are ready to progress into C-turns; however, encourage them to sit down and roll over if they are showing signs of caution. Hands-on assistance is generally not required during traverses unless the snow is particularly icy, as your student's should have established enough independence during the floating leaf.



### SELF REFLECTION

*"Are my students able to carry momentum across the hill on both edges, whilst looking where they want to go?"*

*"Am I allowing them to continue to practise independently, by setting a stopping point further down the run?"*



## EXPERIENTIAL TEACHING EXAMPLE:

Imagine you are a marble on an old zig zag marble run. You roll from one side of the run to the other, pause at the side, then drop through the hole to the next level and roll back across the run, continuing until you get to the bottom.



## ENVIRONMENTAL TEACHING EXAMPLE:

Use the width and angle of the track that your student is creating to help them judge their own success. If the track width is consistent without sharp stops or narrower sections, it shows that they have a smooth traverse whilst balancing over a reasonably flat board. If they can take a slightly steeper angle for each traverse, it shows that their confidence is growing.



## DETECT & CORRECT

Student slides more downhill than across the hill (usually seen on heelside):

- ▶ Check the lateral alignment of their mounted binding position. For example, if the bindings sit closer to the heel edge this is counter productive for a toeside traverse. In this example, your student's COM is favouring the heelside and will make it harder to create tilt over the toe edge.
- ▶ Over either edge, encourage your student to allow the nose of their board to point further downhill than the tail before using balancing on the edge. This will provide more of an initial direction to begin sliding in.
- ▶ On the heel edge, check for sufficient highback forward lean, have your student look across the slope and encourage them to create more tilt by flexing their knees and hips more.
- ▶ On the toe edge, encourage your student to maintain some edge by flexing both ankles and knees.

Student creates too much edge angle, speeds up and falls or loses balance to the uphill side of the board when attempting to slow down from their traverse (usually seen on the toeside):

- ▶ Review which body parts to move and how to come back to a sideslip at the end of the traverse.
- ▶ Ensure that the COM is over the board during the traverse to keep it flatter. This will make it easier to pivot the board back to the sideslip.

## GARLANDS



### WHAT, WHY, HOW

Similar to a traverse but with series of turn initiations and completions, steering into and out of the fall line, leaving a wavy or step-like track.

This is to learn how to initiate and complete a turn, but without an edge change. It is also used to increase confidence in pointing the board into the fall line and riding a flat base.

- ▶ Begin the garland as with a skidded traverse.
- ▶ Once in a comfortable traverse flatten the leading foot slightly to create a little twist in the board and guide it towards the fall line. It will help to move your leading knee down the hill and rotate your hips slightly.
- ▶ When ready to turn back across the fall line, steer the snowboard around progressively by turning the lead knee and hip, finishing with a traverse in the same direction as you began.
- ▶ Try multiple garlands across the slope, then roll over and repeat in the opposite direction on the new edge.



### TECHNICAL DESCRIPTION

#### LATERAL

Similar to what has already been experienced in the floating leaf and traverse exercises, but the initiation will happen more easily given the forward momentum. Torsional twist is necessary to release the nose and steer it into the fall line. Encourage this to come from the leading ankle and knee.

#### ROTATIONAL

Movement rotationally increases slightly here when compared to previous steps. This is used primarily to steer the board back across the fall line but may also be used slightly when steering into the fall line too. Rotational movement should ideally be created from the lower body but it is essential that the upper body rotates in conjunction.

#### LONGITUDINAL

A slight fore movement will help to guide the snowboard towards the fall line; however, even weight should be a priority as the board steers back across.

#### VERTICAL

A slight extension at the initiation of the Garland to help to blend lateral and rotational movements, and keep the hips over the contact edge. As momentum is beginning to increase, encouraging slight flexion at completion will help to control speed and blend other movements.



## TERRAIN & CLASS HANDLING

Garlands are an excellent exercise for turn initiation and completion, especially if your students are having trouble gaining the confidence to turn or are moving with limited or no control into or out of the fall line. As students become comfortable with the garland, try to increase the distance they travel down the slope.

Practise new movements on the flat ground before taking them up onto the slope. This way you can show your students which body parts to move while they are stationary. The most suitable terrain to use for garlands is a wide area with a consistent pitch and fall line. Start on flatter terrain if it is available as this will help with the students' confidence in allowing the nose of the board to travel into the fall line. Remain on the uphill edge at all times when demonstrating. Slower snow conditions will require longer, more drawn out garlands. Faster, icier conditions will require very subtle and gentle steering.

This exercise can be used for any beginner or intermediate student to teach new skills or correct inefficiencies. Hands-on assistance should only be required if your student is showing strong signs of fear when steering into the fall line.



## SELF REFLECTION

*“Are my students leaning back as they steer into the fall line?”*

*“Do they edge the board aggressively when turning back across the fall line?”*

*“Can they ride the board with a flat base momentarily in an efficient stance?”*



### EXPERIENTIAL TEACHING EXAMPLE:

Most adult students have experienced driving a manual car before. In this task you choose to draw a parallel between the front foot and the accelerator. As you gently lower your toes on the front foot and move your knee across the board, you speed up just like pressing the accelerator in a car, while gently lifting off the clutch. If you push on the gas too hard the car will jump and potentially stall.



## ENVIRONMENTAL TEACHING EXAMPLE:

Utilising terrain which has a gentle cross fall line can both help and hinder the student, depending on the direction they are travelling. Look for terrain that has a fall line which goes in the opposite direction to the garland you are using. Then imagine a series of cascading waterfalls that get progressively bigger as they progress down the hill. Have your student draw the imaginary waterfall down the run in their mind and encourage them to adjust where they place their individual waterfalls depending on the pitch and fall line of the run.



## DETECT & CORRECT

Student is scared to steer into the fall line:

- ▶ Spend more time on the floating leaf and traverses, encouraging even weight on two feet.
- ▶ Try holding your student's board on flatter terrain, while they stand on a flat base with the nose pointing directly down the hill, and explore small longitudinal movements.

Student lacks speed control:

- ▶ Encourage your student to spend more time travelling across the fall line before choosing to start their next garland. If it helps, they can focus on the sensation of deceleration.
- ▶ Practise smooth steering and rotate through the lower body while looking where they want the nose to point towards.

Student is over-flexed at the waist when steering back onto their heel edge:

- ▶ Reinforce the heelside basic stance encouraging a strong core.
- ▶ Encourage them to gently lift their toes rather than feeling their calves press into the highbacks.
- ▶ Encourage them to stand up more with a straighter back and look ahead.

Student falls uphill onto their knees when steering back onto their toe edge:

- ▶ Reinforce the toeside basic stance, focusing on keeping the hips over the toe edge and simply standing up balancing on the balls of the feet.
- ▶ Encourage them to balance on the balls of their feet and feel gentle pressure in their shins from the tongues of the boots.

**C-TURNS****WHAT, WHY, HOW**

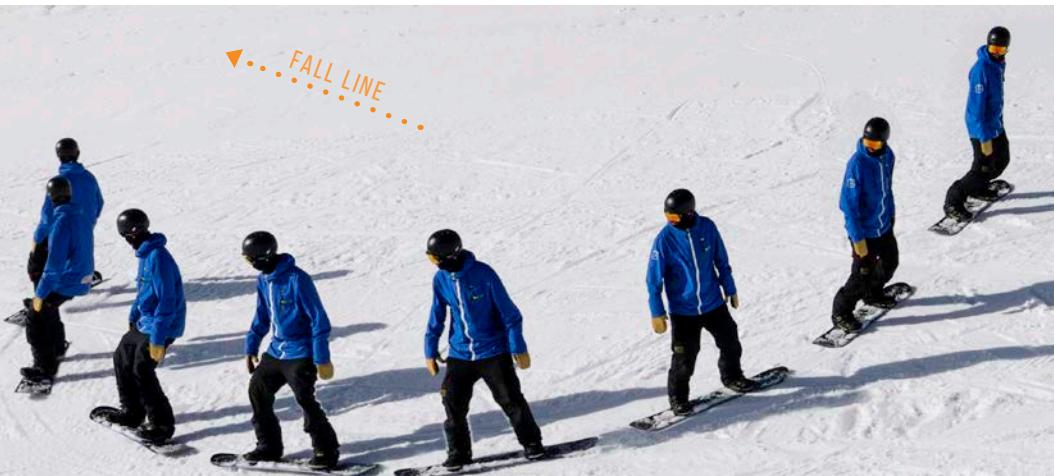
C-shaped turns, starting on one edge and turning to the other.

To complete a single turn with an edge change, but without having to think about preparing for the next turn.

- ▶ Just like in the garland, begin by traversing across the slope and allow the nose of the snowboard to move into the fall line.
- ▶ Once the snowboard is flat on its base and pointing directly down the fall line complete the edge change by gently moving the hips up and over the snowboard, to balance on the new edge. The timing of the edge change is crucial here.
- ▶ To complete the turn gently steer the snowboard across the fall line by progressively rotating the hips and leading knee, just like the garland.
- ▶ Look across the slope in the direction of travel.

**TECHNICAL DESCRIPTION****LATERAL & VERTICAL**

The students are now moving across the board to complete the edge change. Effective movement in the ankles, knees and hips is necessary. Extending a little vertically will help to move the hips laterally and flexing in the completion will help to control speed. Twist is a key component for the initiation of the C-turn; however, this skill should have been developed in the garlands.





### ROTATIONAL

Rotational movement is used to steer the snowboard though the full C-turn. Movement is initiated by the lower body to ensure efficient steering and co-ordinated with the upper body to help maintain balance and alignment.

### LONGITUDINAL

Pressure can be shifted slightly fore to aid initiation if necessary, ensuring a movement back to centre in the control phase and flex evenly over both feet at completion.



### TERRAIN & CLASS HANDLING

The only new information when progressing from a garland to a C-turn is the addition of an edge change. Your students should be familiar with the initiation and completion of the turn, but not changing on to their new edge. Have the student walk through a single turn without the board on or with one foot unstrapped on flat ground. This allows the student to think through the movements required and internally visualise them before committing to the turn with both feet in.

Start on flatter terrain if it is available, as this will help with students' confidence in allowing the nose of the snowboard to travel into the fall line. It is important that the terrain is familiar to the student. A hands-on approach may be needed initially to aid the student through the first edge change, helping their confidence. It is usually best to stand inside the turn and guide your student through with their front hand. The first C-turn is often best done turning onto their stronger edge, typically the heelside.

The timing of the edge change is crucial. Be sure that the student is clear on when the edge change should happen. Encourage a gentle lateral movement and use verbal cues ("wait, wait... ok change now!") to help them. Provide focal points in the turn. This may be a lift tower, fence or you.



## SELF REFLECTION

*“Do my students have the ability to move the hips across the board to balance over their toe edge? If not, will vertical movement help them to achieve this?”  
“Are they patient in their steering or rushing it to control speed? If so, have you chosen appropriate terrain for the snow conditions?”*



## EXPERIENTIAL TEACHING EXAMPLE:

Your student is an artist in their spare time and enjoys calligraphy. You discuss the smooth curves which they are familiar with and liken them to a C-turn to encourage progressive movements and low edge angle throughout the turn.



## ENVIRONMENTAL TEACHING EXAMPLE:

The beginner slope you are using has a natural fall line that is slightly off camber, leading to one side of the slope. You make your students aware of this and have them draw an imaginary line down the fall line. You ask them to adjust their C-turn to account for this and focus on changing edges when they are pointing their board along this imaginary line.



## DETECT & CORRECT

Student struggles to initiate the turn (typically the toeside turn):

- ▶ Encourage a longitudinally centred stance so your student can create torsional twist more efficiently.
- ▶ Reinforce how to create twist with a stationary introduction/review of the movements necessary within the lower body. Revisit the garland if needed.
- ▶ Offer hands-on assistance and walk students through a turn to aid further understanding and boost confidence.

Student washes the tail of the board out at the end of their heel turn:

- ▶ Encourage a centred stance in the completion phase of their turn.
- ▶ Give your students some kinesthetic feelings to help them balance over the new edge, such as shins pressing into the tongues of the boots.
- ▶ Encourage your students to finish a turn using a traverse and look across the slope. Creating a target across the slope will promote this.

## LINKING SKIDDED TURNS



### WHAT, WHY, HOW

With the confidence of C-turns onto both edges, the next step is to link the two turns together to form an S shape.

The goal of linking turns is to develop rhythm and confidence, and to begin exploring new terrain.

- ▶ Start with a C-turn and instead of stopping after one turn continue riding and make the next turn.
- ▶ Keep momentum from one turn to the next ensuring the last turn has been completed with control.
- ▶ Start with a long traverse to give time to get ready for the next turn and avoid other slope users.
- ▶ As confidence increases, reduce the traverse ensuring the eyes are looking in the direction of travel.





## TECHNICAL DESCRIPTION

### ROTATIONAL

Rotational movement should be focused in the lower body. The front foot/leg will steer the board down the hill to start the turn, with the rear foot/leg mirroring this movement to finish the turn. The pivot point should be between the feet. The upper body and head will move with the lower body to maintain alignment.

### LATERAL

This movement is minimal, but enough is needed to change edge and balance over the uphill edge. The student must keep the COM over the board to maintain balance during these slow speed turns. This also enables us to keep a low edge angle. Twist is used for effective initiation.

### VERTICAL

Vertical movement consists of an extension to help move the hips across the board and flexion through the control and completion phases to aid balance and manage the minimal pressure that is created.

### LONGITUDINAL

Movement here can consist of a slight pressure fore to aid turn initiation and pressure moving aft (back to centre), as we flex over both feet in the control and completion phases.



## TERRAIN & CLASS HANDLING

As soon as your student has achieved C-turns in both directions encourage them to start linking their turns on the same terrain. Don't wait to see the perfect C-turn as it can be easier to balance with a little more momentum.

Use traverses after each turn to allow time for your student to balance and consider their next turn. Once students can confidently link turns, structured mileage is essential to reinforce skills and create rhythm and flow within their turns. Use plenty of guided practice with constant feedback.

It's often best to have students follow your track initially, before progressing to choosing their own line. Once the student is displaying rhythm and speed control, and if they are confident, they are ready to progress to steeper green runs. Establish stopping points further down the run to allow for self practice and help foster rhythm in their riding.



## SELF REFLECTION

"Can my students control their speed using both the toe and heel turns?"  
"Are they looking in the direction of travel continuously?"



## EXPERIENTIAL TEACHING EXAMPLE:

Your students have all experienced riding a bike at some point, so you choose to relate their turns to steering on a bike. If they steer smoothly, the turns are easier to achieve. If they maintain even weight over both “wheels” (or feet), they will remain in control. A little momentum will help them to balance, whereas riding slowly tends to be more wobbly.



## ENVIRONMENTAL TEACHING EXAMPLE:

You choose to focus your student's attention on the track they are leaving in the snow. After looking at your track and trying to ride within it, you ask them to lead and make their track as smooth as possible.



## DETECT & CORRECT

Student catches downhill edge:

- ▶ Reinforce the timing of the edge change with your student and that they focus on bringing the COM and hip up and over to the new edge, encouraging patience.
- ▶ Give verbal cues as they are making the turn.
- ▶ Draw a track on the snow indicating the board's path and highlight where the edge change should take place. Then have them follow your track.

Student loses momentum on their toeside:

- ▶ Have your students focus on the direction of travel, rather than looking back up the hill.
- ▶ Encourage patience and a progressive turn shape through the completion of the turn.
- ▶ Add a little flexion to the completion of the turn to help blend the other movements more progressively.

Student uses one turn more than the other for speed control:

- ▶ Focus their attention on turn symmetry and the feeling of rhythm in their riding.
- ▶ Revisit the garland on the edge they are struggling to control speed, focusing on creating a smooth pivot through the completion of the turn.
- ▶ Set visual points to look at directly across the hill to encourage a more closed turn shape.

## SECTION E - TEACHING INTERMEDIATE SNOWBOARDERS

14

# Exploring The Turn

**EXPLORING TURN SIZE & SHAPE**



**EXPLORING DIRECTION (SWITCH RIDING)**



**EXPLORING NEW TERRAIN**



## IN THIS CHAPTER WE WILL EXPLORE...

Different tasks and progressions that will help to guide a student's understanding and skills while exploring the shape, size and direction of the turn. We will also look at where and when to use these skills on the different terrain that students will encounter as they progress.

This begins with learning how to vary turn size and shape (see Chapter 6). This will give them the basic skills required to ride and explore different groomed terrain and understand where each turn is best suited. In addition to this, introducing switch riding will help the student to become more versatile, enabling more options as they begin to explore freestyle and freeride skills.



## EXPLORING TURN SIZE & SHAPE



### WHAT, WHY, HOW

Learning to change the size (small, medium and large) and the shape (open and closed) of the turn.

Varying turn size and shape provides options for maintaining and controlling speed, as well as line choice, as we start to explore new terrain.

#### TURN SIZE

- ▶ Making different sized turns relies on similar movements used in our medium skidded turns.
- ▶ Let's review the movements of gently rising, moving your front knee and hip towards the new turn, once the board is flat, progressively flex over the new edge, turning the front knee and hip to steer the board across the hill.
- ▶ Focus on how long it takes to make each turn, try to measure them by counting how many seconds each turn takes (typically three-four seconds).
- ▶ To make the turn smaller, simply make the same blend of movements a little quicker for a two second count. It may also help to turn the front knee and hip a little more.
- ▶ Larger turns can be achieved by slowing down the same blend of movements or increasing the time taken (typically a five-six second count).
- ▶ Use the same timing changes while focusing on the pressure under the soles of the feet, moving across from the heel, to the centre of the foot, to the ball of the foot and back again.
- ▶ Progressively change the size of your turn by starting with small turns and gradually making them bigger, increasing the timing or count as we ride (or vice versa depending on the terrain available).

#### TURN SHAPE

- ▶ Varying turn shape relies on similar movements used when altering the size of the turn. The more open the turn becomes, the faster you will travel.
- ▶ Focus on how long it takes to make a medium closed turn across the fall line and imagine that you are riding around the bottom of a clock face from three to nine o'clock then back again to close the turns.
- ▶ To make the turns more open, ride around the clock face from four until eight o'clock and back again turning the board less across the fall line. For a really open turn try turning between five and seven o'clock. You will find that you start to pick up more speed the more you open up the turns.
- ▶ Now let's see if you are able to start with open turns and progressively make them more closed.
- ▶ Now that you are able to make different size and shaped turns it's time to vary them to suit the terrain that we are riding. As you look at the slope in front of us what would be the most appropriate turn to use?



## TECHNICAL DESCRIPTION

### VERTICAL & LATERAL

Progressive extension and flexion is required through the lower body. Heel-to-toe, extend through the knee and hip to shift the COM over the board then flex through the ankles and knee to balance over the new edge. Toe-to-heel, extend through the knee and ankle to shift the COM over the board then flex through the knees and hips to balance over the new edge. Note that there will be some independence within the leading half of the body laterally to help with the initiation. The amount of vertical and lateral movement can remain similar for different size and shape turns, though the duration will need to vary.

### ROTATIONAL

Movements should be focused in the front knee, while allowing the hip through to shoulders to make a subtle movement in the same direction to aid in steering. Smaller turns will often require more rotational movement timed faster while larger turns require less rotational movement over a longer duration.

### LONGITUDINAL

Fore/aft movements should remain in a centred position to help maintain effective vertical, lateral and rotational movements.



## TERRAIN & CLASS HANDLING

Mileage with feedback on familiar green terrain is a key to creating the skills needed to progress onto new and more challenging terrain. Make students aware that larger turns will usually result in an increase in speed and use more of the slope. Smaller closed turns will be needed as we move onto steeper terrain to help control speed. Open turns will result in an increase in speed and will be useful for flatter terrain.



Students will need to be very conscious of other people on the mountain as they will potentially be traveling faster and using more width of the slope. Awareness of the pitch of the terrain and snow conditions is crucial to their success and development. The students will often be traveling for longer durations and be well spaced out so setting clear meeting points at the sides of the run will help keep the class together and safe from uphill traffic.



## SELF REFLECTION

*“Did I make my students aware of why we make different sized turns?”*

*“Do my students know how to control speed through the size and shape of their turns?”*

*“Are my students able to match the size and shape of their turns suitably to variations in terrain?”*



## EXPERIENTIAL TEACHING EXAMPLE:

When riding a bike you need to turn the handlebars faster to go around a tight corner and more progressively when it is a more gradual corner. We use our front knee and hip in a similar way to steer the board for small, medium and large turns. You can also compare open and closed turns to a series of gradual hairpin corners or open flowing corners. The hairpins you steer the bike more and for longer and the flowing open corners you steer for a shorter time and are usually able to travel faster.



## DETECT & CORRECT

With all corrections it is important to first assess the rider's stance to make sure they are in an aligned position.

Student falls inside the turn through the control or completion phases:

- ▶ Have your student stay laterally balanced over the board with the upper body at low speeds.
- ▶ Encourage edging movements using flexion in the lower body for balance.
- ▶ Ensure your students have enough momentum to help them balance.

Student experiences instability or chatter during turn completion:

- ▶ Encourage your student to use a larger and more progressive range of flexion movement to aid stability through turn completion. For example, over-flexing at the hips on the toeside will move the upper body laterally out of balance. More flexion in the ankles and knees will complement hip flexion, resulting in a more laterally balanced riding position.

Student lacks speed control:

- ▶ Review how to create a closed turn shape through effective steering using the knee, hip and shoulder.
- ▶ Discuss and review with your student if they are using an appropriate combination of turn size and shape for the terrain.
- ▶ Encourage smooth progressive steering through the lower body for the appropriate duration for the size and shape of the turn.
- ▶ Practise garlands with the focus on finishing across the hill.

## EXPLORING DIRECTION (SWITCH RIDING)



### WHAT, WHY, HOW

Learning to ride switch (opposite direction) with a flat land 360 progression.

Switch riding is essential for a lot of freestyle tricks. Switch can also help in becoming more versatile when freeriding.

- ▶ Begin traversing on the board switch, focusing on a relaxed and rotationally aligned stance.
- ▶ Try a series of back up turns in each direction. Start by traversing across the hill switch then guide the board up hill by gently turning the lead hip, knee and shoulder until you begin to slow down and the board is flat on the snow. Then turn your head and look towards the other end of the board. Gently move the hips over the new edge, turning the new lead knee and hip to steer the board across and back up the hill.
- ▶ Repeat a series of these across the hill in both directions creating W-shaped arcs in the snow.
- ▶ Turn them into slow flat land 360 spins, starting the next back up turn earlier each time, so you are continually spinning. Use small movements with the ankles and knees to gently flatten the board and guide around the spin. Try them in both directions, clockwise and counterclockwise.
- ▶ Now try linking switch skidded turns, applying steering through the new lead ankle, knee and hip. Rotating the shoulders and head progressively into the turn will also help here. Rising up and moving the hips over the board will help with balancing on the new edge.
- ▶ Looking continually in the new direction of travel is crucial.

(An alternative approach is to work through the Learn to Turn progression starting with a switch traverse, into switch garlands, C-turns and linking turns.)



### TECHNICAL DESCRIPTION

#### ROTATIONAL

Rotational movement should come from the lower body, the same as with linking turns in the forward direction, focusing on the new leading knee. The upper body and head may rotate slightly ahead of the lower body to help alignment and encourage looking continually through the turn.

#### LATERAL

This movement is minimal, but enough is needed to change edge and balance over the uphill edge. The student must focus their attention on the timing of the edge change first and foremost. Twist is used for effective initiation.

## VERTICAL

Vertical movement consists of an extension to help move the hips across the board and flexion through the control and completion phases to aid balance and manage the minimal pressure that is created. More importantly, encourage vertical to help blend the other movements.

## LONGITUDINAL

Movement here can consist of a slight pressure fore to aid turn initiation and ensure the student remains perpendicular to their board and the slope.



## TERRAIN & CLASS HANDLING

Similar terrain and class handling to garlands and linking turns should be applied; however, you may choose to use a flatter area on a green run that is away from a beginner area. Students' coordination when riding switch is likely to be less developed, so mileage with simple tasks may be needed. In addition to this, greater consideration to blind spots should be discussed as students may not rotate their head as far to the heelside as they do when riding forward. Setting appropriate focal points will help. Dizziness may also be a factor if students perform multiple flat land 360s in a row. Appropriate green terrain and snow conditions are essential to learning switch, as comfort and confidence are needed for success.



## SELF REFLECTION

*"Did learning switch increase the amount of falls my student had?"*

*"Are they feeling a sense of achievement through learning to ride switch?"*

*"Should I encourage a little more upper body rotation to help the rider align with and look in the new direction of travel?"*



## EXPERIENTIAL TEACHING EXAMPLE:

Learning to ride switch is like learning to write with your other hand, it may feel very unnatural and awkward at first. It will often be harder to make the fine movements with your finger and thumb when writing and the small movements with the ankles and knees when riding switch. With practice it will become easier and more familiar.



## DETECT & CORRECT

Switch riding will have similar issues to garlands and C-turns. The majority of inefficiencies will result from an inefficient stance or not looking in the direction of travel. Traverses are a great way to find a balanced stance so the rider has the correct starting and finishing position.

## EXPLORING NEW TERRAIN



### WHAT, WHY, HOW

Applying turn size and shape to the mountain's natural and varied terrain.

Being able to ride more of the mountain will create adaptability and give options to your students' riding and line choice.

- ▶ Before heading down steeper, more varied terrain, review how to vary the size and shape of the turn on a green run.
- ▶ To get used to the steeper terrain do a floating leaf to feel how much more you need to edge the board to slow down and control your speed. Focus on the increase in pressure under the soles of your feet and how much you need to tilt the board to control your speed.
- ▶ With the same exercise, progressively rise up when steering into the fall line and sink down when slowing or stopping. This will help when turning.
- ▶ Smaller closed turns will help with speed control. Use stronger and faster steering movements with the front knee, hip and shoulder to guide the board through the turn.
- ▶ Open turns on flat terrain will help to maintain our speed. Remain balanced over the board with relaxed ankles and knees. Larger turns can be used to increase our speed as well.
- ▶ Decide which turn to use when looking at the terrain ahead. What turn size and shape should we use to match up to the terrain, trying to maintain a similar speed? How fast should we go when it gets busier with other snowboarders and skiers around us?





## TECHNICAL DESCRIPTION

### VERTICAL & LATERAL

An increase in flexing movement through ankles, knees and hips in the control and completion of the turn will be required to deal with the increase in pressure on steeper terrain. A larger range of vertical movement will enable a balanced progressive (angulated) lateral movement to help tilt and edge the board more appropriate to the increased pitch of the slope. A shorter duration of vertical and lateral movements at the start of the turn can help to create an early/faster initiation in steeper and varied terrain. Maintaining relaxed ankles will make it easier for the rider to make fine tuning adjustments.

### ROTATIONAL

Stronger and larger ranges of rotational movement through the front hip and knee may be required to steer the board effectively relative to the amount of edging, the terrain being ridden and the speed the rider is travelling. All rotational movements should be timed smoothly and progressively.

### LONGITUDINAL

Fore/aft movements should remain in a centred position to help maintain effective vertical, lateral and rotational movements.





## TERRAIN & CLASS HANDLING

Mileage with feedback is key to progressing students at this stage. Students can begin to develop inefficiencies if they are over challenged on new terrain and some students may become anxious and afraid. Remember the “old task on new terrain” theory. Be prepared to alter your lesson plan into correctional focuses, as new terrain will often highlight issues in the students’ movement patterns that were not obvious on easier terrain.

There may be more hazards in the newly explored terrain, as well as higher traffic areas with people traveling at faster speeds. Safe stopping points at the sides of runs and very visible from above should be used. Let students know to slow down well before they are about to stop with the rest of the group.



## SELF REFLECTION

*“Were my students ready to attempt more challenging terrain?”*

*“Are they able to control their speed on varied and steeper blue runs?”*



## ENVIRONMENTAL TEACHING EXAMPLE:

Encourage decision making from the students, matching up the appropriate size turn to changing pitches in the slope while trying to maintain a similar speed. Larger or open turns on flatter sections and smaller on steeper terrain. Using banks to help change the size of the turn or reduce speed helps the student to understand how they can use terrain to their advantage.



## DETECT & CORRECT

Rider picks up too much speed in the steeper sections:

- ▶ Review closed turns and how to steer the board across the hill.
- ▶ Try skidded traverses to get the appropriate lateral and longitudinal balance for the end of the turn. This can also be used to find the appropriate amount of edging for the completion of the turn.
- ▶ Garlands can help with effective initiation and steering movements.
- ▶ Jigsaw turns, where the board travels back up hill, will help to control the speed through over finishing or closing the turn.
- ▶ Setting focal points at the side of the run will help encourage the student to steer the board across the hill.

Rider slows down too much or catches edge on flat terrain:

- ▶ Review open turns on easy green terrain and set focal points down the hill.
- ▶ Talk about how riding a completely flat board in some snow conditions can lead to edge catches.
- ▶ Introduce a small edge roll task down the fall line focused in the ankles while the upper body remains relaxed and balanced.

## SECTION E - TEACHING INTERMEDIATE SNOWBOARDERS

15

# Exploring Freeriding

**INTRO TO OFF-PISTE****PASSIVE ABSORPTION****ACTIVE ABSORPTION**

## IN THIS CHAPTER WE WILL EXPLORE...

Progressions and tasks used to help deal with the unpredictable terrain encountered as riders venture into ungroomed terrain. This includes methods of absorbing bumpy and choppy snow, and how we can blend absorption into our turns.

We will also introduce the concept of how we SCOPE the slope. This is a useful tactic snowboarders use to assess their Safety, the Capabilities to ride terrain, understand their Options and all the necessary Preparations needed before the Execution of a run. Students will require good edge awareness, and turn size/shape skills with a degree of adaptability riding different groomed terrain before venturing off-piste.

## INTRO TO OFF-PISTE



### WHAT, WHY, HOW

An introduction to riding off-piste terrain.

Develop some basic awareness of the skills needed to safely venture off-piste.

- ▶ Review the size and shape of turns. Focus on medium to small closed turns in a slightly lower position than you would normally ride. Utilise progressive flexion and steering from the lower body.
- ▶ A lower edge angle with relaxed ankles and knees will help to keep speed down, allowing the board to skid smoothly across bumpy terrain.
- ▶ Traverse out into the off-trail terrain at the side of the run, then find a suitable place to do a turn that is not too bumpy before traversing back to the groomer. Repeat this a few times on both sides of the run.
- ▶ Start linking turns down gentle off-piste runs remaining patient, making sure the turn is finished in a traverse and a balanced position is achieved before making a turn. Gradually remove the traverse as confidence grows.
- ▶ Now consider your line choice, by looking ahead for places that are less bumpy or choppy with smoother snow in which to make turns.



### TECHNICAL DESCRIPTION

#### LATERAL

Lateral movement should be appropriate to the snow conditions, keeping the rider's COM balanced over the edge. Focus on lower body lateral movement to create torsional twist, while keeping the upper body stacked over the hips. A lower edge angle will help the board to slide across the choppy snow.

#### VERTICAL

A lower vertical position will help to create stability and balance. Being relaxed with extension and flexion movements in the ankles and knees will help to maintain even pressure under the rider's feet.

#### ROTATIONAL

Smooth and progressive rotation through the lead knee, hip and shoulder is required to steer the board through the variable terrain.

#### LONGITUDINAL

A centred stance is preferable, though there will often be subtle weight shifts and adjustments happening due to the terrain. Consideration for snow conditions is needed. A little more movement toward the tail to create lift in powder and being able to regulate movement in sticky slush. Too much movement aft will limit steering movements.



## TERRAIN & CLASS HANDLING

Before taking any student into the off-piste it is crucial to assess the conditions and their ability to ride it. Develop the necessary skills on easy blue groomed terrain. Their first experience off-piste should be a green or easy blue pitch that is not too challenging.

Work through SCOPE (Safety, Capabilities, Options, Preparation, Execution) in your own mind and as a group if possible. Asking questions of yourself and your students is a great way to make sure that you have covered all the essentials before heading into the off-piste.

Consider the entry and exit points, the terrain and snow conditions and any terrain hazards that may exist. Present different options to ride in the off-piste, the size and shape of the turn required, options to traverse if needed and that it is okay to use a floating leaf if they find it too difficult. Being warmed up and having good working equipment, set up correctly, will help in preparation to ride off-piste. Once you feel confident that you have covered the above you should be ready to execute the run.



## SELF REFLECTION

"Were my students able to control their speed in the off-piste?"

"Did they manage to stay in balance?"

"Were the terrain and snow conditions appropriate to their level?"



## ENVIRONMENTAL TEACHING EXAMPLE:

Before heading off-piste look for banks that are a bit choppy at the side of groomers and try traversing or doing garlands along them in tall and flexed positions to explore a more balanced position. You could also use a flat area and have your student try standing on their board in a tall position with their eyes closed. Then get down and wiggle their board. Try the same exercise with the student in a flexed position, then ask when they felt more balanced.



## DETECT & CORRECT

Student lacks confidence in off-trail:

- ▶ Use "follow me" to help your student with their line selection.
- ▶ Review turn size and shape with progressive vertical and lateral movement to promote confidence on-trail first.
- ▶ Offer your student options with line selection that will avoid or deal with snow conditions and obstacles.
- ▶ Look for less challenging terrain.

Student lacks speed control:

- ▶ Review skidded traverses with relaxed ankles and knees with a lower edge angle on trail then in the off-piste.
- ▶ Set focal points for the student to look at to help finish turns.
- ▶ Review turn size and shape, and ensure that the terrain choice is conducive to success and promotes confidence.
- ▶ Encourage your student to close both heel and toe turns to control speed.

Student lacks pressure control or the board chatters:

- ▶ Review smooth progressive vertical flexion through ankles/knees on toeside and ankles/knees/hips on heelside.
- ▶ On groomed terrain, try a straight run then progressively tilt and pivot the board into a sideslip to slow down on the edge that the student experiences chatter.
- ▶ Encourage a lower edge angle and looking across the hill through the control and completion of the turn in question.
- ▶ Check longitudinal and rotational alignment of the student through the completion of their turns.

## PASSIVE ABSORPTION



### WHAT, WHY, HOW

Softly absorb undulating or bumpy terrain with independent leg movement.

To maintain balance in the off-piste and begin exploring more of the mountain.

- ▶ While on green terrain, try gently moving up and down through a skidded traverse. Flexing in the ankles and knees on the toe edge and knees and hips on the heel edge while maintaining a balanced upper body without changing the edge angle.
- ▶ Try the same exercise gently moving up and down throughout medium, closed skidded turns on green terrain. Both legs will flex and extend smoothly at the same time.
- ▶ In mellow bumps, traverse across with relaxed ankles and knees, find a spot that looks okay to turn and traverse back on the other edge. Feel your legs moving up and down with the bumps while keeping your upper body stable and aligned.
- ▶ Notice how your legs moved separately as the board went up and over the bumps - first the front leg then the back leg. This is independent absorption. (Repeat this several times to build awareness.)
- ▶ Gradually remove the traverse as you feel comfortable and start linking turns. Remember to look for easier places to turn and stay a little lower with relaxed ankles and knees.



### TECHNICAL DESCRIPTION

#### VERTICAL & LONGITUDINAL

Relaxed and independent flexing and extending movement through the ankles, knees and hip joint are required to allow the board to maintain contact with the snow. Vertical position should be more flexed than the rider would use on trail. Some additional longitudinal movement may be required if the snow is sticky, slushy or powdery.

#### ROTATIONAL & LATERAL

These are similar to those used in the Intro to Off-Piste progression.



### TERRAIN AND CLASS HANDLING

Gentle, undulating terrain with good snow conditions is ideal for introducing students to this. Look for easy exit points back to groomed runs. Assess students' confidence levels and offer the option of doing a floating leaf if they lose confidence with their ability to turn. Plenty of mileage with feedback on the same terrain will help with decision making and line choice. Encourage students to look across the slope to aid in steering and completing turns.



## SELF REFLECTION

"Are my students able to maintain balance while turning in the off-trail?"

"Is the terrain too challenging for my students?"

"Is the terrain bumpy enough for them to feel independent leg movement?"



## EXPERIENTIAL TEACHING EXAMPLE:

Imagine that you have just upgraded your old mountain bike that only had front suspension to a new one with much bigger front and rear shocks. Your new bike is a dream to ride and you can hardly feel a bump in the track. Using your legs like your front and rear shocks will make it feel like you have a new board capable of gliding over the toughest terrain.



## DETECT & CORRECT

Student has a lack of flexion/extension and struggles absorbing pressure or changes in terrain:

- ▶ Encourage your student to use continual, progressive vertical movements in the ankles and knees.
- ▶ Whilst stationary, have your student explore their own personal range of vertical flexion and extension in their legs. By doing so, both you and your student gain an understanding of their natural range and flexibility.
- ▶ Check how stiff your student's boots are and see if this is affecting them.
- ▶ Check that your student's stance width is not limiting their vertical range. This can happen with stances that are both too narrow and too wide.

## ACTIVE ABSORPTION



## WHAT, WHY, HOW

Physically lifting the snowboard up and over bumpy terrain.

To develop an alternative and stronger method of absorbing terrain.

- ▶ With the board off and standing in an active stance, lift the front leg and spring gently off the back leg, landing on the front leg with the back leg landing just after. This is the same movement used in a bad ollie, where you do an ollie that lands nose first.
- ▶ Try this again with the board on, imagining that you are riding over a bump.
- ▶ Traverse across the groomed slope and make two or three bad ollies mimicking the movements needed to actively ride up and over bumpy terrain. Make a turn and practise on the other edge.
- ▶ Time the same movements to physically lift the board up and over gentle bumps while traversing, keeping the board in contact with the snow.

- Once feeling confident with this new movement try to blend it into your off-trail riding. Remember to still use a lower edge with smooth turning movements of the knee, hip and shoulder to steer the board.



## TECHNICAL DESCRIPTION

### LATERAL

A strong stable lateral position that has the hips and upper body balanced over the working edge is required. This position should also enable an appropriate edge angle to maintain edge grip but still allow the board to skid through turns.

### VERTICAL

Strong independent flexing and extending movement through the ankles, knees and hip joint is required to lift the board up and over bumps while maintaining contact with the snow.

### ROTATIONAL

Rotational movements should be smooth and progressive focused in the lead knee and hip, and timed with vertical flexion to aid in steering. A slightly lower position should still be used.

### LONGITUDINAL

There is often a subtle fore/aft movement happening with active absorption. This movement should be controlled to avoid moving too far to the nose or tail of the board. More longitudinal movement will be required as independent absorption is increased.



## TERRAIN AND CLASS HANDLING

Bumpy terrain similar to that used in passive absorption exercises will be the most appropriate place to begin and the same general class handling will be required. Students may tire quickly when using active absorption because of the extra energy needed. Watch for signs of fatigue and avoid riding bumpy terrain if students are not warmed up or feeling tired, as there will be a heightened risk of injury. Progress students to terrain with bigger features, like man-made rollers, and increase speed as their timing and range improves.

Active absorption should be developed as a tactic to complement passive absorption rather than the main method of riding off-piste terrain. Encourage students to be careful with how much independent power they use in their legs as too much can lead to inefficient riding and falls.



## SELF REFLECTION

*“Are my students able to coordinate the movements of a bad ollie before heading off-trail?”*

*“Did my explanation of how to actively absorb bumps and undulations make sense to my students?”*



## ENVIRONMENTAL TEACHING EXAMPLE:

Set up a series of snowballs in a traverse line across a groomed slope and have your student try and make bad ollies over them. This will help in timing their movements, matching up to multiple bumps. You can also develop more power and range of movement in your students by turning the snowballs into larger snow stacks if the snow is mouldable.



## DETECT & CORRECT

Student struggles with the timing of active absorption movements and matching them to terrain:

- ▶ Have your student practise ollies, nollies and bad ollies.
- ▶ Find more suitable terrain with isolated bumps to develop timing of these movements.
- ▶ Try pre-jumping a bump with a bad ollie or using a “follow me” approach.
- ▶ Utilise long traverses across multiple bumps to develop more sequential movements.
- ▶ Encourage your student to use verbal cues for timing such as counting or singing/humming a tune.

## SECTION E - TEACHING INTERMEDIATE SNOWBOARDERS

## 16

# Exploring Carving

INTRO TO CARVING



EARLY EDGE CHANGES



DEVELOPING CARVING



## IN THIS CHAPTER WE WILL EXPLORE...

Tasks and concepts aimed at introducing carving, also known as edged turns. These tasks are aimed at intermediate riders within the exploration stage of development. When put together, these tasks make up a detailed progression for introducing and developing carving as a riding option. They can be used as a series of exercises as part of a longer progression, or individually to build particular skills in your students' riding.

The concept of carving is to tilt the board enough so the edge grips and cuts through the snow with less skid (see Turn Types in Chapter 6), utilising the board's site-cut more to shape the turn. Students will require a variety of turn sizes and shapes, before learning to carve.



## INTRO TO CARVING



### WHAT, WHY, HOW

Introducing carving through the bottom half of a turn.

To increase edge awareness and effective edging movements, and develop the feeling of having the snowboard hold an edge for an extended period, and work on pressure management when carving from the fall line across the slope.

- ▶ Stationary, with one foot out, feel the edge angle of the board by flexing through the lower body (angulating). Walk the board to one side leaving a narrow, slightly curved track in the snow. This is the side-cut working.
- ▶ Edged traverses, beginning on the side of the trail in a centred stance, with a focal point to traverse towards, slightly down and across the slope. Start moving with a skidded traverse towards the focal point. As momentum is gained, increase the edge angle by flexing through the ankles and knees on toeside / knees and hips on heelside, while minimising skid.
- ▶ Allow the side-cut to gently turn the snowboard back up the hill to a stop. Repeat several times until comfortable maintaining an edged traverse all the way across the slope.
- ▶ Now make a gradual transition from a traverse across the hill, to a series of deeper edged arcs, which progressively increase in momentum. In each arc, flex down progressively throughout the arc as speed is increased, focusing on good angulation in the body. Be progressive with edging and pressuring through the completion of the arc.
- ▶ When comfortable, add more speed to the edged arcs by spending a little more time in the fall line. Include a progressive, whole body rotational movement in the direction of travel to change the arc into more of a carved J shape, pointing the nose slightly back up the hill. This will encourage steering through the completion of the turn.
- ▶ Link these together, removing the slight uphill steer, focusing on maintaining a carve from the fall line through to the completion of the turn.





## TECHNICAL DESCRIPTION

### LATERAL & VERTICAL

The COM should be balanced over the uphill edge throughout these tasks. Vertical and lateral movements need to be well blended to achieve a carved turn. Flexion through the ankles, knees and hips should be used to create angulation in the body, help increase edge angle and maintain stability. Heelside angulation should be through the knees and hips mostly; however, it is also useful to encourage dorsi flexion in the ankles, gently pulling the toes up inside the boots. Toeside angulation should be focused in the ankles and knees by progressively driving the knees over the toe edge. Maintaining dorsi flexion in the ankles is crucial here. A small amount of flex will also be required in the hips to ensure an active stance is maintained.

### ROTATIONAL

Looking in the direction of travel with progressive steering through the whole body should be encouraged in the latter parts of this progression.

### LONGITUDINAL

Students should remain centred over the side-cut.



## TERRAIN AND CLASS HANDLING

Start on a flat area for the stationary step, then progress to terrain that the student feels comfortable to make turns on, without skidding the snowboard too much to slow down. Ensure that the slope is groomed wide enough to comfortably make medium to large turns. Remember that snow quality will also play a large part in the success of these tasks.



Safety is very important in all tasks that cross the width of a slope. Be aware of other slope users and encourage this within your students. Remember to look uphill for traffic. Address regular and goofy by showing both heelside and toeside tasks. Once they have attempted a task once, let them practise in their own time by setting a stopping point further down the run. It may take a few runs to work through all the tasks in this progression.



## SELF REFLECTION

*“Do my students understand the use of side-cut?”*

*“Can they maintain an edge on both the toeside and heelside?”*

*“Are they blending their vertical and lateral movements efficiently?”*



## EXPERIENTIAL TEACHING EXAMPLE:

Comparisons with how we use a knife in our everyday eating are excellent for this level of rider. Discuss how they would spread a lump of soft butter onto a fresh piece of bread without tearing a hole in the bread. Then talk about cutting a thin slice of cheese to put on top of the bread. Now you have the comparison between a skidded and carved turn.



## DETECT & CORRECT

Student has difficulty maintaining a higher edge angle:

- ▶ Check equipment for a snug boot and binding fit.
- ▶ Check the lateral alignment of their mounted binding position. If the bindings sit closer to the heel edge your student's COM is already favouring the heels and will make it harder to create tilt over the toe edge.
- ▶ Ensure your student has sufficient highback forward lean.
- ▶ Encourage them to move COM inside the turn as their speed increases.
- ▶ On the heelside, ensure that your student is not over-flexed at the hips. Encourage them to keep their upper body stacked upright over the hips.
- ▶ On the toeside encourage the feeling of continually increasing pressure in both shins and focus on keeping the hips stacked over the toe edge.

Student loses balance inside the turn:

- ▶ Review an efficient stance over both heel and toe edge, highlighting kinesthetics specific to each edge.
- ▶ On the toeside, ensure use of flexion movements through the ankles and knees with a more upright upper body to promote more stability over the board.
- ▶ On the heelside, ensure that your student does not over-flex through their knees and hips too early in the turn. This will ensure they still have some vertical range left to use as the forces increase later in the turn.

## EARLY EDGE CHANGES



### WHAT, WHY, HOW

Through the Intro to Carving tasks, we have increased edge angle from the fall line through the completion of the turn. We now concentrate on creating a higher edge angle earlier in the turn.

The ability to change edges earlier in the turn will help to manage increasing speeds when carving and in other riding.

- ▶ Utilise some flatter terrain with a very gentle pitch like a cat track to introduce the concept of edge rolls. Using a very open turn shape focus on keeping the lower body loose and relaxed, whilst using the ankles to gently roll from edge to edge, trying to remove any pivot within the board and keep the upper body quiet.
- ▶ Work through the movements of an early edge change in a carved turn while stationary to create understanding of the movements required before momentum is introduced. The timing of the edge change should occur at the most extended position vertically, but before the fall line.
- ▶ Link together a few large, closed edged turns, allowing time during the traverse to prepare for the next turn. Focus on projecting the COM into the new turn and changing edges before the snowboard enters the fall line. Remember to reduce the edge angle and skid the board when travelling across the hill if speed becomes an issue.
- ▶ Once comfortable, discuss the timing of flexion and extension movements, focusing on lifting the hips up and over the board at the edge change, then progressively flexing throughout the control and completion phases.
- ▶ When comfortable with an early edge change, try some edge rolls across the fall line or hanger turns to experiment with the timing of the edge change and the ability to move across the board with limited rotation. In these tasks, try to roll onto the downhill edge for a brief moment when travelling across the fall line, then come back to the uphill edge. This can be repeated a number of times, depending on the width of the slope, before committing to the full carved turn. Movement across the board using the lower legs is crucial to the success of this task.





## TECHNICAL DESCRIPTION

### LATERAL & VERTICAL

A greater range of vertical movement will be required to manage the increased pressure due to greater forces acting on the rider. Gradual flexion focused through the ankles, knees and hips will be necessary to increase angulation, help create tilt and maintain stability. The COM will need to be moved laterally into the new turn. Encourage soft lateral movements in the lower body to remain balanced when changing the edge early in a turn. Dorsi flexion in the ankles is important on both the heel and toe edges.

### ROTATIONAL

As with the Intro to Carving tasks, a progressive whole body rotation, as well as looking in the direction of travel, will help to steer the snowboard through the completion of the turn.

### LONGITUDINAL

A centred stance should be encouraged throughout these tasks.



## TERRAIN AND CLASS HANDLING

Use terrain that is well within the student's ability. The same terrain that has been used for the Intro to Carving tasks is usually suitable; however, finding a slightly flatter pitch for the edge rolls can be beneficial. Remember that snow quality will still play a large part in the success of this lesson.

As with the previous carving tasks, ensure that your students look uphill before starting across the trail. Make your students aware of the situations where carving is appropriate. Ensure that you emphasise blind spots when carving through the heelside turn, as crashes can be common here. Remember, skidded turns will still be used in certain situations. Checking for forward lean in the highbacks will help with the creation of edge angle, particularly on the heelside. Ensure the student is confident with and understands the increased speeds required to generate a higher edge angle. Confidence for this should be built up using the edged arcs and edge Js, in the previous progression. The more the snowboard is flexed and tilted, the tighter the turning radius becomes.



## SELF REFLECTION

*"Are my students confident enough with the speed required to make an early edge change?"*

*"Are they still pivoting or twisting the board in the initiation of the turn?"*



## ENVIRONMENTAL TEACHING EXAMPLE:

Use the snowboard's track in the snow to provide instant feedback on edge angle and timing of edge change. A wider track indicates skidding, a narrower track is a sign of a stronger edge. Encourage the student to listen to the snowboard's edge grip - carving is quieter than skidding. Utilise natural terrain to give your students the feel of an earlier edge change. By having your students ride on the downhill edge while travelling across a side hill or bank, you can explain and encourage the concept of an edge change across the hill or before the fall line.



## DETECT & CORRECT

Student lacks speed control or has difficulty creating a closed turn shape:

- Review turn shape and reconsider your choice of terrain.
- Encourage your student to complete both their heel and toe turns, focusing on the sensation of deceleration before thinking about their next turn.
- Ensure they are looking across the hill in the completion of every turn.
- Review the use of flexion movements and the effect this has on the side-cut of the snowboard relative to a closed shape.
- Encourage your student to stay mobile while riding and continually move vertically/laterally.

Student pivots their board at the initiation of the turn:

- Review the blend of vertical and lateral movements to help with the early edge change.
- Have them focus on balancing their hips of the downhill edge before the snowboard enters the fall line.
- When they move onto their downhill edge, try to keep the board travelling across the hill for a moment before the side-cut engages and steers them into the fall line.

Student inclines on the toeside, due to excessive lateral movements of the upper body across the board to change edges early:

- Review how the different parts of the body can move laterally.
- Encourage movement of the hips and knees across the board to change edges.
- Focus them on keeping their head upright and maintaining a level horizon in their line of sight.
- Encourage early but gentle pressure with the shins touching the tongues of the boots.

## DEVELOPING CARVING



### WHAT, WHY, HOW



Using various tasks and drills to explore and improve the movements for intermediate level carving.

To improve range of movement, timing and balance while carving, and provide more confidence with speed.

The following tasks can be used in any order to help develop carving...

Hopped edge changes:

- ▶ Start by bouncing through a traverse in between carved turns, taking notice of the different stance positions from heel to toe.
- ▶ Add some hops to the bouncing when comfortable, taking off and landing on the same edge.
- ▶ Start to work the bouncing into the turn then add the hopping as confidence increases, then take out any traverse and link the turns together. Keep in mind that landing with a lower edge angle may create skid. When timed well, the edge change will occur in the air.

Flasher turns (or board-sponsor turns):

- ▶ Try to flash the base of the snowboard up the hill at the edge change. This encourages a quicker and more aggressive edge change.
- ▶ In pairs, take it in turns to stand uphill from each other to check how much of the base on your partner's snowboard you can see.
- ▶ To make it more challenging, increase the pitch of the terrain or try maintaining a true carve throughout the entire task. Ensure that riding speed is sufficient for these tasks to avoid any quick loss of balance or falls inside the turn.

Indy grab carves:

- ▶ Use indy grab carving to improve vertical range of movement on the heelside, by reaching down progressively and touching the toe edge with the back hand.
- ▶ With the increasing range of movement, try holding the grab through the bottom of the turn by flexing through the knees so the trailing shoulder becomes level (or close to level) with the trailing knee.





## TECHNICAL DESCRIPTION

### LATERAL AND VERTICAL

A quick but precise movement laterally will be necessary for all of the previous tasks. A larger range of movement vertically will be needed for indy grab carves.

### LONGITUDINAL AND ROTATIONAL

These movements do not change from regular carved turns.



## TERRAIN AND CLASS HANDLING

These exercises should be used as developmental tools for intermediate level carving. Wide, green or blue groomed trails are most suitable for these tasks. Let your students use large stretches of the runs, possibly even riding from top-to-bottom in some tasks. Pairing students up is an ideal way to manage a group when doing this.

To progress the student's ability, have them see how efficient they can make their hop at the edge change, how early they can flash the base of their snowboard up the hill, or how long they can hold the grab for.





## SELF REFLECTION

*“Do my students have the physical ability to increase their range of vertical enough to grab their edge?”*

*“Do they have the strength to hop at the edge change?”*



### EXPERIENTIAL TEACHING EXAMPLE:

You're in an Indiana Jones movie, there is an abandoned mine with a railway track that winds down into the mine. You are racing along in a small carriage or cart having to lean as you go around the corners on two wheels to keep from falling off the tracks. You come around an 'S' bend and see that part of the track is missing on the side you're balancing on. You manage to hop the cart onto the other track, gently leaning to balance on the other wheels. As you come around the next bend the same thing has happened to the track you're on and you have to hop to the other track again.



### DETECT & CORRECT

Student loses grip through the control and completion of the heel turn:

- ▶ Check highback forward lean.
- ▶ Focus on even vertical movement through both knees and a gentle lift of the toes.
- ▶ Focus their attention on how quickly the board is edging, and try to blend vertical and lateral movements together to make this more progressive.
- ▶ Ensure your student remains longitudinally centred so that the entire length of the side-cut is pressured and provides grip through the turn control and completion.

Student struggles to get the board off the ground in the hopped edge changes:

- ▶ Ensure they are taking off from a strong platform with a medium edge angle - not too high that they can't move across the board and not so low that the board slips when they hop.
- ▶ Promote a disciplined upper body so the bounces and hops come from the legs.
- ▶ Focus on taking off from two feet and retracting the legs slightly in the air.

Student struggles to reach their toe edge in the indy grab carves:

- ▶ Try to increase range of movement through the knees specifically and balance this with flex through the hips.
- ▶ Work on keeping the butt closer to the edge of the snowboard and trying to get the tricep on the trailing arm next to the trailing knee.

## SECTION E - TEACHING INTERMEDIATE SNOWBOARDERS

17

# Exploring Freestyle

**OLLIES****NOSE ROLLS & SWITCH  
NOSE ROLLS****FRONTSIDE 180S****BACKSIDE 180S****INTRO TO PARK****INTRO TO JUMPS****INTRO TO BOXES & RAILS**

## IN THIS CHAPTER WE WILL EXPLORE...

A series of tricks to explore freestyle riding both outside and inside the park. There is an introduction to park safety and the ATTL model, to help breakdown each trick.

Freestyle is often one of the main reasons why people first start snowboarding. Remember that, whilst extremely popular, freestyle is not for everyone. Be mindful of your students' interests and do not push them into freestyle if they appear uncomfortable. The tricks in this chapter are fundamental tricks required to become a well rounded freestyle snowboarder. Students will need a variety of turn sizes and shapes before learning these tricks. In some tricks, students will require the ability to flat base and ride switch, for either approach and take off or to land the trick.

## OLLIES



### WHAT, WHY, HOW

A controlled jump, taking off from the tail of the snowboard and landing with a flat base.

An ollie gives riders the ability to get air off many natural features or flat ground and allows them to practise jumping before heading into the park.

- ▶ On flat ground in a solid centred stance, move the hips towards the tail of the snowboard at the same time as pulling up the front foot to perform a “wheelie”. Keep the shoulders level to the ground when doing this. This helps load the tail of the board.
- ▶ Jump off two feet while stationary. Try to takeoff and land with a flat base. Now combine these two movements and takeoff by springing from the tail of the snowboard, pull the knees up equally in the air and land centred over both feet. Keep looking up to help with balance.
- ▶ On a gentle pitch at slow speeds, practise the hop and “wheelie” separately.
- ▶ To perform the complete trick, blend the two movements together (just like in the stationary practice) whilst riding at a slow speed (the focus here is on timing and not the amplitude of the trick).
- ▶ When comfortable, ride a little faster and look for flatter, mellow areas to keep practising.
- ▶ Develop the trick by adding more power and/or range of movement to an efficient movement blend to create a higher ollie.



### TECHNICAL DESCRIPTION

#### LONGITUDINAL

The student should try to utilise the natural flex of the snowboard to assist them with the ollie by shifting the COM towards the tail of the snowboard or shifting the snowboard under the COM by shuffling the board forward. The flex and rebound from the tail can increase the height achieved. The COM is returned to the centre of the board for landing.

#### VERTICAL

The more range of movement a student exhibits in the vertical plane, the bigger the resulting ollie. The rider must begin with flexed ankles, knees and hip joints, and make a strong extension to lift the board into the air. The knees should be sucked up towards the COM in the air to increase stability. For landing, the legs should be extended, then flexion in the ankles, knees and hips is used to absorb the impact.

### LATERAL

A neutral position is best so that students can takeoff from a flat base for stability. Students may find it beneficial to pressure the toeside edge slightly when taking off and landing. This utilises the ankle joint for a greater range of movement and increased pop.

### ROTATIONAL

Rotational movements should be kept neutral with the body remaining rotationally “quiet” to maintain stability.



## TERRAIN AND CLASS HANDLING

A flat area with minimal traffic is advisable to begin this exercise. A gentle pitch to progress to is also necessary. Choose terrain that students can ride a flat base on for several seconds without picking up too much speed. This will allow ample time to make the required movements without onset of fear. To complement this, ensure that areas of low traffic are selected so students feel like they have enough space to practise.

In larger groups ensure students are even more aware of their surroundings, more specifically each other. It's common for students to focus heavily on themselves, making it easy for them to pick up speed and catch up with students in front, leaving minimal time to slow down.





## SELF REFLECTION

"Is my terrain selection mellow enough to promote success and build confidence?"

"Can my students even create an ollie on flat ground before trying whilst riding?"

"Do they have the physical strength to bend the board and pop into the air?"



### EXPERIENTIAL TEACHING EXAMPLE:

Your students play the drums and can relate the feeling of pressure under their foot to create a beat from the bass drum. When teaching your ollie, you get students to imagine they have a bass drum pedal under each foot. To help them with timing, you explain that they should jump off the bass drum pedals, front foot first followed by rear foot and land evenly on both pedals to create one beat. If they are creating a double beat when they land then they are landing on each bass drum pedal separately.



## DETECT & CORRECT

Student jumps off both feet when performing an ollie:

- ▶ Explain and practise pulling the front foot up first to pop off the tail.
- ▶ Have your student explore their longitudinal range and its effect on the board. Students are often surprised how much more they need to move longitudinally to get closer towards the tail.
- ▶ Ensure that your terrain selection is accommodating for mileage over a flat base without gaining too much speed.
- ▶ Start with small ranges of movement and increase energy and effort as timing improves.

Student keeps landing on the nose of the board:

- ▶ Focus on when the ollie is released. The pop from the vertical extension of the back leg is often released too late and the COM projected towards the nose.
- ▶ Have students practise their "wheelies" and get to know exactly when their snowboard is going to rebound. With this knowledge, students will begin to understand that they should release their rear leg extension just before the board rebounds.

## NOSE ROLLS & SWITCH NOSE ROLLS



### WHAT, WHY, HOW

A 180 degree roll over the nose of the snowboard that can be performed in both forwards and switch directions.

To improve balance, experiment with moving longitudinally, and to progress towards other pressuring tricks like butters and presses on boxes.

- ▶ On flat ground and move the hips along the length of the snowboard, pressuring first the nose then the tail. Ensure that a nose press can be created and held whilst stationary.
- ▶ Use a back up turn progression to teach the spinning movements necessary to pivot the snowboard through 180 degrees. (Begin with frontside rotations so that students can always see where they are going, always starting on the heel edge and finishing on the toe edge - see Chapter 14 on Exploring the Turn.)
- ▶ To perform the whole nose roll, begin in a centred stance and guide the nose of the snowboard into the fall line. Once a comfortable speed is reached, steer across the hill over the heelside edge (utilising the back up turn).
- ▶ When the nose of the board is pointing back up the fall line over a flat base (and speed is minimal or zero), move the hips over the front foot and pull up with the back foot, lifting the tail of the snowboard off the snow (utilising the nose press from stationary practice). Release the press and move the hips over the new edge and ride away switch.
- ▶ Through mileage, turn the snowboard less uphill and spin the tail of the board in the air as the hips move over the nose. Make sure the hips move towards the nose smoothly as the body turns to blend the press and spin. With comfort, when riding in a traverse, use more power when moving the hips over the nose and turning the body to spin the board. This will help to create the trick in a traverse with minimal turning up the hill.
- ▶ These manoeuvres can be executed either forwards or switch, pivoting off the nose or tail (switch nose) of the snowboard. Additional exercises to progress onto include stalled rotations, nose ollies (nollies) and combining nose/switch nose rolls with 360 spins.





## TECHNICAL DESCRIPTION

### LONGITUDINAL

Longitudinal movement is the key to this exercise. The COM must be moved towards the nose of the snowboard, to bend the board and create a pivot point under the front foot to rotate around. Pressure is then returned to the centre to complete the manoeuvre. Be aware that the flex of the snowboard can greatly affect the outcome of this task and should be considered when providing feedback.

### ROTATIONAL

Strong rotational movements of the hips, legs and upper body are used to generate the required rotational momentum. It will help to use some rotational pre-wind to store energy from which to release the trick.

### VERTICAL

Vertical movement will assist to release the blend of longitudinal and rotational movement from the edge. Flexion in the lower body is required to absorb the impact of the nose or tail of the snowboard returning to the snow.

### LATERAL

A lateral movement across the board is essential to maintain balance as the edge change occurs.



## TERRAIN AND CLASS HANDLING

Wide green or easy blue trails are suitable to teach nose rolls on, provided that you have checked that your students are comfortable. It could be beneficial to check if your students can ollie and control their speed in a switch traverse as a minimum for their switch riding ability. Encourage your students to spin frontside from heels to toes. This will be easier for them, as the trailing end of the board is rolled downhill, with the pressing end uphill, stopping the snowboard catching on the snow.

This progression will require students to spend time in traverses on their heel edge so it's important to choose low traffic zones and encourage students to check their blind spots. With larger groups, it can be useful to pair students up to educate them about spotting for each other as they attempt their trick.



## SELF REFLECTION

*“Can my students ride switch or show some confidence in switch elements of the back up turn?”*

*“Is my student able to bend their board in a stationary environment before trying this trick?”*



## EXPERIENTIAL TEACHING EXAMPLE:

Your students enjoy kickboxing classes to keep fit. You liken a nose roll to a roundhouse kick. You explain how you wind up to store power for the kick, release the kick whilst balancing on one foot and follow through by turning the whole body to then finish in your unnatural kickboxing stance, either orthodox (left foot forward) or southpaw (right foot forward) depending on the individual. This can also be done starting in an unnatural kickboxing stance and returning to a natural stance.



## DETECT & CORRECT

Student cannot complete a full 180 during nose/switch nose rolls:

- ▶ Work on blending longitudinal and rotational movements smoothly.
- ▶ Encourage use of a traverse, even turning more uphill before releasing the trick. This use of the side-cut and natural turning direction will aid rotation.
- ▶ Introduce/review the use of pre-wind to help rotationally prepare and store power for the trick.

Student uses counter-rotation to complete the full nose roll:

- ▶ Focus on the pre-wind, bringing the front hand down to the trailing knee on the approach.
- ▶ Encourage strength in the core throughout the rotation.
- ▶ Use vertical movement to help blend the other movements.

## FRONTSIDE 180S



## WHAT, WHY, HOW

A half rotation in the air spinning with the front of your body facing in the direction of travel during the spin. This is clockwise for goofy and anticlockwise for regular riders.

This is usually the easiest spin trick, as the student can see where they are travelling the entire time. It is also the foundation for any frontside spin.

- ▶ On flat ground with the snowboard off explain the difference between frontside and backside spins, then try to spin a frontside 180. Frontside is when the chest and body turns to face the direction of travel when starting the spin. Try them forwards and switch. Jump, spin 180 degrees, retract the legs and land with the feet in the same marks in the snow. It may help to pre-wind by turning the upper body against the direction of spin to store energy to release when taking off. Keep looking up to help with balance and imagine riding away.

- ▶ Practise hopping off the heel edge by extending the knees and hips whilst traversing the slope. Do the same switch to practise landing switch.
- ▶ Practise a skidded 180 by traversing on the heel edge at a comfortable, pre-wind and release the spin by turning the shoulders and hips uphill to spin the body and board through 180 degrees, to ride away switch on the toe edge. A back-up turn progression can be used as an alternative (see Exploring the Turn in Chapter 14).
- ▶ In a heelside traverse, perform a hop off both heels, followed by a pre-wind and skidded 180, followed by a hop off the switch direction toe edge to practise the takeoff, spin and landing.
- ▶ For the full 180, blend the hop and spin together in a heelside traverse using power from the pre-wind. Ride slowly to start with to build confidence and gently increase the speed. For each attempt, ensure a strong edge is used to maintain a platform to release the trick from.
- ▶ Once all the movements are beginning to blend, use natural terrain that your student can ride into on their heel edge, i.e. banks, cat tracks or bumps to help create some extra airtime for the 180.



## TECHNICAL DESCRIPTION

### ROTATIONAL

The spin is led with the shoulders and arms. The lower body follows once in the air and rotates past the upper body to land. The head stays in the same position throughout the entire process.

### VERTICAL

Focus on flexing and extending the ankles, knees, hips and lower spine. This is used for pop and to retract in the air. It is also necessary for extension and flexion to absorb the landing.

### LATERAL

Takeoff can be from toe or heel edge, depending on the rider's preference. Taking off from the heel edge is more natural for the rotation, but taking off the toe edge will help increase the pop vertically as the rider can utilise their ankle joint. Landing on the opposite edge will help minimise edge catches.



**LONGITUDINAL**

A centred stance is the key to taking off and landing on both feet. Students who are comfortable with an ollie may find pressuring the tail when taking off slightly easier but it is not necessary to perform the trick.

**TERRAIN AND CLASS HANDLING**

Begin on a flat area for stationary tasks and then progress to a mellow blue or green run depending on student comfort levels. When riding through the progression towards a frontside 180, be aware that there is a lot of time spent in a traverse on the heel edge of the snowboard. For this reason have students constantly checking their blind spots paired with sensible use of space, and consideration for traffic. If choosing to teach frontside 180s from the toe edge, a big focus on avoiding edge catches will be required.

**SELF REFLECTION**

*“Are my students travelling with enough speed and across the fall line to help them maintain a platform to take off from?”*

*“Can my students blend their vertical and rotational movement smoothly enough in both the pre-wind and the 180 itself?”*

**ENVIRONMENTAL TEACHING EXAMPLE:**

As it can be more of a challenge for students to create pop from their heel edge, show students how to use small undulations and changes in the snow to use as a takeoff. This can be easier later in the day as small bumps and lips appear. The key is to educate your students on how to spot them.

**DETECT & CORRECT**

Student struggles to pop off their heel edge:

- ▶ Focus on vertical movement through the knees whilst keeping the toes up inside their boots.
- ▶ Ensure students can generate edge in a traverse without the hop first, an edged traverse could be very useful here.
- ▶ Ensure that they are not over-flexing through the hips.

Student has trouble creating a smooth full rotation (usually the upper body rotates too far into the spin without using “scissored” finish in the lower body):

- ▶ Review how to jump and spin on flat ground, rotating with the whole body.
- ▶ Focus on the timing of the rotational release from a pre-wound position. Ideally, this will be just as the shoulders pass the point of rotational alignment with the board.
- ▶ Ensure that pre-wind is being used effectively and the student is not simply moving their arms. Focus your eye on their hips and core to analyse how much rotation is being used to pre-wind.

## BACKSIDE 180S



### WHAT, WHY, HOW

A half rotation in the air, with your back facing in the direction of travel during the spin. This is anti-clockwise for goofy and for clockwise regular riders.

The backside 180 is considered a must-have for any aspiring freestyle rider. It creates a thrill as the student has their back turned in the air to the direction they are travelling. This is the foundation for all backside spins.

- ▶ On flat ground with the snowboard off, explain the difference between frontside and backside spins, then try to spin a backside 180. Backside is when the back turns to face the direction of travel when starting the spin. Try them forwards and switch. Jump, spin 180 degrees, retract the legs and land with the feet in the same marks in the snow. It may help to pre-wind by turning the upper body against the direction of spin. Looking back towards the approach and takeoff throughout the spin will help with balance and avoid over-rotating.
- ▶ Try this with the snowboard on, still on flat ground. The upper body can be used to help generate the spin. Don't be discouraged if less than 180 degrees is achieved at this stage.
- ▶ Progress to quiet terrain and practise hopping off the toe edge by extending the ankles, knees and hips whilst traversing the slope. Do the same in the switch direction to practise landing switch. Continue to practise this switch and develop by looking in the opposite direction of travel whilst hopping (as long as it is safe to do so).
- ▶ Use a back up turn progression (see Chapter 14) to teach the rotation necessary to spin the snowboard through 180 degrees. Include the use of pre-wind and the timing of it to help with the spin.
- ▶ To perform the full 180, begin in a centred stance and guide the nose of the snowboard into the fall line. Once a comfortable speed is reached, steer across the hill onto the toeside edge (utilising the back up turn). When the nose of the board is pointing back up the fall line (over a low toeside edge angle and speed is minimal or zero), jump off both feet, retract the legs and land on the new edge to ride away switch. Look back towards the takeoff for balance and to stop over-rotating.
- ▶ Through mileage, turn the snowboard uphill less and hop earlier to allow the board to spin more in the air (this will require the pop to be blended with the release of the spin).
- ▶ With comfort, in a toeside traverse, use a pre-wind before releasing the jump and spin. This will help to create the trick in a traverse with minimal turning up the hill.
- ▶ Once all the movements are beginning to blend, use natural terrain that your student can ride into on their toe edge i.e. banks, cat tracks or bumps to help create some extra airtime for the 180.



## TECHNICAL DESCRIPTION

### ROTATIONAL

The spin is led with the shoulders. The lower body follows from takeoff and once in the air rotates past the upper body to land. Looking down and back towards the takeoff point throughout the spin will help to avoid over-rotating.

### VERTICAL

Work on retracting the legs towards the COM to give the snowboard time to rotate. Focus on flexing and extending the ankles, knees and lower spine.

### LATERAL

Taking off from the toe edge is more natural for the rotation and will help increase the pop vertically as the rider can utilise their ankle joints. When performing a backside 180 from a toeside traverse it is important to land on the heel edge. When trying it over a park jump, pressuring the toe edge during takeoff and landing will aid the spin and help to stop over-rotation and edge catches.

### LONGITUDINAL

A centred stance is the key to taking off and landing on both feet.



## TERRAIN AND CLASS HANDLING

Begin on a flat area for stationary tasks and then progress to a mellow blue or green run depending on student comfort levels. Take some time to ensure that students are comfortable getting their snowboard off the ground and also with switch riding. As the landing is blind, a lot of trust is needed from you as an instructor so select areas of low traffic and terrain that can offer a calm environment to learn in.





## SELF REFLECTION

*"Is my student comfortable enough to ride away switch without looking where they are going?"*

*"Are nerves making my students tense in their ankles and knees causing instability?"*



## ENVIRONMENTAL TEACHING EXAMPLE:

Have students focus a lot more on their surroundings for the backside 180 as eyeline and visual cues are a powerful teaching tool. During the approach and takeoff, pick out an object/marker that keeps their eyeline up and level to avoid over flexing at the hips. During the transition from trick to landing, focus on looking back towards the takeoff, more specifically the point in the snow where your track ends when you released your trick.



## DETECT & CORRECT

Student has problems popping off two feet and ends up rolling over the nose:

- ▶ Focus their attention on springing with the ankles and using them at the same time to generate pop.
- ▶ Encourage a slightly later rotation just as the board pops into the air.

Student has trouble riding into or out switch:

- ▶ Review elements of the linked turns progression in switch to increase confidence riding switch.
- ▶ Reinforce movements fore and aft to aid initiation with the new front foot.
- ▶ Challenge your student with switch flat base tasks including hops to develop the movements required to take off and land in their switch direction.
- ▶ Ensure the size of the feature is suitable for their comfort and skill level.

Student reverts on landing:

- ▶ Ensure that the student is not looking for their landing.
- ▶ Work on rotating the head separately to the core, only looking in the direction of travel after the board has touched down and they are stable on their edge.
- ▶ Reduce the amount of upper body rotation used and focus on rotating more through the hips.
- ▶ Encourage a slight toe edge or flat base landing, before rolling to the heel edge.

## INTRO TO PARK



### WHAT, WHY, HOW

Bringing students to the terrain park for the first time.

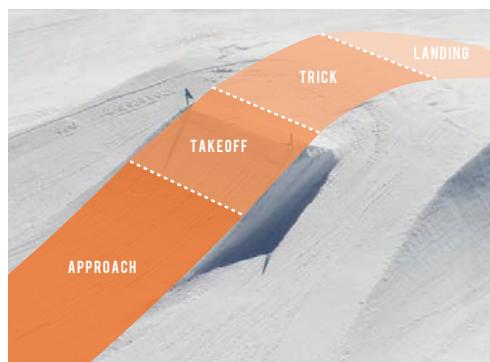
To create awareness around park etiquette and signage, the different types of features and how to ride them, and how snowboarders can prepare for park riding outside of the park.

Outside-in concept:

- ▶ Make use of the available terrain before reaching the park to grow confidence and get warmed up. This can be as simple as making a variety of turn sizes and shapes.
- ▶ If capable, this can also include some ollies and switch riding (be aware that these are not required skill sets but are beneficial).
- ▶ Between turns, explore riding over a flat base (when safe to do so) with an active stance and explain its relevance to park riding.
- ▶ Introduce speed checks. Riding across the slope, quickly and smoothly turn the knees and hips uphill as you turn your head and upper body downhill. The arms will naturally be slightly raised for balance and the core will feel slightly tense. When enough speed has been lost, release or unwind the light core tension to return to an aligned position riding across the slope. Do this over both edges. When comfortable, try them down the fall line from a flat base in both variations.
- ▶ If available, use rollers to try riding flat base and using speed checks.
- ▶ Let students know that at any level of park riding, there is always a way to prepare outside of the park, before riding inside the park. The considerations above are to prepare first-time park riders with the skills to control speed and line whilst riding between and to the side of features.

Approach-Takeoff-Trick-Landing:

- ▶ ATTL is a tool to help divide features into zones.
- ▶ Look at the **approach** to check the snow conditions, the length of the run in, the pitch and width of the run in and any early spill zones that can be used if the best line isn't taken.
- ▶ The **takeoff** should be inspected for snow conditions, pitch and height compared to the feature or gap.



- ▶ The **trick** zone can vary depending on the feature type. A box/rail feature will have a trick zone on the feature itself and a jump feature will have a trick zone in the air between the takeoff and landing.
- ▶ Ride through the **landing** zone to feel snow conditions, pitch and to see if it is level or bombed out with uneven bumps and ruts.

#### Features:

- ▶ When introducing park, focus on features that are small. They can be identified by small signs with an "S" on them.
- ▶ Small sized boxes will be close to the ground, ride-on, flat, often quite wide and usually the first features in the park.
- ▶ Small sized jumps will be tabletops or step-overs usually 5-10 feet in distance (2-3 metres) from the takeoff to the sweet spot in the landing (the steepest part). They are usually the first jump features in the park.



## TECHNICAL DESCRIPTION

### VERTICAL

Focus on a relaxed range of vertical movement, particularly in the ankles, knees and hips. Parks can often increase anxiety in students which can increase muscle tension, especially with their vertical movement.

### LATERAL

Movements laterally should be deliberate and precise to ensure a flat base can be used when required. The focus is with small and smooth movements in the ankles, knees and hips with a stacked upper body laterally on top of the board. The ability to create twist and tilt quickly with the lower body is beneficial within the park.

### LONGITUDINAL

Ideally, students remain longitudinally centred until they choose to move to the nose or tail when riding in the park. The focus should be largely on the board moving underneath the COM with the ankles and knees, for quick adjustments when needed in the park.

### ROTATIONAL

Ensure that students can show rotational alignment throughout their turns and when riding a flat base so they can build confidence in their ability to hold their line when they want to. The speed checks will add to their options for scrubbing off speed and challenge their early use of counter-rotation which can later be developed and drawn from for more advanced freestyle riding.



## TERRAIN AND CLASS HANDLING

This is a huge component of this lesson. It's crucial to review with your students how to call their drop, as well as highlighting safe stopping areas and spill zones from features. The focus here should be to pass on park etiquette and education to students so that they will continue to use the park safely even when they are not with you.

With any lesson in the park, ensure that you offer options for each skill set to include everyone, particularly in larger groups. Remember that park riding isn't for everyone so perhaps there is more you can do outside of the park to keep everyone in your group satisfied. Finally, ensure students recognise and can show you the arm signals "O" for open and "X" for closed.

As you ride through the park for the first time with your group ensure that everyone knows how to call their drop. Before dropping, ensure you have set a clear meeting area that is visible from the first drop in and clear of all features and landings. This can be a decision made as a group, highlighting pros and cons of any suggestions.

For your first run through, let students ride past features slowly to look at the zones of ATTL. It may take more than one run to gain confidence within a terrain park environment so as you ride more, encourage students to ride next to the features trying to match their speed to what might be suitable when hitting features. This way students can look at the takeoffs as they approach features and get an idea of the pitch of the landings. Through this process you are scoping the park and learning about the snow conditions, the condition of the takeoffs, landings and features themselves. Ensure that all scope laps are summarised with questions about what your students saw and continuing open discussion as a group. Realistically, if you are not going to focus your students' attention during a scope lap and encourage them to share what they saw, then there is little point taking the time to do so.

**PARK SMART**

**Start Small**  
Work your way up. Build your skills.

**Make a Plan**  
Every feature. Every time.

**Always Look**  
Before you drop.

**Respect**  
The features and other users.

**Take it Easy**  
Know your limits. Land on your feet.



## SELF REFLECTION

*“Do my students actually want to go in the park?”*

*“Do my students have control of their direction and speed through a variety of turn sizes and shapes?”*

*“Have I considered and used the “Three Cs” to build up their comfort and confidence before trying something new?”*



## EXPERIENTIAL TEACHING EXAMPLE:

Just like going to your first day of school when you were most likely nervous, unsure of what was going to happen, worried by what people thought of you, or scared you wouldn't fit in and that the school bully would hurt you, the terrain park can be equally, if not more, daunting. It's important to recognise that there are certain things you can prepare for in life and at some point you have to “jump in” and commit. Park riding is similar in that we can prepare our movements, our expectations and our understanding of how to ride safely to help build confidence. The rest is up to us; all that is left is to commit.



## DETECT & CORRECT

Student has trouble using counter-rotation to create a speed check (usually on the heelside):

- ▶ Find some flat ground and introduce the body position used during a speed check and more importantly, how to move into that position. It may help to have students jump into and out of the speed check.
- ▶ Focus on keeping the core muscles tight when the upper and lower body turn in opposite directions to help bring the body back into alignment over the board.

Student has problems judging their speed appropriate to the features:

- ▶ Ensure that they watch other riders and count the number of speed checks or turns they are making.
- ▶ Have the student follow directly behind you and match their speed to yours.
- ▶ Have them run parallel to you (or another rider), matching their speed to yours, but next to the feature instead of actually hitting it.

## INTRO TO JUMPS



### WHAT, WHY, HOW

Jumping off natural and man-made features.

To introduce skills to jump off features that have more transition through the takeoff (e.g. park jumps), to develop basic air awareness and build confidence.

Straight airs:

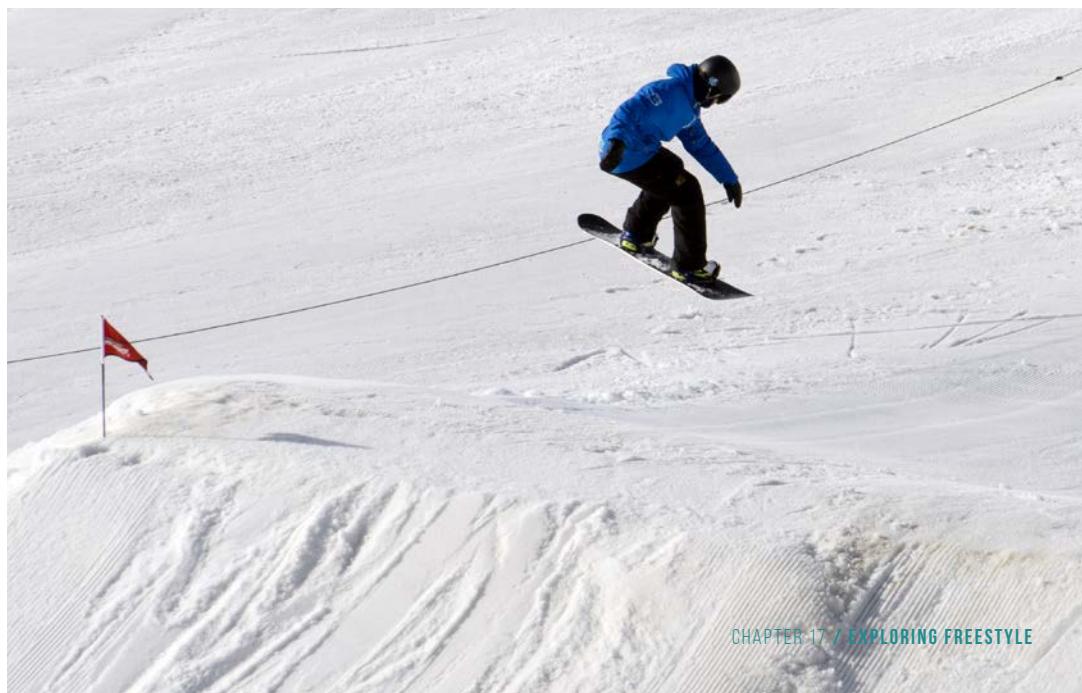
- ▶ Start stationary and practise hops from both feet (takeoff), a small retraction of the legs in the air (trick) and landing softly in the same spot (landing). Focus on a quiet upper body.
- ▶ Practise hopping off both feet from a flat base in the fall line (approach and takeoff). Focus on absorbing the landing through the ankles and knees (landing). Develop this by adding the small retraction movement in the air (trick).
- ▶ Hop off the side of cat tracks or natural terrain features from a flat base, approaching the feature in the fall line. Approach, takeoff, position in the air (trick) and landing can all be focused on one at a time through different tasks or attempts.
- ▶ Practise when to time the hop by drawing lines in the snow to jump over, focusing on allowing the nose to pass the line and jumping when the leading foot is at the line.



- ▶ Find a small and well-shaped park jump and describe what to expect within each zone of ATTL. Remind students to hop when the nose of the board has just passed the lip and the leading foot is at the lip. Watch others to help judge speed (including the demo), sideslip to a suitable drop in point, call your drop and commit.

Basic air awareness (retracting for grabs, pokes and shiftys):

- ▶ To develop basic air awareness, practise holding a compact body position in the air for a longer period of time before extending the legs for landing.
- ▶ Creating a competition around who can hold the retracted position in the air for the longest can be a fun way to learn this skill.
- ▶ To challenge the use of the legs in the air, find a tucked position then poke the front or back foot forwards/backwards/down (whichever is easier) by extending the front or back leg, before preparing to land.
- ▶ To frontside shifty, use flat ground to review using counter-rotation (used before in speed checks) and practise heelside speed checks from a flat base down the fall line. Make these movements quickly so that the speed check is created and released quickly, just as it will be done in the air with minimal time. Ride away on a flat base, looking in the direction of travel.
- ▶ Find a natural feature or cat track to jump off and make the speed check in the air, now called a frontside shifty. When comfortable, take this to a small park jump and focus on taking off as with the straight air before, then creating the counter-rotation required for the shifty. Release the frontside shifty and extend the legs to prepare to absorb the landing.
- ▶ To backside shifty, the above tasks in the frontside shifty can be replicated but with toeside speed checks.





## TECHNICAL DESCRIPTION

### VERTICAL

Movements vertically are the key to a good pop during takeoff and absorption on landing. Focus on moving through the ankles, knees and hips. Be aware that excessive flexion movements of the ankles, knees and hips that aren't well proportioned will result in an unwanted lateral by-product.

### LATERAL

Minimal movements are recommended at the early stages. Encourage students to take off and land on a flat board. To help this, ensure that flexion movements in the ankles, knees and hips are well proportioned.

### LONGITUDINAL

A centred stance is the key to landing on both feet and avoiding butt checks or going over the nose on landing.

### ROTATIONAL

Rotational movements should be avoided to maintain alignment and stability as students ride through each zone of ATTL (with the exception of shiftys, where a small counter-rotation movement should be used).



## TERRAIN AND CLASS HANDLING

Begin on flat ground, much the same as with the ollie. Progress onto gentle pitches with even fall lines. Look for small natural features to jump off before heading into the park. Airing off cat tracks is great for focusing on the landing and run-out of a jump, but be aware of hazards/traffic and keep speed low. Remember to start small and let students increase speed and amplitude as they choose to do so.

Now with more mileage in the park, continue to reference Park SMART. In a group, share this responsibility around and have students identify something relevant for each letter of SMART.



## ENVIRONMENTAL TEACHING EXAMPLE:

When riding the early steps in the progression you get your students to check their tracks in the snow to ensure that when they are hopping the base of the board is flat. When the trick is beginning to appear and needs developing, you can create hurdles or obstacles in the snow for students to time their hops over. This can be in the form of lines drawn in the snow (ground level obstacle) or snowballs or gloves placed to hop over (a challenge for timing but also amplitude of the trick).



## SELF REFLECTION

*“Do my students look stable over their snowboard when they land from a natural feature before attempting a park jump?”*

*“Can my students project their COM upwards from the snow without travelling laterally sideways?”*

*“Can they maintain strength through the transition of the jump?”*



## DETECT & CORRECT

Student lands sideways and catches their edge when jumping:

- ▶ Encourage shoulder alignment with the board and in the direction of travel.
- ▶ Ensure that the size of the feature is within your student's comfort zone.
- ▶ When your student is successfully landing jumps and is comfortably riding away, move them back to the original features they had trouble on.

Student flaps arms while in air:

- ▶ Reinforce a low, disciplined hand position to aid balance.
- ▶ Reduce the size of the jump or the speed your student is taking off with.
- ▶ Focus on smooth extension of the legs at takeoff to project your student into a more balanced position in the air.
- ▶ Work on a strong controlled retraction of the legs up towards the body as the hands move down towards the snowboard.

Student leans back towards the tail while jumping:

- ▶ Reinforce a centred stance at takeoff and landing.
- ▶ Focus on smooth, active extension movements at takeoff to ensure your student is not passively absorbing the lip.
- ▶ Encourage your student to suck both knees up in the air.
- ▶ Reduce the size of the jump or the speed your student is taking off with.
- ▶ Use lots of mileage over a feature that your student feels confident on as it will allow them to practise good technique.

Student leans back over the heel edge in the air or when landing:

- ▶ Spend time with flat base tasks to ensure the student can takeoff with the board flat.
- ▶ Focus on keeping their COM directly over the board and ensure they are flexing evenly through ankles, knees and hips - during the approach, takeoff and when in the air.

Student lands sideways when shifty-ing:

- ▶ Get mileage using counter-rotation and develop this movement pattern to ensure that the upper and lower body can be separated.
- ▶ Ensure that the size of the feature is within your student's comfort zone.
- ▶ Ensure that students are showing confidence in a straight air before building basic air awareness.

## INTRO TO BOXES & RAILS



### WHAT, WHY, HOW

An introduction to box/rail riding comfortably.

To learn to ride on boxes/rails in balance and build confidence on the features.

50-50s:

- ▶ On flat ground, practise hops and focus on landing on a flat base.
- ▶ Do some straight runs (with both feet strapped in) on green terrain to practise the approach and trick zone. Practise hopping and landing in a flexed position in the straight run to practise the sensations associated with landing from the feature.
- ▶ Plastic poles/bamboo and other props can be laid down in the snow for the rider to slide over or a box can be drawn in the snow. This is used to work on lining up the snowboard with the feature and riding straight over it. This can be used to practise all zones of ATTL in succession.
- ▶ Take these new skills to an easy box feature in the park, ideally a ground level, short, wide and flat feature. Ensure to describe what to expect within each zone of ATTL. Watch others to help judge speed (including a demo), sideslip to a suitable drop in point, call your drop and commit.
- ▶ When comfortable, explore other entry level features to develop versatility or even begin to explore movements to develop the ability to move during the trick zone.



### Exploring movement and building confidence:

- ▶ During a 50-50, begin by reaching down and touching the knees, boots or even the feet depending on how confident you feel.
- ▶ During a 50-50, flex down with the ankles, knees and hips for stability and reach the front hand over the nose, or grab the nose of the board if you can reach it. Try the same towards the tail, ensuring to look in the direction of travel. This challenges moving nose and tail.

### Exploring boardslides and presses:

- ▶ Choose which trick appeals to the students and on flat ground review the use of counter-rotation (as with speed checks) or fore-aft movement of the hips from nose to tail to press (as with nose rolls).
- ▶ Outside of the park, try speed checks with the board as flat as possible and/or presses in the fall line.
- ▶ In the park, approach the same feature used for the 50-50, in the same way as the 50-50 and ride on to the feature.
- ▶ To explore a boardslide, during the trick zone, make a quick and smooth counter-rotation movement over a flat board (similar to the heelside speed check) to create the beginnings of a backside boardslide. Release the counter-rotation movement as quickly as you created it to return to an aligned position to exit the feature and ride away straight.
- ▶ To explore a press, during the trick zone, move the hips smoothly along and down towards the nose or tail of the board whilst looking in the direction of travel. As the other end lifts, a brief nose/tail press has been created. Move the hips back to the middle of the board, returning to even pressure over both feet to exit the feature and ride away.





## TECHNICAL DESCRIPTION

### VERTICAL

The focus here is on soft ankles, knees and hips to lower the COM. This will also help the rider transition onto the feature smoothly and absorb any drop at the end of the feature.

### ROTATIONAL

Rotational movements should be avoided in 50-50s and presses; however, it is more important that the rider remains aligned with their snowboard rather than the feature. When exploring boardslides, focus on smooth counter-rotation to maintain stability on the feature.

### LONGITUDINAL

The rider should focus on a centred stance initially. “50-50” is a reference to the rider’s even weight distribution during this trick. When exploring presses, focus on keeping the shoulders as level as possible to the feature as the hips move down towards the tail to promote stability and balance during the press.

### LATERAL

Maintaining a flat base is critical. Lateral movements should be avoided.



## TERRAIN & CLASS HANDLING

Start on flat ground, then use a green or easy blue run. When looking for a box make sure it is low, wide and short. This is often the first box in the park. With a larger group, make sure that they are grouped together and not blocking the park entrance or run into the feature. Once you have provided a demo, hustle back uphill to stand next to the feature for their first attempts. It's possible that you cannot see your students approach the feature from downhill and you can help students judge speed and when to drop with verbal cues.





## SELF REFLECTION

"Are my students riding at a suitable speed to coast off the end of the feature into the landing in a 50-50 before exploring movements in the trick zone?"

"Is my student making unnecessary turns in their approach causing instability and a poor line?"



## ENVIRONMENTAL TEACHING EXAMPLE:

If appropriate for your group, spend time next to the feature watching others ride over it. Your students can also take their boards off, hold them by the bindings and slide them back and forth on the feature to familiarise themselves with the sound and how the feature is sliding (fast or sticky).



## DETECT & CORRECT

Student drifts off the side before reaching the end of the feature:

- ▶ Reinforce body alignment with the snowboard and the feature.
- ▶ Encourage your student to avoid last minute speed checks during their approach so they can line up with the feature.
- ▶ Encourage them to stay balanced over the snowboard if it does drift to the left or right.
- ▶ As your student transitions through approach to takeoff, have them relocate their vision to the end of the feature.

Student slips out on their heel edge when attempting to pivot the board into a boardslide:

- ▶ Check that their approach is straight and their takeoff is flat base.
- ▶ Revisit 50-50s and focus on maintaining the feeling of a completely flat base and the soles of the feet remaining level.
- ▶ Ensure that your student is remaining laterally balanced over the centre of the board.

Student can't lift the nose or tail when attempting a small press:

- ▶ Spend more time outside of the park working on pressuring both ends of the board effectively.
- ▶ Encourage a blending of vertical and longitudinal movement, lowering the hips towards the nose or tail.
- ▶ Ensure that the shoulders remain parallel with the board.

## SECTION F - TEACHING ADVANCED SNOWBOARDERS

## 18

# Advanced Turns

DOWN UNWEIGHTED TURNS



RETRACTION TURNS



TERRAIN UNWEIGHTED TURNS



## IN THIS CHAPTER WE WILL EXPLORE...

Progressions and methods for teaching a variety of advanced turn types (see Chapter 6), used within advanced freeriding, carving and freestyle. We will also look at where and when to use these types of turns on the varying terrain that advanced riders will encounter as they begin or continue to challenge themselves.



## DOWN UNWEIGHTED TURNS



### WHAT, WHY, HOW

This type of turn is when the body moves down towards the snowboard to release pressure at the initiation of the turn (opposite timing to an up unweighted turn) and flatten the board for the edge change.

This movement allows the rider to be at their most flexed during the edge change. This can help balance in rough terrain, provide a faster edge change and build edge pressure earlier in the turn.

- ▶ Begin by replicating the down unweighted movements with the back foot unstrapped, stepping across the board while focusing on the timing changes from an up unweighted turn.
- ▶ Use pivot slips to introduce the timing of the vertical movement. This exercise involves moving from toeside to heelside side slip and back again with a skidded down unweighted turn being the link in between. Like side slipping, it is often easier to perform on steeper pitches. Start with the snowboard across the fall line, with the legs extended. Begin to flex, using twist to guide the nose of the snowboard into the fall line. As the snowboard starts to point downhill use rotation to pivot it into and through the fall line, changing edges with the legs flexed. When back in the side slip, with the snowboard completely across the fall line, extend the legs again. Repeat this in the other direction.
- ▶ Adapt this task by replacing the side slip with a shallow traverse. Ensure that flexion movements happen before the turn is initiated to focus on the timing change from up unweighted to down unweighted. Extension movements can begin to blend with rotational movements from the control phase through the completion now.



- ▶ Use two-footed J-turns as a way to develop progressive extension movements to build pressure. Have the student begin a straight run in a fully flexed position and allow momentum to develop. Encourage the student to tilt the snowboard on edge and extend laterally away from the snowboard to build pressure. The snowboard should perform an edged J-turn. Have the student practise this exercise on both edges.  
Now link down unweighted turns together. Have the student carry speed through the completion of the J-turn, flex the legs and allow the snowboard to pass underneath the COM to change edges. After the edge change, the legs extend to build pressure on the new edge.



## TECHNICAL DESCRIPTION

### VERTICAL

The timing of vertical movement is opposite to that in up unweighted turns. The legs are extended to increase edge grip, and then flexed to allow the body to move down towards the snowboard, to flatten the board and initiate the turn.

### LATERAL

The legs are extended, moving the COM away from the base of support laterally to increase the edge angle. The snowboard is twisted using the lower body to help guide it underneath the COM at the edge change.

### ROTATIONAL

Movement is focused in the ankles, knees and hips. The upper body remains relatively still. A separated relationship between the upper and lower body may develop during down unweighted turns, especially small turns.

### LONGITUDINAL

The rider should initially focus on a centred position throughout the turn. Fore and aft movements can be introduced to adapt turns to variable conditions such as bumps, steeps or powder.



## TERRAIN & CLASS HANDLING

Down unweighted turns should be taught on-piste at first. Blue runs with varying pitches are ideal for this. Ensure riding speed is kept slow enough to focus on early flexion, before the edge change. If speed increases too rapidly, your student is likely to revert to an extension movement at edge change.

Have your student focus on soft legs and a stable upper body when riding through these tasks. Letting the student follow you and mimic the timing of your flexion/extension will help develop their timing. Once the timing is established, look for terrain with gentle bumps or ridges and try to time the edge change over the bump, progressing towards terrain unweighting turns.



## SELF REFLECTION

*"Do my students understand the timing change of vertical movements properly?"*

*"Are my students ready to be learning this movement pattern, e.g. Do they have the ability to soften their ankles and knees when flexing from heel to toe?"*



## ENVIRONMENTAL TEACHING EXAMPLE:

Set an imaginary corridor for the pivot slips. Or even better, use a snowmobile track and ensure they every time they come back to the side slip their board is across the track. As soon as they move out of the track, they must flex before the nose steers down the hill.





## DETECT & CORRECT

Student has trouble with timing down unweighted movement patterns:

- ▶ Review and walk through the sequential use of flexion and extension relative to the edge change in a stationary environment.
- ▶ Begin with slow exaggerated movements to show the timing of flexion and extension movements.
- ▶ Ensure that your student uses extension of the legs for turn control and completion phases to allow a larger range of flexion to be available for turn initiation. This is particularly useful when using more exaggerated movements to highlight the pattern.

Student is able to down unweight from toe to heel but not heel to toe:

- ▶ To begin with, ensure your student uses flexion of the ankles and knees to move vertically closer to their board before they change edges.
- ▶ Slow down the movement pattern, have them focus on moving down and rolling over the front foot at the same time.
- ▶ Be creative with lower-level tasks and reversed vertical movement patterns.
- ▶ For example, make use of a down unweighted garland on the heel edge to develop your student's ability to move vertically closer to their board whilst reducing tilt and achieving a flat base.
- ▶ Ensure that your student's extension for heelside completion does not create a large lateral movement of the hips away from the board. This will leave the hips too far over the heel edge making it more challenging to move the hips laterally back on top of the board to initiate the toe turn.

## RETRACTION TURNS



### WHAT, WHY, HOW

This is when the snowboard is retracted back towards the body to aid flattening of the board at the edge change.

Similar to down unweighted turns, retraction turns put the rider in their most flexed position at the edge change. This can help balance in rough terrain and a very quick change of direction.

- ▶ Introduce a slightly more high performance body position, with the hips and shoulders a little more open to the direction of travel. With the board on or off (depending on terrain and abilities), use a stationary retraction exercise. From a taller position, rapidly retract the legs to lift the feet or board off the ground momentarily.
- ▶ Using edge rolls, have the student practise rolling from edge to edge whilst riding in the fall line on a gentle pitch. The focus should be on keeping the upper body still, while changing edges using the hips, knees and ankles. The track in the snow should be created by the natural path of the side-cut, with no pivot or skid.

- ▶ Now with more speed and a progressively lower body position, begin to extend the legs and guide the board further away from the COM to increase edge angle and build pressure. To change edges, rapidly pull the legs back under the body.
- ▶ Apply this turn type to other terrain using varying sizes and shapes. With mileage, encourage agility through the ankle joint when retracting and a regulated extension to avoid loss of edge grip.



## TECHNICAL DESCRIPTION

### LATERAL & VERTICAL

The board is physically drawn back towards the body to unweight at the initiation. This movement is very fast allowing quick unweighting and turn initiation. Laterally, the board is moved away from the COM to build edge angle and then retracted back at edge change. Higher edge angles can be created by extending the snowboard further away from the COM.



**ROTATIONAL**

Movement here is focused in the knees and hips. The upper body remains relatively stable. A separated relationship between the upper and lower body is likely to occur, especially in smaller turns.

**LONGITUDINAL**

Focus initially on a centred position, but fore and aft movements can be introduced to adapt turns to variable conditions such as bumps or powder.

**TERRAIN & CLASS HANDLING**

As these tasks involve performing open, edged/carved turns, use a run with a shallower pitch (green or easy blue, that ideally changes pitch to become flatter down the run) as speed will constantly increase throughout. If the terrain you have chosen doesn't have a flatter run out, make sure that you give them the option to pull out of the task before they risk losing control.

**SELF REFLECTION**

*"Can my student already roll from edge to edge within an extended position?"  
"Do they have the ability to hold an edge in an open turn, with speed?"*

**EXPERIENTIAL TEACHING EXAMPLE:**

In retraction turns (as opposed to down unweighted turns) the height of the rider's COM relative to the snow should stay the same. Have your students imagine they are riding with their heads touching a low ceiling, aiming to keep their head at the same height throughout.

**DETECT & CORRECT**

Student's board skids too much when extending, pivoting with back leg:

- ▶ Encourage an even extension with both legs simultaneously.
- ▶ Have them work on extending gently and remaining low, only moving the board slightly away from their COM. Progressively extend the board further and further away until they feel any form of skid, then pull it back in again.

Student's hips/COM move upwards away from the snow during the edge change from heel to toe:

- ▶ Whilst stationary, review how the ankle, knee and hip must soften and flex to allow the hips to remain at the same height from the snow.
- ▶ Encourage your student to start in a vertically more extended stance whilst becoming familiar with allowing the board to pass underneath them from heel to toe edge. As the movement becomes more familiar, have your student start in an increasingly vertically flexed position. This will result in the edge change being in a more stable position.

## TERRAIN UNWEIGHTED TURNS



### WHAT, WHY, HOW

Here the terrain is used to unweight the snowboard. This could be the terrain pushing up against the board, creating a flexed edge change, or the terrain dropping away from the board to create an extended edge change.

Terrain unweighting allows us to perform down unweighted or retraction movements in more undulating and uneven terrain. It also provides us with a new way to use the up unweighted movement pattern over specific terrain.

- ▶ Start by recapping down unweighted and retraction turns. Explain how we can make similar turns but by using the terrain to unweight the snowboard.
- ▶ Have the student lie on their back with the base of their snowboard pointing up. Push down on the base so the rider can feel pressure on their feet as if they were riding. As you push on the bottom of the snowboard ask the student to relax their legs; have them notice how the pressure from your hands makes the legs flex as they relax. This is similar to how we can use rises in terrain or bumps to unweight the snowboard and change edges in a flexed position.
- ▶ Have the student push lightly up into your hands. As you lift your hands up point out that the student will feel less pressure on the bottom of their feet even though the legs are extending. This is how we can use the terrain dropping away to unweight the snowboard and change edges in an extended position.
- ▶ For terrain unweighting with a flexed edge change, take the student into some bumps and have them feel the sensation of unweighting the snowboard while traversing and absorbing the bumps. At the end of each traverse use this movement to unweight the snowboard and make a turn. Slowly shorten the traverse until the student is linking the turns through the bumps, unweighting by flexing over the bump.
- ▶ For terrain unweighting with an extended edge change, take your student to some rollers or terrain that steepens or drops away rapidly, or even use some small tabletops in a beginner park. Have the student ride over the terrain at a speed where they feel the snowboard unweight and maybe even get a little air. Now have the student focus on riding at the same speed but approaching in a flexed position. As they ride over the terrain have them extend their legs so the snowboard remains on the snow but has very little pressure on it. Now change the angle of approach slightly so the student is coming in slightly on their heels but still in a flexed position. This time, as they extend their legs encourage them to extend the snowboard on to the toe edge and think about moving the snowboard laterally under the body. Replicate the same exercise starting on your toes.



## TECHNICAL DESCRIPTION

### VERTICAL

It is important to maintain responsive legs, allowing the snowboard to be physically pushed up or drop away due to the terrain under the board. By allowing the legs to move vertically with the terrain we can unweight the snowboard and change edges.

### LATERAL

These are matched to the snow condition but should be minimised in tricky conditions to keep the body balanced over the base of support. This keeps the rider balanced at all times while riding uneven terrain.

### LONGITUDINAL

The rider should focus initially on a centred position throughout the turn. However, fore and aft movements need to be introduced when applying this to more variable terrain and bumps.

### ROTATIONAL

Movement here is focused in the ankles, knees and hips. The upper body remains relatively stable.



## TERRAIN & CLASS HANDLING

Perform the stationary steps on flat terrain. Easy off-piste with lots of undulations, like a blue bump run, should be used for terrain unweighting with a flexed edge change. Rollers, small cat track drop-offs, easy tabletops in the park, or entry-level boarder-cross tracks can be used for teaching terrain unweighting with an extended edge change.

To progress riders in terrain unweighting with an extended edge change, increase the angle of approach over the features so the rider can begin to come out in a carve. For a challenge in terrain unweighting with a flexed edge change, try pivot slips in the bumps to feel out the timing of the terrain unweighting.





## SELF REFLECTION

*“Do my students have the timing of a down unweighted movement pattern already?”*

*“Are they comfortable enough in the terrain of choice to be able to focus on the changing movement patterns?”*



### EXPERIENTIAL TEACHING EXAMPLE:

You're a monster truck with quick firing adjustable suspension that can be controlled from the driver's seat in a split second. As the front wheels begin to ride over a large bump you, the driver, hit the adjustable suspension button and the wheels pull up. At the same time you rotate the steering wheel into a turn.



### DETECT & CORRECT

Student has excessive upper body movement including use of the arms to combat instability (a common issue with terrain unweighting):

- ▶ Keep the hands low to aid balance.
- ▶ Reinforce a stable upper body and the continual active use of flexion and extension in the lower body to maintain board-to-snow contact. This will result in an increase of stability with a quieter upper body.
- ▶ Ensure that your terrain selection and slope variables are not too challenging for your student. Remember to build up to larger terrain changes as evidence of comfort and stability appear consistently in your student's riding.

Student over-flexes at the hips (breaking at the waist) when initiating the toe turn:

- ▶ Review how to create efficient flexion using more range in the ankles and knees to move vertically closer to the board for edge change.
- ▶ Ensure that when developing terrain unweighted turns, the terrain changes are not sufficiently large enough to encourage too large a range of hip flexion to be used for absorption. Your terrain selection will be key.
- ▶ Focus on starting the movement from the ankles so the knees move laterally across the snowboard first.
- ▶ Have your student focus on how low their hips are, rather than their shoulders or head.

## SECTION F - TEACHING ADVANCED SNOWBOARDERS

19

# Advanced Freeriding

**RIDING STEEPS****RIDING BUMPS****RIDING TREES****RIDING ICE****RIDING CRUD****RIDING POWDER****RIDING SLUSH****RIDING IN FLAT LIGHT**

## IN THIS CHAPTER WE WILL EXPLORE...

Freeride situations for advanced snowboarders, considering both snow condition and terrain variables. This chapter outlines specific turn sizes, shapes and types that are appropriate to the situation, with movement options quantified through range, timing and power. It is by no means every consideration but merely a guide to get you started. A more in-depth use of SCOPE is necessary to develop decision making abilities for each situation.

Most advanced freeride lessons will be corrective-based. Included are some example detect and corrects for each situation. There are many more not covered here, but it is expected that a Level Three instructor will have the ability to create corrective lesson plans based on knowledge and experience.

## RIDING STEEPS



### WHAT, WHY, HOW

Build confidence when riding on steeps.

As a rider explores more of the mountain they will encounter steeper, off-trail terrain. Having confidence to ride it will open up new terrain and experiences.

- ▶ Review small, closed, skidded, down unweighted turns on a steep blue or black groomer to assess and prepare for the terrain you intend to ride. Focus on an earlier edge change and a good range of vertical movement. Well-timed vertical movements will help with blending the edging and steering movements.
- ▶ Make the timing of the edge change progressive but earlier to help avoid too much acceleration at initiation. An early edge change gives the rider more time on the new edge, from which to pressure and steer the board later in the turn. It is important to make sure that the COM moves across the board at the edge change.
- ▶ Edging should be smooth and progressive and lateral movement is somewhat restricted (depending on snow conditions) avoiding leaning into the turn too much, even though higher edge angles will occur at some point in the turn.
- ▶ Progressive extension through the legs will help to regulate the pressure that builds in the board.
- ▶ Use strong rotational movements in the front knee, hip and shoulder to steer the board. Looking across the hill through the completion of the turn to keep forward momentum.





## TECHNICAL DESCRIPTION

### ROTATIONAL

Powerful and continuous steering movement focused in the front knee, hip and shoulder are needed to guide the board through the turn. Using an anticipation movement through the upper body can be a good tactic for timing and power, allowing a quicker initiation and strong steering.

### LATERAL

A progressive edge angle will be required, along with a strong degree of tilt in the completion of the turn, achieved with lateral movement through the lower body. The edge angle is relative to the pitch of the slope and snow conditions. The COM should try to remain close to the base of support and movements should be focused in the ankles, knees and hips.

### VERTICAL

Vertical movements should be smooth and continuous and come from a lower, centred position. A down unweighted movement with a quick flexion will allow the rider to make an earlier edge change. A progressive yet strong extension will help to regulate pressure and is essential in the blending of movements for effective edging and steering.

### LONGITUDINAL

Fore-aft alignment should be maintained to start with. As confidence grows a small aft movement through the completion can be added to increase edge grip through the completion of the turn. A slight fore movement can be added to help at the initiation.

Rider: Chris Hazeldine  
Photo: Keith Stubbs





## TERRAIN & CLASS HANDLING

Prior assessment of snow conditions and hazards is important before riding steep, off-trail terrain. Careful consideration of students' confidence and appropriate skills is also needed. Identify safe entry and exit points. Look out for potential hazards, rocks, drops and snow conditions. Line choice and decision making should be discussed before dropping in. Let students know that it is okay to sideslip or traverse if the terrain proves too challenging. Encourage safe stopping points and spacing of students. Make the first turn the best turn. In short... use SCOPE!



### SELF REFLECTION

*"Did my students sideslip or floating leaf down the whole run?"*

*"Did my students look nervous going into steep terrain? If so, what could I have done differently to help make them feel more comfortable?"*



### ENVIRONMENTAL TEACHING EXAMPLE:

Look for terrain that offers different line choices with short steep pitches that transition into easier terrain. Areas like this will be less intimidating and allow students' skills and confidence to build. Picking the right slope is only part of the equation when riding steep terrain. Add any of the above condition variables and it will make it easier, harder, potentially unsafe or simply impossible for students to ride.



### DETECT & CORRECT

Student struggles to initiate their turns:

- ▶ Move on to easier terrain and develop your student's ability to twist the board through a faster flexing movement at the initiation. This may involve a review of, or an introduction to, independent lateral movements with the lower body and their effect on the snowboard.
- ▶ Remind your student that things happen quickly on steeper terrain and so the speed of your movements should reflect this.
- ▶ Introduce anticipation to help with lateral commitment across the board.

Student struggles with pressure management in the completion of the turn:

- ▶ Consider what movements are happening earlier in the turn to result in this issue and where the rider's COM is placed.
- ▶ Encourage a more progressive extension of the legs in the down unweighted movement pattern.
- ▶ Ensure that this extension movement is blended well with lateral movement, and that the board is not edging too rapidly.
- ▶ Focus on the sequence of edge-pressure-steer to give your student more time on the new edge, and avoid sudden pressure increases.

## RIDING BUMPS



### WHAT, WHY, HOW

Introduce an efficient way to ride on bumps.

Bumps are often encountered on and off trail. The ability to ride them will create a more versatile snowboarder whilst providing access to more terrain.

- ▶ Review small, closed, skidded, down unweighted and retraction turns on a similar pitch groomer to the bumpy terrain you intend to ride. Focus on a lower centred position restricting the amount that you edge the board. Introduce terrain unweighted turns.
- ▶ Try timing the edge change to the bump. Allow the ankles and knees to passively absorb the bump to aid in unweighting the board as it changes edges on top of the bump.
- ▶ Gentle movement of the hips across the board will help to keep the edge angle lower.
- ▶ Focus on having soft, supple ankles and knees that move independently to keep the board in contact with the snow.
- ▶ Strong and progressive steering movements in the front knee and hip are needed to guide the board through the turn.



### TECHNICAL DESCRIPTION

#### VERTICAL

Vertical movements should be smooth and continuous, and from a lower position. A combination of turn types is often needed, though the focus should be on terrain unweighted turns. There will need to be a strong focus on independent absorption as the board moves over the bumps.

#### LONGITUDINAL

Fore-aft movements will increase in the bumps and will need to be timed with the vertical movement. Movements should not be excessive but rather be used to help balance and strengthen other movements.

#### ROTATIONAL

Progressive rotational movement focused in the lower body is needed to steer. This should be timed with vertical and lateral movements. Anticipation can be added to aid power when steering in larger and steeper bumps.

#### LATERAL

Smooth movements through the ankles, knees and hips are required to stay in balance. More independent lateral movement through the front ankle and knee will be required to twist the board through the initiation. A lower edge angle will help to reduce speed and allow for more effective steering.



## TERRAIN & CLASS HANDLING

A good assessment of the snow conditions and the size and shape of the bumps is needed before taking students into this situation. Consideration should also be given to the pitch of the slope and exit points. Focus your students on their line choice and point out the options of riding the troughs and the peaks or the shoulders of each bump. Make sure that students are warmed up and avoid bumpy terrain if students are fatigued. Space students out and spend time discussing line choice and tactics of where to turn.





## SELF REFLECTION

*“Was the snow condition helping or hindering my students’ ability to develop skills in the bumps?”*

*“Did I give a demonstration of terrain unweighted turns whilst riding towards the students to allow for a different perspective?”*



## ENVIRONMENTAL TEACHING EXAMPLE:

Find a similar pitch to the bumps that you are intending to take your students. Introduce a dolphin turn encouraging the movements needed to change edges on the top of the bump. Then make a series of snowballs spaced approximately where you think the students should be initiating turns over the bumps. Now have the students time their dolphin turns over the snowballs.



## DETECT & CORRECT

Student is being bucked by the terrain changes and loses balance:

- ▶ Review your terrain selection to ensure that your student is able to develop their riding skills and build their confidence.
- ▶ Encourage your student to focus on reducing muscle and joint tension so that their legs flex and extend freely when required. A simple analogy can help such as “jelly legs”.
- ▶ Use mileage with traverses in bumpy terrain to develop the sequential use of flexion and extension (independent absorption). Focus on keeping the snowboard in contact with the snow. On the toe edge, purely focusing on soft ankles and feeling pressure under the balls of the feet will promote stability.
- ▶ On the heel edge, focus more on a balanced blend of flexion in the knees and hips to keep the upper body more on top of the snowboard to promote stability.

Student struggles with line choice and loses their way in the bumps:

- ▶ Spend more time at the top and bottom of bumpy sections considering line choice, and avoiding the biggest troughs and bumps on the face.
- ▶ Give the option to traverse more at the start, so they can feel out the shape of each bump and become accustomed to the transitions.
- ▶ Work on rhythmical riding and predicting the terrain changes before they happen.

## RIDING TREES



### WHAT, WHY, HOW

Tactics for riding in trees (when teaching in the Northern Hemisphere).

Understanding line choice and timing of turns will make riding trees exhilarating and more achievable.

- ▶ Review turn size and shape, down unweighted, retraction and terrain unweighted turns on a similar pitch groomer to the trees you intend to ride.
- ▶ Focus on a lower centred position and practise making rapid changes and adjustments to direction and timing of movements.
- ▶ Introduce an anticipation movement through the preparation to aid in timing of initiation.
- ▶ On an easy blue pitch, with well-spaced trees, discuss the line choice, looking at the gaps and planning two or three turns ahead.
- ▶ Precise movements of the ankles and knees are needed when timing the edge change to make it through the gaps in the trees. Supple ankles and knees will help absorb unpredictable conditions found in the trees.
- ▶ Strong and constantly adjusting steering movements in the front knee and hip are needed to guide the board around the trees.



### TECHNICAL DESCRIPTION

#### ROTATIONAL

Steering movement is focused in the front knee and hip. Range, timing and power need to be constantly adjusted to create flow through the trees. Anticipation through the head and shoulders will allow for power to be released in the lower body to aid initiation and steering movements.

#### LATERAL

Smooth movements through the ankles, knees and hips are required to stay in balance. More independent lateral movement through the front ankle and knee will be required to twist the board through the initiation. A lower edge angle will help to reduce speed and allow for more effective steering.

#### VERTICAL

Vertical movements should be smooth, constantly adapting to the terrain through adjusting the turn type, size and shape. Movement should be focused in the lower body and stem from a lower centred position. All absorption methods may be needed, so independence in the legs is necessary.

#### LONGITUDINAL

Fore-aft alignment should remain stable but active longitudinal movements will be needed to adjust to any bumps, branches or fallen trees.



## TERRAIN & CLASS HANDLING

Vision will often be restricted over greater distances in the trees. Set meeting points and discuss the line you are taking. Visual contact with your students is often restricted. Try to stay within verbal contact distance. Knowing the tree runs and the terrain will help with deciding the line choice, entry and exit points, and areas to avoid with your students. Careful assessment of snow conditions is needed. Early season there tends to be more hazards in the form of branches, undergrowth, stumps and fallen trees lurking just beneath the surface.



### SELF REFLECTION

*"Did my students spend time using a floating leaf because the trees were too tight to turn?"*

*"Did I maintain visual or verbal contact with my students?"*



### EXPERIENTIAL TEACHING EXAMPLE:

Have you ever walked quickly through a crowded shopping mall or public place. You are subconsciously looking for the gaps and predicting the movements of others, trying to avoid walking into anyone. You can use a very similar tactic in the trees, though it is a lot easier as trees are not going to move and make random direction changes like people do. Trees are a little harder when you run into them and it is unlikely you will get an apology.



### DETECT & CORRECT

Student is nervous of riding in the trees:

- ▶ Terrain selection is the key to encouraging a nervous student in a gladed environment. Find areas of the run with options to make one or two turns in the trees with an option to return to an area with more space to turn.
- ▶ In more spacious areas of the mountain develop your student's confidence to make a turn not only when they choose to, but when they have to.
- ▶ Remember that trees do not have a uniform size or spacing between them so being adaptable with the timing of your movements is key. For example, have your student follow you for a few turns with symmetry and rhythm, then change the turn size and shape to a more unpredictable path.

Student loses momentum in the trees due to poor line choice:

- ▶ Focus on staying low and action-ready, rather than taller and stiff.
- ▶ Spend more time discussing their line choice before they drop in, ensuring that they are planning two or three turns ahead.
- ▶ Encourage them to change their field of vision regularly, from right in front of them to gaps further ahead.

## RIDING ICE



### WHAT, WHY, HOW

Introduce an efficient way to ride in icy conditions.

To create skills and awareness to keep stable and avoid falls on this challenging situation.

- ▶ Review medium, closed, skidded, down unweighted turns on non icy terrain if possible. Focus on a lower, centred position and restrict the amount that you edge the board.
- ▶ Make the timing of the edge change before the fall line to help minimise the increase in speed down the slope. Awareness of the gentle weight shift across the sole of the front foot will help in making gentle movements.
- ▶ During the second half of the turn use minimal but progressive lateral movement through the lower body with a focus on low, progressive edging. Feel for even pressure under both feet throughout the end of the turn.
- ▶ Focus steering movements in the front knee while subtly moving the hip and shoulder to help steer the board. Setting focal points will help to keep momentum across the hill.



### TECHNICAL DESCRIPTION

#### LATERAL

Smooth, subtle lateral movement through the ankles, knees and hips is required to stay in balance. A lower edge angle will be the result of the restricted lateral movement to stay in balance. The rider will experience a lot less edge grip than they would normally gain on the same terrain; however, the edge is still relevant to the pitch of slope in turn completion.

#### ROTATIONAL

Gentle and progressive steering movement focused in the front knee with a small complementary movement through the hip and shoulder. These movements need to be well-timed and power should be restricted to avoid over steering and pivoting of the board.

#### VERTICAL

Vertical movements should be smooth and continuous, but minimised, and come from a lower, centred position. A down unweighted movement pattern is preferable as the rider is lower and more stable during the edge change.

#### LONGITUDINAL

Fore-aft alignment and a centred position should be maintained.



## TERRAIN & CLASS HANDLING

Stopping points should be on areas that students can safely stop without sliding or being slid into. Understanding of the individual's skill and confidence level must be carefully assessed. Identify the patches of snow that have been scraped and avoid turning on these areas. Look to turn on areas where snow has been pushed into piles or spread across the ice to help get some edge grip. Avoid icy terrain where possible, especially steeper aspects. Falls can be painful due to the hard nature of the snow. Avoid shady spots and leave riding until later in the day if possible. Make sure edges have been recently tuned to help grip better on the ice.



### SELF REFLECTION

*"Did I try to minimise riding on the icy terrain?"*

*"Did I consider the time of day and how this may have had an effect on snow conditions?"*



### ENVIRONMENTAL TEACHING EXAMPLE:

When riding icy terrain look for the areas where the snow has been pushed and scraped into patches on top of the ice. These will often be more concentrated at the sides of the runs. Now try to plan your route down the slope moving from patch to patch, making the turn on these patches of snow.



### DETECT & CORRECT

Student creates a high edge angle in an attempt to slow down:

- ▶ Encourage your student to remain flexed and relaxed in their lower-legs to bring their COM closer to their snowboard.
- ▶ Remind your student that more grip might not be achievable due to the nature of ice. A lower edge angle will allow more of the base to contact the snow and help you to maintain balance until you find some softer snow in which to grip more with the edge.
- ▶ Encourage your student to keep their COM laterally more on top of the snowboard to help keep a flatter snowboard.

## RIDING CRUD



### WHAT, WHY, HOW

Efficient ways to ride in cruddy snow conditions.

This is a common condition and being able to ride it will often allow us to access better snow on different aspects that have not been affected.

- ▶ Review medium, closed, skidded, down unweighted turns on a similar pitch groomer to the cruddy terrain you intend to ride. Focus on a lower centred position restricting the amount that you edge the board. Well-timed vertical movements will help with blending of steering movements.
- ▶ Make the timing of the edge change progressive to help avoid catching edges at initiation.
- ▶ Create gentle and progressive edging throughout the turn trying to keep the hips just over the effective edge.
- ▶ Allow the ankles and knees to passively absorb the choppy terrain, maintaining a stable upper body.
- ▶ Use strong gradual steering movements in the front knee, hip and shoulder to help steer the board.



### TECHNICAL DESCRIPTION

#### LATERAL

Subtle lateral movements through the ankles, knees and hips are usually required to stay in balance. If the crud is softer, a little higher edge angle can be used to help cut through the crud.

#### ROTATIONAL

Strong progressive steering movement focused in the front knee and hip with the shoulder aligning to hip movement. Smooth timing and blending these movements with vertical and lateral is needed to effectively steer. Be ready to adjust the timing and power to suit the changing conditions.

#### VERTICAL

Smooth progressive flexion and extension movements through the ankles and knees are needed to manage pressure and independently absorb the crud. Leg muscles should be strong and active, yet with supple and soft joints.

#### LONGITUDINAL

Good fore-aft alignment is crucial, though there will be subtle longitudinal movements happening as the board travels across the crud.



## TERRAIN & CLASS HANDLING

Entry and exit points should be identified. Snow conditions should be checked before taking students into this situation. Spread students out so they avoid collisions. If the students are new to riding crud, check they have the relevant skills and understanding before committing to the run. Create understanding of how crud is formed through snow, wind, sun, rain and tracks left in the snow. Talk about how much edging and steering will be required to suit the pitch and type of crud you are about to ride. Point out line choices and where to turn.



### SELF REFLECTION

*“Do my students understand what crud is and how it is formed?”*

*“What type of turn are my students making and do they have the skills to ride crud?”*



### EXPERIENTIAL TEACHING EXAMPLE:

If you have ever driven up a mountain road in New Zealand, you will have encountered the rutted bumps that form from a lot of traffic. If you drive too fast, it feels like your teeth will be rattled out of your head and the car will start to lose control. The same will happen if you try to ride crud too fast.



### DETECT & CORRECT

Student struggles to initiate turns on wind-affected crud:

- ▶ Check that your student can make a down unweighted turn and that the edge change is timed correctly. Focus on a smooth progressive edge change. If this is a new movement for your student, find some suitable terrain to allow practice of this new sequence.
- ▶ Have your student focus on stronger muscles but loose joints, to allow finer movements of the ankle and knee.

Student is unable to adjust their edge angle to suit the changing snow conditions:

- ▶ Encourage the student to be light on their feet and avoid any aggressive movements.
- ▶ Ensure that the student has a strong active or high performance stance and is able to adjust quickly with their ankles.
- ▶ Tasks that develop edge awareness like hops up the hill without side slipping will work well here.

## RIDING POWDER



### WHAT, WHY, HOW

Effective powder riding tactics and techniques.

Understand how to ride powder well and it can be the most fun snowboarding you will ever have.

- ▶ Review medium, open and closed, skidded, down unweighted and retraction turns on trail. Using small aft movements throughout the turn can help to create float in powder.
- ▶ Make the timing of the edge change with a progressive retraction of the legs to bring the nose of the board to the surface. This will help avoid burying the nose at initiation.
- ▶ Avoid leaning too heavily on the edge until you get used to the powder as the board may get bogged in the snow.
- ▶ Use a smooth movement with the hips towards the tail of the board from control through to completion of the turn. Ideally, the front leg should remain flexed when this happens.
- ▶ Strong, progressive steering movements in the front knee, hip and shoulder will be needed at times. Keep the turns a little more open to maintain enough speed.



### TECHNICAL DESCRIPTION

#### LONGITUDINAL

Active fore, centre-to-aft movement should be encouraged. Working the COM a little towards the tail during the control and completion will aid in floating the nose and regulating pressure under the back foot. This should be achieved by sliding the hips towards the back foot and keeping the front knee flexed, rather than leaning back with the shoulders.



### VERTICAL

Vertical movements should be smooth and continuous. Rapid and powerful extension movement through the completion phase will create spray and bend the board so that rebound can be utilised in the initiation phase by more experienced riders. The initiation works best by retracting the board to the surface of the snow.

### LATERAL

Smooth lateral movements through the ankles, knees and hips are typically required. Edge angle and movements of the COM away from the base of support will need to be adjusted to suit the type and depth of powder.

### ROTATIONAL

Progressive steering movement focused in the front knee and hip. The power and range of these movements will need to be adjusted depending on the depth and density of the powder.



Rider: Alex Tyrwhitt

Photo: Keith Stubbs



### TERRAIN & CLASS HANDLING

The amount of snow that has fallen and what is beneath the surface both need careful assessment as there are often hidden hazards. Identify flat spots as speed will need to be carried through these sections. Use other riders' and skiers' tracks to keep speed through flat run outs. Snow being sprayed, although fun, can create total blindness for brief periods of time. Space students out to avoid collisions. Be aware of wind loading and terrain traps. Check avalanche reports. Be aware that people, yourself included, will usually be very excited about fresh snow and decision making is often clouded. Take the time to SCOPE!



## SELF REFLECTION

*“What were the conditions like before the powder came and could there be hazards underneath?”*

*“Did I take my students into terrain that was appropriate for their physical ability and experience riding off-trail?”*



## EXPERIENTIAL TEACHING EXAMPLE:

Have you ever held a large cork under the water? You can feel it pushing back. When you relax your arm and release it, the cork floats up to the surface. We can use a similar idea when riding powder. We extend our legs pushing the board under the snow, then let the board float to the surface as we release pressure and retract our legs to begin each turn.



## DETECT & CORRECT

Student loses balance towards the nose of snowboard:

- ▶ Encourage your student to maintain sufficient speed to keep the snowboard afloat.
- ▶ Review more efficient ways to keep the nose of the snowboard afloat to avoid fatigue and back leg burn. Begin with subtle pressure changes under the soles of the feet, focusing on a slight increase of pressure under the rear foot. This will avoid large movements of the COM over the back foot which creates extra strain on the working muscles.

Student leans back with the shoulders and straightens their front leg in the process, limiting their ability to absorb and steer the snowboard:

- ▶ Spend some time stationary working through different ways to move aft on the board. Encourage the sliding of the hips over the back foot, rather than leaning with the shoulders.
- ▶ Encourage longitudinal alignment of the shoulders and hips, keeping them parallel with each other.

Student struggles to initiate the toeside turn when the terrain becomes steeper and the snow is deep:

- ▶ Focus on increasing range of movement vertically with the down unweighted movement pattern.
- ▶ Ensure that the extension through the heelside turn happens late to help create a more compact platform of snow underneath the board, before moving down and across the board into the new turn.
- ▶ Encourage a larger lateral movement with the shoulders and hips earlier in the turn.

## RIDING SLUSH



### WHAT, WHY, HOW

Develop efficiency when riding slushy conditions.

Spring is a super-fun time of the season. Being able to ride slush well will make it even better.

- ▶ Review medium, closed and open, skidded, retraction or down unweighted turns. Focus on a centred and slightly lower position, restricting the amount that you edge the board to help avoid booting out in the slush.
- ▶ Make the timing of the edge change progressive but generally early in the turn. Be prepared to brace yourself against sticky snow through maintaining a strong core and subtle aft movements.
- ▶ Create progressive, but limited, edging with smooth extension movements and avoid leaning too heavily on the edge until you have a feel for how soft the slush is.
- ▶ Strength will be needed in the legs to allow the board to shift fore and aft to maintain balance if the snow is sticky.
- ▶ Use strong steering movements in the knee, hip and shoulder.



### TECHNICAL DESCRIPTION

#### LONGITUDINAL

Very active, stable and strong fore and aft movement is needed to maintain balance and stability in sticky snow.

#### VERTICAL

Flexion and extension movements should be smooth and continuous. A degree of independence is needed as slush will often have a variable snow surface. Down unweighted and retraction turn movements are the most effective in slush.

#### LATERAL

Subtle lateral movement through the ankles, knees and hips is used to balance and edge the board. Edging can be increased depending on the depth of the slush.



## ROTATIONAL

Strong progressive steering movement focused in the front knee and hip are often needed. Steering needs to be well-timed with vertical.



## TERRAIN & CLASS HANDLING

Slush can be a very variable condition and will change rapidly due to temperature fluctuations. Identify sunny and shady aspects. Warmer slush is deeper and often sticky (especially if it is new snow transitioning to slush). Cold slush is firmer and faster. Check weather reports for freezing levels. Prepare the board with a warm snow wax in spring. Encourage students to look out for hazards like rocks and tussock that will start to become more present as snow warms and melts. Adjust turn shape to suit the type of slush.



## SELF REFLECTION

*"Did I talk about the importance of waxing your board when riding slush?"  
"Were my students getting bogged down or falling over in the slush, if so why?"*



## EXPERIENTIAL TEACHING EXAMPLE:

You're at the beach early morning and it is still a bit cool as you are in the shade. You spot the sun coming over the hill behind you and walk for a minute to get into the sun and feel the warmth. Later in the day it's hot and you find it cooler under the shade of a tree. Using the same tactic we can find the softer slush by following the sun, or if it's too hot we look for the shaded aspects.



## DETECT & CORRECT

Student loses balance towards the nose of the snowboard:

- ▶ Generate awareness in your student that snow with higher water content will create more of a suction effect with the snowboard. With this knowledge your student can choose a line that avoids areas of water collection.
- ▶ Ensure that your student is able to make quick adjustments longitudinally with smaller levers in the lower body. This will allow them to be more agile over their snowboard and bring their COM back within balance as quickly as possible. Often, this movement can be described as shuffling the snowboard underneath the body.

Student gets toe or heel drag in the slushy snow:

- ▶ Check their equipment for boot/binding overhang, ensuring that the bindings are well placed laterally on the board.
- ▶ Check that the board they are riding is wide enough for their feet.
- ▶ Encourage less edge angle when the snow is wetter.

## RIDING IN FLAT LIGHT



### WHAT, WHY, HOW

Create confidence to ride on in low visibility.

Flat light can be one of the most difficult situations to ride. Having an effective tactic to deal with it will make it safer.

- ▶ Review medium, closed, skidded, retraction or down unweighted turns.  
Focus on a lower centred position.
- ▶ Time the edge change smoothly and progressively. Kinesthetic awareness will need to increase. Feel the subtle sensation and pressure changes in the feet. This will help in making gentle movements.
- ▶ Use minimal but progressive lateral movement through the lower body.
- ▶ Feel for even pressure under both feet through the bottom part of the turn. Steer the board smoothly using the front knee, hip and shoulder.
- ▶ Try to use any visual references to help gauge speed and direction, and spend time riding the same terrain so familiarity increases.



### TECHNICAL DESCRIPTION

#### ROTATIONAL

Steering movements should come from the front knee with a small complementary movement through the hip and shoulder. The power should be restricted to avoid over-steering.

#### LATERAL

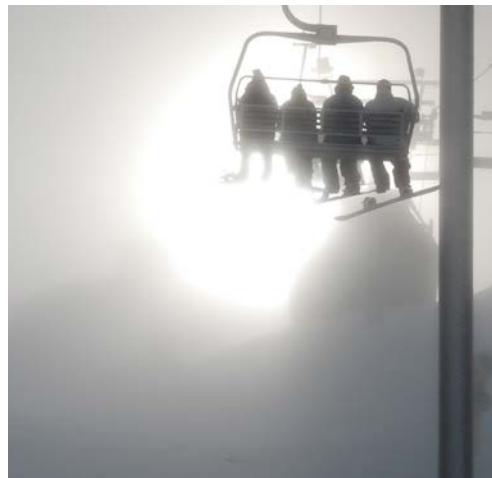
Subtle lateral movements through the ankles, knees and hips are required to stay in balance. Edging should be progressive to help balance. Ankles and knees should remain relaxed to adjust to unseen changes in terrain.

#### VERTICAL

A lower centred position with minimal flex and extension movements through the lower body. Adjustments will need to be made to suit the terrain being ridden. A retraction or down unweighted movement is preferable as the rider is lower and more stable during the edge change.

#### LONGITUDINAL

Fore-aft movement should be minimised.





## TERRAIN & CLASS HANDLING

Riding familiar groomed terrain is recommended. Stay on trail where possible to avoid having to deal with too many variables. In white-out conditions look for anything that will give awareness of location, slope pitch and speed. Use darker terrain features like trees, lift towers or large rocks to bring more definition to the surroundings. Listen for other voices, their equipment on the snow and lifts. If disorientated, stop and sit so that your senses can readjust. Ride your students closer together to help keep a visual and verbal contact. Use a reciprocal approach and pair students up. Highlight kinesthetic feelings to ride the terrain you are on.



### SELF REFLECTION

*"Did I lose any of my students at any point in the lesson?"*

*"Did I choose easy familiar terrain for my students to ride?"*



### EXPERIENTIAL TEACHING EXAMPLE:

You are in your own home, you get up in the middle of the night to go to the toilet and find there is a power cut. You still easily navigate your way to the bathroom. If the same scenario happened in an unfamiliar house you could end up getting quite lost and disoriented. Flat light is the same, familiar places are easier to navigate.



### DETECT & CORRECT

Student struggles to keep their balance and falls inconsistently throughout their turns:

- ▶ Visual reference points are key in flat light. Utilise trees, rock features, wind fences, lift towers etc. If nothing is available then ride in front of your student to provide a visual reference so they can judge the speed of their riding.
- ▶ Encourage your student to remain in an action-ready stance, with a lower COM whilst having relaxed ankles. This will allow them to make quick adjustments from a more stable position to aid stability.
- ▶ Focus your student's kinesthetic awareness on the sensations they are receiving through the soles of the feet. This will help them adjust to undulations and pitch changes more easily.

## SECTION F - TEACHING ADVANCED SNOWBOARDERS

20

# Advanced Carving

**ADVANCED ANGULATION****ALL-TERRAIN &  
CREATIVE CARVING****HIGH PERFORMANCE  
CARVING**

## IN THIS CHAPTER WE WILL EXPLORE...

The technical aspects required for more advanced carving techniques and some tasks that can be used to progress riders to a higher level of performance.

Once students are comfortable carving on a variety of blue terrain we can start to advance and adapt their skills for steeper pitches, more varied terrain, higher speeds, increased board performance and to become more creative. Riders should already be exploring use of a high performance stance and a variety of turn types.



Rider: Leo Carey  
Photo: Kahli Hindmarsh

## ADVANCED ANGULATION



### WHAT, WHY, HOW

Adapting and developing angulation techniques to cater for increased speed, pressure and performance.

When carving at higher speeds and with increased performance, the snowboard will bend more and the radius of the side-cut becomes tighter. As this happens the snowboard is able to make tighter turns that change the rider's direction very quickly across the fall line.

- ▶ With the introduction of advanced turn types (Chapter 19), you have begun the groundwork for a high performance stance already.
- ▶ Spend some time carving on familiar terrain exploring a more rotationally open body position. Focus your students attention on how this rotationally open position can affect the other three directions of movement, both positively and negatively.
- ▶ In between each run, pause on flatter terrain to address each movement whilst stationary. Holding the back hand of the rider, have them flex down over their heel edge and progressively create angulation with a more open body position. Draw attention to how the front knee must remain flexed, how the hips need to slide over the back foot slightly, how the chest begins to move over the front quad muscles as you flex and the front hand lowers behind the highback of the front binding, and how the trailing ankle must be actively flexed (pulling the toes up).
- ▶ Now begin to explore how this high performance stance can increase the range of movement in all directions. Exercises like dragging the back knee on the snow or moving towards a melon grab on the toeside, and lowering the lead hip towards the snow on the heelside, are suitable for this purpose.



### TECHNICAL DESCRIPTION

#### LATERAL & VERTICAL

A high performance stance with advanced angulation allows a greater range of vertical movement, which helps to maintain a higher edge angle, whilst keeping the COM closer to the board. This allows the rider to remain low and balanced throughout the turn, rather than extending excessively for the edge change. This position also allows the hips to be used more effectively when flexing on both edges. It is possible to adjust the shoulders slightly laterally to match the pitch of the terrain, increasing the ability to regulate pressure. On the toeside the hips no longer align completely over the toe edge, although the core should still remain perpendicular. On the heelside, the hips and core can align laterally with the edge, even though they should be open to the direction of travel. Maintaining flex in the trailing ankle is important.

## LONGITUDINAL

Moving the hips slightly over the rear foot is necessary to allow for the open body position. Adjustments can be made through the hips to allow for recentering of the COM (and more range vertically) when needed, bringing the chest towards the front quad muscles. This position provides more time to be proactive with movements when anticipating changes in terrain. It is imperative that the front knee and ankle remains flexed to allow for steering and absorption.

## ROTATIONAL

The rotationally open body position is used on both edges, yet steering is created through manipulating the sidecut and use of whole body rotation. Powerful rotational movements are needed here, so the shoulder must work with the hips and knees.



## TERRAIN & CLASS HANDLING

Use terrain that is familiar to the student, as they will be exploring a new position on the board, focusing more on their movements than on the terrain around them. Early-morning blue groomers are ideal for this. Keep the carving tasks relatively slow at first and only increase the pitch or speed as they become comfortable with the new position - this may take some time. Be aware than they will need to feel the increase in forces for the new position to become completely relevant. Like all carving tasks, ensure that everyone remains aware of uphill traffic and blind spots, particularly on the heelside. Use long stretches of runs or even the whole trail to allow lots of practice and exploration of movements. Regular stationary steps to review each movement will be useful.



## SELF REFLECTION

*“Do my students have the physical ability to begin opening up their stance without it negatively affecting other movements?”*

*“Am I encouraging too much movement in a particular direction, that could be creating an inefficiency in their riding?”*



## ENVIRONMENTAL TEACHING EXAMPLE:

Have your students follow your track or each other's on a fresh groomer, whilst continually playing with their turn shape on easy, familiar terrain. You can have the follower try to match your carve in the snow but perform it a few metres higher on the run, instead of following the leader's track. Or have the follower try to mirror image the leader's track to create figure of eight shapes in the snow.



Rider: Ollie Midgley  
Photo: Keith Stubbs



## Detect & Correct

Student struggles to create a high performance stance on their heelside and pushes their lead hip too far inside the turn:

- ▶ Spend more time working on the position while stationary, focusing on blending vertical, lateral and longitudinal movements and sinking the hips back over the rear highback.
- ▶ Reduce the range of vertical movement being used if necessary and focus on keeping the leading hip directly under the lead shoulder.
- ▶ Take the focus off adjusting the shoulders to match terrain and put emphasis on the hips, knees and ankles.
- ▶ Ensure that their leading knee remains flexed throughout and have them pull the toes up through the completion of the heel turn.

Student inclines the shoulders on the toeside too far:

- ▶ Focus them on driving the trailing hip over the toe edge early in the turn, rather than the shoulders.
- ▶ Continue to build edge angle with the lower body first and foremost.
- ▶ Change their mindset so the upper body becomes a powerful extra that can be added when desired, rather than a habitual movement pattern.
- ▶ Discourage the dragging of hands in the snow.

## ALL-TERRAIN & CREATIVE CARVING



### WHAT, WHY, HOW

Taking advanced angulation techniques into gullies/banks and varying snow conditions, and becoming more creative with carving.

The surge in carving popularity has riders looking for ways to be more creative on groomed terrain, and explore varied terrain like banked slalom courses.

- ▶ Begin with mellow gullies or bowls that have suitable snow conditions. Experiment with the timing of edge changes, application of edge angle, pressuring movements and use of side-cut. Carving tasks that include the use of flat basing across the fall line can be useful here. Explore the use of larger inclination movements to add power laterally.
- ▶ Begin to challenge your students with varying snow conditions, bringing awareness to the different turn types. Turn types will vary regularly to help manage different terrain. Encourage terrain unweighting as the undulations in the snow increase.
- ▶ Encourage small movements in the ankles and lower legs to help students adjust their edge angle at a moment's notice. Use follow-the-leader tasks on easier groomed runs, where the leader uses edge wiggles in their turns randomly to throw off the follower, without skidding the board.
- ▶ Experiment with different ways to create rebound in the board. Pump turns can be used to experiment with rebound on flatter terrain. On more challenging terrain, powerful extensions followed by quick retractions at the edge change will create rebound without raising the COM too much. Small but quick movements towards the tail can achieve a similar result.
- ▶ Explore the euro carve to help create more lateral power from the upper body whilst remaining flexed in the ankles. Consider using a progression to develop this skill. Focus on building the skill from the board upwards, starting with the ankles and finishing with the shoulders/arms. Contact between the upper body and the snow should be the final addition here and should come from the trailing elbow or shoulder.
- ▶ Try including freestyle elements to bring more creativity to their riding. Revert carves, where the rider pivots the board 180 degrees underneath the body before re-engaging the same edge into a carve but travelling switch (or vice versa if starting switch), are a great introduction to this.





## TECHNICAL DESCRIPTION

### VERTICAL

Range of vertical movement plays a bigger part in all-terrain and creative carving; however, the timing is just as important, if not more. A combination of the different turn types will be necessary to develop these skills. Retraction and terrain unweighted turns will be used regularly, as both focus on the regulation of pressure relevant to the terrain. Down unweighted turns allow the rider to quickly lower their COM early in the turn, but require an extension in the control and completion where the pressure is generally greater. Up unweighted turns help the rider to balance through the control and completion of the turn yet can lead to vulnerability at the edge change. Note that your student will require a good down unweighted movement pattern to be able to ride out from euro carves.

### LATERAL

Quick lateral adjustments in the lower body are essential to carving in variable snow conditions. Larger lateral inclination with the upper body can be utilised to create power but is only effective with strong lower body angulation. The ability to reduce edge angle is just as important here as the skill of creating it. This can help to avoid toe and/or heel drag during euro carves.

### LONGITUDINAL

Quick but strong movements longitudinally are useful for creating rebound, absorbing bumps and adjusting to changes in snow conditions. The COM generally moves between the centre of the board and the back foot, and should rarely come fore.

### ROTATIONAL

Rotational movements are much the same as high performance carving; however, the ability to quickly separate rotationally in the body and pivot the board is necessary for creative carving.



## TERRAIN & CLASS HANDLING

Exploring the whole mountain is important here. Terrain should be used to challenge your students, not hold them back. Almost every type of terrain can be utilised in all-terrain carving, snow conditions dependent. Increasing performance to this level can be taxing, so be sure that energy levels are high and look for signs of tiring. When teaching euro carves or any other creative carving skill, snow conditions become much more important. The ability to hold an edge with the COM moving far away from the board is crucial.



## SELF REFLECTION

*“Do my students already have some experience riding in the terrain and/or snow condition before turning up the level of performance?”*

*“Do I have suitable terrain and conditions to begin exploring creative carving?”*



## EXPERIENTIAL TEACHING EXAMPLE:

Strong muscles and loose joints are the key to carving in variable snow conditions. To help develop awareness of this, use a stationary reciprocal learning task where you pair people up. Have them stand facing each other (boards off generally) and touch hands, palm to palm. Take it in turns for one person to lead by changing how much pressure is created between their palms whilst the other has to regulate the pressure without losing contact. The leader in the pair can choose to push or pull their hands away, but is only allowed to use a small range of movement.



## DETECT & CORRECT

Student extends too quickly through the control or completion of the turn and begins to chatter:

- ▶ Begin by reducing the vertical range of movement, then reintroducing it to match the turn size/shape and snow condition.
- ▶ On the heel edge, ensure that extension movements are blended through the knees and hips. Remind your students that the pressure between the calf and highback should remain constant, and that the ankles can be used to create more edge angle, when needed, by pulling the toes up.
- ▶ On the toe edge, ensure that extension movements are used smoothly, predominantly from the knees, keeping the ankles soft to absorb small bumps and undulations. Remind your students that stability on the toe edge is achieved over the balls of the feet, with flexed ankles. If they extend their ankles they are more likely to create lower leg muscle tension which will not absorb any sudden pressure changes efficiently, resulting in quick loss of balance.

Student struggles to maintain pressure when carving through the bottom of a transition, like a narrow gully:

- ▶ Review the turn type they are using and decide if it's appropriate for the terrain.
- ▶ Check that their body positioning is suitable, with the COM positioned over the edge.
- ▶ Ensure that the edge change is as early as possible to give more time on the new edge, allowing for effective pressuring.
- ▶ Focus on building pressure before the quick transition comes and using longitudinal movements where necessary.

Student struggles to make quick adjustments to the variable terrain or snow conditions:

- ▶ Spend more time riding the same terrain with a detuned performance.
- ▶ Use tasks to develop their reaction time and quick movements in the ankles and knees.

Student over-flexes through the hips during an attempted euro carve to drag their back hand in the snow:

- ▶ Don't allow them to drag their hand in the snow until they can get the trailing knee and/or hip on the snow. Then add the upper body to create more power laterally.
- ▶ Encourage lots of flex in the ankles and the feeling of stretching the calves. Focus your student on balancing with their elbow in the snow instead of dragging the hand.

## HIGH PERFORMANCE CARVING



### WHAT, WHY, HOW

Large, high-speed carved turns with increasing performance.

Aside from being incredibly fun, this type of riding is required in racing scenarios like boarder cross and banked slaloms.

- ▶ Begin reviewing/introducing advanced angulation techniques and the high performance stance required. Show how an increased edge angle can manipulate the side-cut of the board to tighten our carve.
- ▶ Try some stationary edging tasks like hopping up the hill on the heel edge and down the hill on the toe edge (whilst facing downhill), focusing on a strong and blended movement through the lower body. Ensure that a strong edge in the snow is maintained, not allowing the board to skid or slip out, as well as adjusting balance over the contact edge.
- ▶ Spend time carving on familiar terrain with consistent pitches and fall lines, using a larger range of vertical movement at first, along with an up unweighted movement pattern. Slowly begin to reduce this vertical range, focusing on using the position of the body to regulate pressure (i.e. advanced angulation) instead of vertical movement. The aim here is to maintain and regulate edge pressure throughout the turn, rather than having big increases and decreases.
- ▶ Work through the same concepts with a down unweighted or retraction movement pattern to provide options and prepare for terrain changes. When ready, begin to challenge their timing and ability to regulate pressure with changes in pitch and fall line. Focus on manipulating the side-cut to adjust turn size and shape, rather than skidding the board.





## TECHNICAL DESCRIPTION

### LATERAL & VERTICAL

The same lateral and vertical positioning required for advanced angulation should be utilised here. The COM should remain fairly low and laterally close to the snowboard throughout the turn; however, it will need to move across the board at the edge change. A retraction or “cross-through” movement can be used here to allow the COM to move quickly across the board without a significant decrease of pressure. Up unweighted and down unweighted movement patterns can both be used, depending on what is required during the control and completion phases of the turn, i.e. flexing down to manage pressure or extending to build pressure.

### LONGITUDINAL

The high performance stance and advanced angulation techniques help to create a slight aft position on the board without compromising the flex or absorption in the leading knee and hip. This can be utilised to the rider’s advantage when completing turns by making small, yet powerful aft adjustments to help increase edge grip at the tail of the board.

### ROTATIONAL

Powerful rotation through the whole body is required here. This is only used as a complementary movement to the vertical and lateral movements, as the manipulation of the side-cut should create most of the steering.



## TERRAIN & CLASS HANDLING

As with all carving, morning corduroy with minimal traffic is ideal. Begin on the widest trails you can find, but ensure there is enough pitch for your students to gain speed. Without this, the high performance stance is not needed. Progress to trails with changing fall lines and undulations, but encourage scope and tactics when you do. Look out for points on the side of trails where the groomed corduroy suddenly changes to off-trail conditions and make your students aware of this. Reinforce the checking of blind spots in heelside turns.

Ensure you take the time to review your students’ equipment here. Blunt edges will make carving at this level very challenging. Highback forward lean will help maintain edge angle through the heelside. Be particularly aware of binding angles. A more neutral back foot will certainly achieve the necessary high performance stance, whereas an even duck stance is likely to put unnecessary pressure on the back knee.



## SELF REFLECTION

*“Are the snow conditions suitable for the increasing level of performance?”  
“Are my students aware of how the side-cut can be manipulated to tighten the turn radius?”*



## EXPERIENTIAL TEACHING EXAMPLE:

In high performance carving, the focus should be on regulating and maintaining pressure, avoiding sudden increases or decreases. The analogy of pressure sensors under the feet works well here. Each sensor has a metering arm that flick and bounce when pressure is suddenly increased or decreased. The aim is to keep the metering arm in the middle and reduce flicking or bouncing as much as possible.





## DETECT & CORRECT

Student looks off-balance when speed is increased:

- ▶ Check that the equipment used is adequate and appropriately set up.
- ▶ Check for heel/toe drag as the edge angles increase.
- ▶ Remind your student that the purpose of the high performance position is to help with the increasing forces. If the speed of the riding is not sufficient enough to increase the forces acting on the rider, then there is no real need for a high performance position or advanced angulation.
- ▶ Focus on progressive edging movements using lower limbs, helping the upper body remain calm and balanced as it moves through the turn. Progressive edging will help your student to blend pressuring movements.

Student has difficulty maintaining a higher edge angle at speed:

- ▶ Focus on keeping the COM low and inside the turn.
- ▶ Reintroduce advanced angulation whilst stationary. Ensure that any use of the upper body does not move the upper body's mass over the opposing edge. This will decrease tilt and be detrimental to performance.
- ▶ Use drills that will isolate that phase of the turn where the issue is occurring and allow your student to work on a progressive blending of vertical and lateral movements to increase edge angle. As the snowboard begins to grip the snow, increase the speed used in the drills to help your student balance and explore a greater range of movement and tilt.

Student skids during the transition from the control to completion phase of the turn:

- ▶ If your student is down unweighting, introduce an up unweighted turn as an option. This promotes movement down into a low stable position moving through the student's problem area.
- ▶ In a closed turn, redirect your student's line of sight through the turn and across the hill to help them direct their mass in that direction.
- ▶ Ensure that any adapted stance positions (e.g. advanced angulation) do not have an inefficient effect of excessive pivot or twist on the board.
- ▶ Remember that every student has an individual level of flexibility and it is possible that an adapted stance in one student with no inefficiencies arising can still create inefficiencies in another less flexible students.

Student struggles to create a more closed turn shape at higher speeds:

- ▶ Encourage progressive flexion/extension movements, blended with progressive edging to continually manipulate the side-cut. The vertical range is not the important thing here, it is timing that counts.
- ▶ Try increasing the edge angle of the board at the tail through the completion phase, by pulling the toes on the back foot up slightly on the heelside and driving the back knee towards the snow more on the toeside. The hips will need to be slightly aft to achieve this.
- ▶ No matter what turn type your student uses, encourage them to look across the slope in the direction they intend to travel.

## SECTION F - TEACHING ADVANCED SNOWBOARDERS

21

# Advanced Freestyle

## IN THIS CHAPTER WE WILL EXPLORE...

A wider look at freestyle both in and out of the park, with a view to develop versatility and creative riding. This chapter shows a selection of tricks that are commonly performed at an advanced level and can be categorised into all-mountain, jumps, boxes/rails and halfpipe riding.

### ALL-MOUNTAIN FREESTYLE

BUTTERS



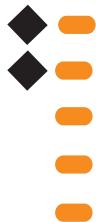
FRONTSIDE &amp; BACKSIDE 360S

HARDWAYS SPINS

DROPS

### BOXES & RAILS

PRESSES



BOARDSLIDES

FRONTBOARDS

FRONTSIDE &amp; BACKSIDE ENTRIES

50-50S WITH SPINS IN &amp; OUT

### PARK JUMPS

ADVANCED AERIAL AWARENESS



EDGEDED TAKEOFFS

180S (ALL DIRECTIONS)

360S (ALL DIRECTIONS)

### HALFPIPE

INTRO TO PIPE



DROPPING IN

FRONTSIDE &amp; BACKSIDE AIRS

360S &amp; ALLOYOOPS

## ALL-MOUNTAIN: BUTTERS



### WHAT, WHY, HOW

A playful style of riding involving a combination of pressing and spinning on, often in the absence of terrain park features.

To have as much fun as possible on flatter, groomed terrain.

360 tail butter:

- ▶ With a mellow approach speed either down or across the slope on the heel edge, pressure the tail and turn whole body in a frontside direction.
- ▶ Allow the upper body to continue to spin frontside and pull the leading heel uphill.
- ▶ Keep looking uphill over the leading shoulder as the tail begins to point downhill.
- ▶ Keep the board in a tail press and subtly change edges in the fall line to the toe edge.
- ▶ Continue to turn the shoulders in a frontside direction and look downhill over the lead shoulder.
- ▶ Allow the hips and leading heel to complete the spin and catch up with the upper body.
- ▶ Release the press to complete the trick or build by adding more rotation, a transfer to a new press or even pop out.
- ▶ Try this butter in a backside variation or even switch to increase versatility.



Frontside nose roll 180-out:

- ▶ Ensure that the nose roll and switch backside 180 (See Exploring Freestyle, Chapter 17) are solid as a baseline to building this new progression. A quick refresh of each may be needed.
- ▶ Bring the two tricks together with a forwards nose roll, riding away switch moving the hips aft into a switch tail press. Allow the upper body to continue to turn and pop off the back foot into a switch backside 180.
- ▶ For the complete trick, as the nose roll is released use this rotational momentum to spin the switch backside 180 when popping out of the press. Explain where to look throughout the trick to aid balance.
- ▶ This trick can be done in backside variations, when riding switch and even with hardways takeoffs.

Backside 180 to press 180-out:

- ▶ Ensure the the backside 180, switch tail press and switch frontside 180 (See Exploring Freestyle, Chapter 17) are solid as a baseline to building this new progression. A quick refresh of each may be needed.
- ▶ Bring the three tricks together in a single traverse by doing a backside 180, ride away switch and move the hips aft into a switch tail press. Allow the upper body to continue to turn in the switch frontside direction and pop off the back foot to release the switch frontside 180.
- ▶ For the complete trick, as the backside 180 roll is released use this rotational momentum to spin the switch frontside 180 when popping out of the press. Explain where to look throughout the trick to aid balance.
- ▶ This trick can be done in frontside variations, when riding switch and in hardways variations.



## TECHNICAL DESCRIPTION

### VERTICAL & LONGITUDINAL

During butter tricks, it's key to be able to blend vertical and longitudinal movements. The COM will move fore and aft and up and down as a result of precise flexion and extension movements in the ankles, knees and hips. This can be developed through mileage and often range of these movements needs to be explored to flex the board, create/hold/release presses and utilise rebound when required.

### LATERAL

Edge awareness is key throughout butters and requires constant fine tuning movements with the ankles, knees and hips. This will allow the rider to keep the COM over the uphill edge when required and also transition over a flat base through parts of the tricks to allow free flowing tricks.

### ROTATIONAL

Rotational movements will involve the whole body. Depending on the trick the upper body can be used to generate power and can be separated from the lower body to help create and maintain rotational momentum.



## TERRAIN & CLASS HANDLING

Choose terrain that will help keep the riding speed relatively slow and also provides enough width for the space to use traversing tasks. If using traverses to build butters, ensure that students are spotting for each other and checking their blind spots frequently. With a range of abilities and stances, be sure to offer options for regulars and goofys as well as adequately challenging butter tricks to keep interest up without taking away from the ability to achieve the butter.



## SELF REFLECTION

*"Did I choose an easy enough butter to build from as the lesson progresses?"*

*"Are my students capable of performing all the ingredient tricks separately before trying to perform the complete trick?"*

*"Are the tasks I'm using to build my progression relevant to the butter trick?"*



## EXPERIENTIAL TEACHING EXAMPLE:

Your students like to dance and you liken buttering to dancing on your snowboard. Dance moves involve balancing over one leg, spinning around, transferring weight to the other and also balancing over both feet when desired. This can help students not only move in a way beneficial to the trick but also to visualise the moves they need to make to perform the right dance combo / butter trick.



## DETECT & CORRECT

Student is unable to maintain flex in the board in butters:

- ▶ Ride slower to begin with to ensure that fear does not become an issue.
- ▶ Review how to move the COM longitudinally while maintaining flexion in both legs.
- ▶ Encourage students to move their hips further vertically downwards and fore/aft towards the nose/tail as desired.
- ▶ Spend time learning about the board's flex and rebound properties to understand how far the COM needs to move to maintain flex.

Student struggles to keep rotational momentum over a flexed board:

- ▶ Review how to use pre-wind to store and release rotational energy into a trick.
- ▶ Focus on leading rotational butters with the head and eyeline to avoid the spin stalling mid-trick.
- ▶ Encourage the use of a larger range of rotational movement and also more powerful application of those movements.
- ▶ Keep the snowboard as flat as possible to ensure that tilt or twist does not create too much grip which will slow rotational momentum.

## ALL-MOUNTAIN: FRONTSIDE & BACKSIDE 360S



### WHAT, WHY, HOW

A full 360 degree rotation in the air, taking off and landing in the same riding direction.

A natural progression from 180s and often at the top of people's trick list.

- ▶ On flat ground with the board off, explain the timing of rotational movements. Allow the upper body to lead the first 270 and the lower body to complete the spin.
- ▶ Use a bank hit on the side of the run or similar suitable slope. Approach in a flexed, pre-wound position so the student can ride up, extend to create pop at takeoff and do an allyoop frontside 180, riding in on the heel edge and out forwards on the toe edge for frontside 360s and riding in on the toe edge and out forwards on the heel edge for backside 360s.
- ▶ Then, by increasing the power and range of the upper and lower body separation, lessen the angle turned up the hill and spin more of the trick in the air. During the trick, tighten the core and suck the knees towards the chest. Absorb the landing on the opposite edge to takeoff, and slide the board around if under-rotated.
- ▶ When the student can spin close to a full frontside/backside 360, they can take it to a feature that is more across fall line, like a cut-out where you land pointing in a similar direction to the takeoff.
- ▶ Once the movements for either frontside or backside 360s are blending well, develop the trick by trying it off cat tracks and land on a down slope or even a hit down the fall line.



### TECHNICAL DESCRIPTION

#### ROTATIONAL

The spin is led with the head and shoulders for the first 270, then the lower body follows and rotates past the upper body finishing off the last 90 degrees to land. A greater amount of separation and rotational power is needed than in a 180.

#### LATERAL

For frontside 360s, slight pressure to lock-in the heel edge during takeoff to help avoid pre-spin (skidding the snowboard on takeoff). Landing on the toe edge will help to stop over-rotation and edge catches. For backside 360s, slight pressure on the toe edge during takeoff will help the spin. Landing flat base or with slight pressure on the heel edge will help stop over-rotation and edge catches.

## VERTICAL

Work on retracting the legs towards the COM to give the snowboard time to rotate. Focus on flexing and extending the ankles, knees, hips and lower spine. The rider must hold their knees retracted while rotating past the point where they would extend to land in a 180.

## LONGITUDINAL

A centred stance is the key to landing on both feet. Some riders may find pressuring the tail slightly during takeoff will help.



## TERRAIN & CLASS HANDLING

Begin on trails that have natural banks on the side, then progress onto bank cut-outs before going into the park. Ensure that all students know which spin direction is best for particular cut-outs, then focus on finding features that cater to their individual preferences, be it frontside or backside spins.



## SELF REFLECTION

*"Can my students perform all four 180s cleanly before progressing to 360s?"  
"Am I building on my students' strongest and preferred direction of spin?"*





## ENVIRONMENTAL TEACHING EXAMPLE:

Use visual markers to help students know where to look, or where the nose of their board needs to point towards. This helps with the range of rotation needed for 360s and is particularly useful when leading the first 270 degrees of rotation with the upper body, but rotating the lower body for the last 90.



## DETECT & CORRECT

Student lacks rotation when spinning:

- ▶ Ensure the rotation is released as your student leaves the lip and not before. A skidded takeoff creates friction, reducing the rider's travelling speed and the power of their initial rotation.
- ▶ Focus on tightening of the core muscles to aid spin.
- ▶ Hold the knees retracted for longer when in the air.
- ▶ In backside 360s, focus on looking for the landing early during the spin.
- ▶ In frontside 360s, focus on a clean edge takeoff (i.e. not skidding) so they have a stable platform from which to release the rotation.

Student over-rotates on landing:

- ▶ Reinforce using a slight amount of edge to aid a stable landing.
- ▶ In backside 360s, have your students begin to open up as soon as they can see the landing. They can do this by gently extending their legs and spreading out their arms to slow down the rotation of the upper body. This will allow more time to rotate the lower body and complete the spin.
- ▶ In frontside 360s, after leaving the lip and viewing the landing, encourage your student to turn their head and look back towards the takeoff. As they see the landing beneath them, have them open up by gently extending their legs and spreading out their arms to slow down the rotation. This will provide more time to rotate the lower body and complete the spin.
- ▶ When your student develops more air and edge awareness, encourage them to land on a slight edge, to help stop their rotation.



## ALL-MOUNTAIN: HARDWAYS SPINS



### WHAT, WHY, HOW

Spinning frontside off the toe edge and backside off the heel edge.

To increase your bag of tricks and options at takeoff, and works towards spinning in the pipe.

- ▶ Use frontside and backside 180 progressions (Chapter 17) for progression ideas. For hardways frontside 180s, ensure that the toe edge is used on approach and takeoff. For hardways backside 180s, ensure that the heel edge is used on approach and takeoff.
- ▶ To begin with, it will help to utilise a larger range of pre-wind, focus on pop from both legs together and retraction of the legs in the air.
- ▶ Once comfortable performing hardways 180s in traverses, progress into toe-to-toe and heel-to-heel turns, where the rider takes off and lands on the same edge.
- ▶ When comfortable with 180s and when students can time a smooth release of pop and spin from takeoff, progress onto hardways 360s by adding more power for the release of the trick at takeoff.



### TECHNICAL DESCRIPTION

#### VERTICAL

Flexion and extension movements should be kept as equal as possible to ensure that stability is kept at takeoff and the board is kept level when moving into the trick zone. To create an appropriate amount of pop on the heel edge, focus on the amount of power that can be used through the knees and hips when extending.

#### LATERAL

Use of the ankles in hardways spins is key for efficient takeoffs to ensure a platform can be maintained to pop from. Over time, edge awareness will develop and the ankles will continue to be used to make adjustments to the edge angle when needed.

#### LONGITUDINAL

A centred stance is beneficial for stability throughout the trick. When spinning backside off the heels, using a nollie may help with pop initially but it can lead to negative riding habits later on.

#### ROTATIONAL

Rotational movements with the upper body should be used for pre-wind and to generate momentum for the spin. The lower body will often rotate past the upper body when committing to a full toe-to-toe or heel-to-heel spin.



## TERRAIN & CLASS HANDLING

Take advantage of terrain that is comfortable for your students when introducing the hardways rotations. The same side hits, cut-outs and natural features can be used to develop hardways rotations. Consistent snow conditions should be utilised when first attempting this. Particularly soft snow will make it challenging to pop and icy snow will make landings much harder.



### SELF REFLECTION

*"Is my student creating enough of a platform with the side-cut to jump from?"*

*"Does my student understand clearly which way to spin from each edge?"*



### ENVIRONMENTAL TEACHING EXAMPLE:

When linking toe-to-toes or heel-to-heels together, draw an obvious line in the snow, directly down the fall line in the middle of the trail. Try timing the pop and retraction to jump over the line and avoid touching it with the board. Repeat this, but turn the line into a small ridge of snow to build on the retraction in the air.





## DETECT & CORRECT

Student loses edge grip and slips at takeoff (common in a hardways backside spin):

- ▶ Review use of the side-cut to create grip and practise hips if required to build kinesthetic awareness of edge grip in the feet and lower legs.
- ▶ Practise a hardways pre-wound body position in a traverse to ensure grip can be maintained.
- ▶ Focus on maintaining tilt when releasing rotational pre-wind so the board does not flatten and slip.

Student under-rotates the spin:

- ▶ Remain longitudinally centred and focus on even use of flexion and extension in both legs throughout the complete trick.
- ▶ Focus on the timing of the release of vertical and rotational movements together.
- ▶ Use a larger range of pre-wind with a more powerful release to create more rotational momentum.

## ALL-MOUNTAIN: DROPS



### WHAT, WHY, HOW

Hitting natural lips and riding off drops, cat tracks, rocks, logs and anything else you can send it off.

To get air without man-made or park features.

- ▶ Check for comfort in the air with ollies off rollers at speed, straight airs on small jumps or even cut-outs.
- ▶ Discuss how to scope drops, how to judge the approach speed and how to recognise if a landing is too flat having the potential to cause injury.
- ▶ Explain the characteristics of a drop. Depending on the drop, approach speed can be slow or fast but speed will always increase after landing.
- ▶ Use suitable terrain changes, e.g. cat tracks with steeper down slopes off the side to ride off. Practise compact body positions in the air after takeoff, absorbing the landing and riding away looking in the direction of travel.
- ▶ Develop this by choosing terrain that has ungroomed or variable runouts. As confidence builds, increase riding speed to get more air and to gain mileage riding ungroomed/variable terrain after landing.
- ▶ Develop further by explaining where to look and how to identify areas to slow down and control speed after landing, based on personal riding preferences and which edge they would prefer to make their first turn.
- ▶ Find a drop with options to progressively go bigger, scope it, identify the runout, commit and send it. Develop by adding a grab, tweak or trying a larger line on the same drop.



## TECHNICAL DESCRIPTION

### VERTICAL & LONGITUDINAL

When riding drops, a slightly aft position can be beneficial. The hips will be slightly aft of centre, maintaining flexion in the leading leg. Extension movements will be subtle from the ankles, knees and hips depending on the drop and approach speed. Using an ollie on takeoff will help the rider to tuck their knees up in the air. Flexion movements will be used in the ankles, knees, hips and curvature of the spine to cope with absorbing the landing of a drop. If needed, extension of the back leg to prepare for landing can help absorb pressure on flatter or powdery landings.



### LATERAL

Small adjustments will be made in the ankles to control the amount of tilt during approach and takeoff, often dictated by the natural slope. Ideally, a laterally neutral position will be maintained at takeoff to provide as much stability as possible.

### ROTATIONAL

Rotational movements should be kept to a minimum to promote stability. Stance adjustments can be made rotationally (i.e. high performance stance) to allow for a larger range of other movements.



## TERRAIN & CLASS HANDLING

Fear management is a big part of riding drops so ensure that students are choosing to take on drops within their ability levels. Intervene when necessary to suggest more appropriate drops or better yet, additional tasks to ride that can prepare them for that drop they have been eyeing up from the lift.

When riding drops, it's essential to scope the terrain to assess the landing for any rocks or debris that may cause injury. This is especially important with fresh snow that may have hidden natural hazards. A visual assessment of the landing can provide further insight into line choice, expectations of landing and the approach speed needed to clear any hidden surprises.



## SELF REFLECTION

*"Are my students capable of riding away from the drop that we are scoping?"  
"Is fear blocking their ability to commit and, if so, what other suitable terrain could I build confidence on first?"*



## EXPERIENTIAL TEACHING EXAMPLE:

Most people have at some point in their life, jumped from a fence/wall/ledge. Draw from this simple experience relating the drop on a snowboard by highlighting how to absorb a landing and why line of sight is so important to spot the landing and look forwards to where you're moving next.



## DETECT & CORRECT

Student lands and falls over the nose:

- ▶ Focus on allowing the back leg to flex more than the front leg when landing to help the COM move slightly towards the tail.
- ▶ Encourage students to look where they want to ride out towards as opposed to the ground near the nose of the board.

Student lands on the heel edge with the board across the slope:

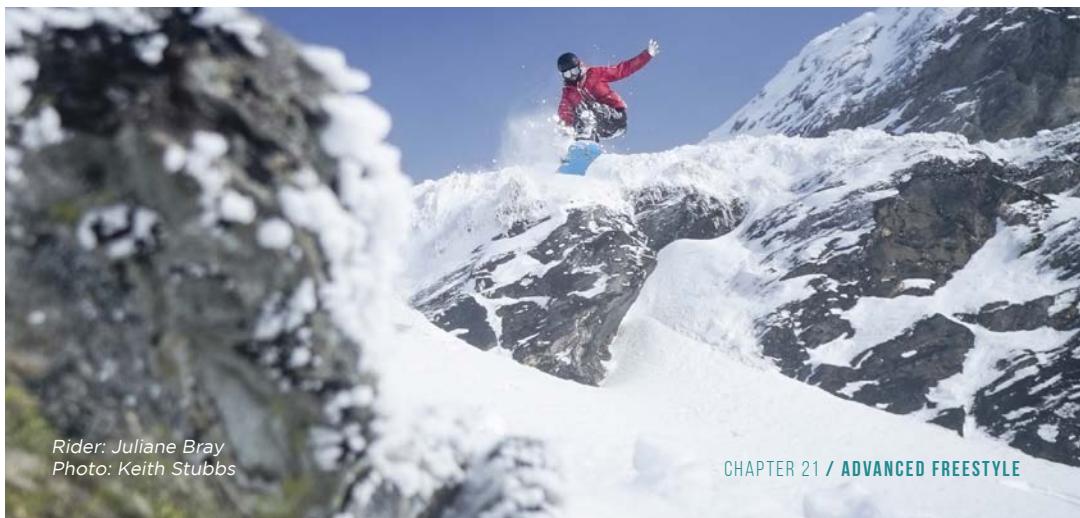
- ▶ Choose a smaller drop, or build confidence on other suitable terrain changes to build confidence in the ability to land.
- ▶ Practise straight running at increasing speeds over ungroomed/variable terrain to build confidence in the run out.

Student nose dives off the drop:

- ▶ Focus on subtle, smooth extension movements from the legs at takeoff.
- ▶ Assess the approach speed being used to ensure that there is sufficient speed for the board to leave the drop cleanly and level.

Student becomes very extended in the air:

- ▶ Ensure that there is a small pop or ollie during takeoff. This will help them to become more compact in the air.
- ▶ Reduce the size of the drop and increase the size of their ollie.
- ▶ Bring the board up towards the COM, rather than raising the hands.



Rider: Juliane Bray  
Photo: Keith Stubbs

## PARK JUMPS: ADVANCED AERIAL AWARENESS



### WHAT, WHY, HOW

Getting comfortable being able to move the body whilst in the air.

To develop the basis of grabs and be able to move in the air by choice.

- ▶ Warm up with a straight air to feel how much airtime there is in the air.
- ▶ Try pumping both legs in the air to build towards grabs.
- ▶ Extend the back/front leg and flex the other leg to prepare for a nose/tail grab.
- ▶ During a frontside shifty, retract the legs to prepare for a stalefish.
- ▶ During a backside shifty, flex the back leg and extend the front to prepare for an indy nosebone.
- ▶ Explore any combination or variation of the above, plus the many more positions available to prepare for any grab desired.
- ▶ Take the same movements to bigger jumps, ensuring that speed is adjusted to suit.



### TECHNICAL DESCRIPTION

#### VERTICAL & LONGITUDINAL

All flexion, extension and combinations to create independent movements should be focused in the ankles, knees and hips underneath a stable upper body. Larger range of movement should be encouraged.



#### LATERAL

Focus on neutral lateral alignment to allow the base of the board to remain flat throughout the trick.

#### ROTATIONAL

Focus on rotational alignment associated with a more high performance stance for maneuvers where the board remains aligned with the fall line. Allow the upper and lower body to separate when counter-rotation is used in maneuvers such as shifties.



## TERRAIN & CLASS HANDLING

Ensure everyone is clear on smart style and how to call their drop for your chosen jump. It's important that students feel comfortable with the feature being ridden to progress. Focus on creating a group culture that looks out for each other in the park by ensuring that the rider who has just dropped is clear of the landing before the next rider calls their drop.



## SELF REFLECTION

*"Are my students stable and consistent performing a straight air to be able to move in the air?"*

*"Does the task I'm using benefit the trick that they are working towards?"*



## EXPERIENTIAL TEACHING EXAMPLE:

For those that have used a trampoline before, moving in the air can be quite similar; it's important to take off the trampoline first before moving into a position in the air and keep the eyes up for stability while bouncing. It's also easy to recognise that a little more airtime can provide a little more time to make movements in the air.



## DETECT & CORRECT

Student catches tail on the lip of the jump performing a shifty (common for frontside shifty):

- ▶ Encourage patience and focus separating the takeoff and trick zones to ensure the board pivots after it has left the lip.
- ▶ Focus on a small range of rotational separation in the air to begin with to create the trick.

Student waves their hands around and loses balance when attempting awareness movements on bigger jumps:

- ▶ Use a "follow me" approach to ensure the rider is comfortable with the speed needed.
- ▶ Focus on keeping the hands low and smoothly retracting the legs in the air before moving out of this position.
- ▶ Ensure all awareness-based movements are done through the lower body, keeping the upper body quiet and relaxed.

## PARK JUMPS: GRABS



### WHAT, WHY, HOW

Grabbing the board in the air.

Grabbing the board can add balance in the air, show control and is a way to express individual style through different variations.

- Build from advanced aerial awareness with students' natural preference.
- Focus on the movements from aerial awareness maneuvers to get the body position in the easiest position to then grab the board.
- Explain where to look and where to place the arms/hands to meet the board for the grab.
- Consider explanations that help to bring parts of the lower body towards parts of the upper body, for example lifting the front knee towards the back shoulder for a melon grab.
- Develop by changing jump size or learning more grabs to increase the bag of tricks available to the student.

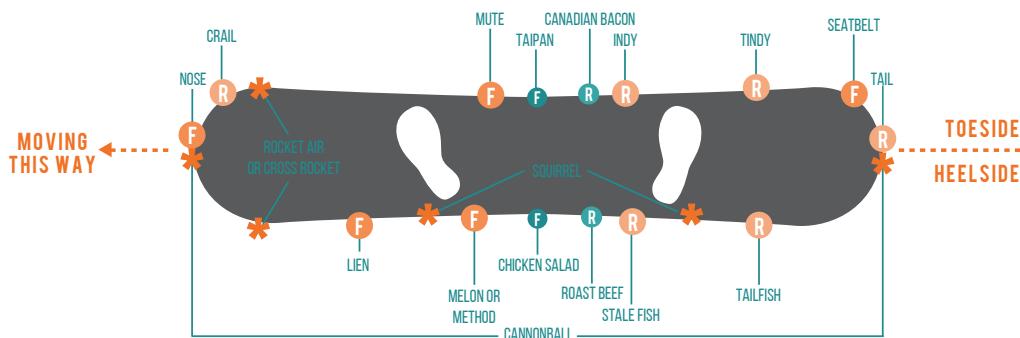
R REAR HAND

F FRONT HAND

\* BOTH HANDS

R REAR HAND THROUGH LEGS

F FRONT HAND THROUGH LEGS



### TECHNICAL DESCRIPTION

#### VERTICAL

Depending on the grab, vertical movements will be used in the form of flexion and extension of both legs together, or if necessary, independently.

#### LATERAL, LONGITUDINAL & ROTATIONAL

Use an appropriate range of movement in each direction to achieve the desired grab, focusing on where to look throughout the trick from approach to landing.



## TERRAIN & CLASS HANDLING

Use features that are familiar and comfortable with the student. Park Smart should be adhered to at all times - make a plan so that students begin to think about what they are doing instead of just hoping for the best. If there is no suitable jump then get creative with looking for terrain changes such as cut-outs and natural hips/banks that can still provide enough airtime to hold their grab, not just touch the board.



## SELF REFLECTION

*"Does my student have an injury or physical block in their movement that would prevent them from performing a specific grab?"*

*"Is my student able to get enough air to even attempt their grab safely?"*



## EXPERIENTIAL TEACHING EXAMPLE:

Games such as SKATE or SHRED, where riders take it in turn to call a different grab for others to try are a great way to experience new grabs that students haven't tried before, instead of always trying their standard safety grabs.



## DETECT & CORRECT

Student leans over or reaches down for the grab, losing balance in the air:

- Review aerial awareness and movements that build towards the grab.
- Reduce the size of the feature to increase comfort levels.
- Encourage more pop as they take off to help retract the legs in the air.

Student tries to grab too early, losing balance at takeoff:

- Focus on separating the takeoff and trick zones so the movement for a grab is not rushed.
- Reduce the size of the feature to increase comfort levels.

## PARK JUMPS: EDGED TAKEOFFS



### WHAT, WHY, HOW

Using the edges of the board during the approach and takeoff zone.

To prepare for spinning from takeoff on park features.

- ▶ Outside the park, use edging tasks in the fall line focusing on efficient angulation and mellow direction change. Develop if needed by adding hops to prepare for takeoffs and landings.
- ▶ Inside the park, establish how long the approach and takeoff transition is for the feature being ridden.
- ▶ Explain the path of an edged takeoff for heelside and toeside. Start with a mellow edge set for takeoff, retract the legs in the air and encourage a flat base landing to begin with, moving to the opposite edge after landing.
- ▶ Build on this with an explanation of a set-up turn for spinning off park jumps. Focus on leaving the lip of the jump directly down the fall line.
- ▶ Develop edge awareness by landing on the opposite edge to takeoff.



### TECHNICAL DESCRIPTION

#### LATERAL & VERTICAL

Efficient blending of these two movements is required for stability, primarily at takeoff. Balance over the edge for approach and takeoff is regulated through angulation, starting at board level with the ankles and knees on the toe edge and knees and hips on the heel edge. The edge angle of the board should be kept to a minimum. Flexion and extension should be used smoothly and evenly through both legs together at takeoff and landing to promote stability.

#### LONGITUDINAL & ROTATIONAL

Neutral alignment within these two movements will promote stability at takeoff and into the trick zone.



### TERRAIN & CLASS HANDLING

With tasks outside of the park, use mellow terrain or natural features to practise taking off on an edge. Preferably, these natural features will have a flat camber to them, similar to that of a park jump. Inside the park, continue to use jumps well within your students' comfort levels. With edged takeoffs, focus on starting small to ensure that students can build confidence with this new skill set before choosing a larger feature.



### SELF REFLECTION

*“Does my student have the edge awareness to be learning this?”*

*“Is my student losing grip or pivoting too much off the lip?”*



## ENVIRONMENTAL TEACHING EXAMPLE:

With the key focus of these tasks involving the use of edges, it's obvious that tracks in the snow are a valuable tool to learn from. Tracks can be observed in the approach, takeoff and landing zones to help generate awareness.



## DETECT & CORRECT

Student's snowboard turns 90 degrees in the air:

- ▶ Review the use of the side-cut to create a direction change in the fall line focusing on a rotationally neutral upper body.
- ▶ Practise releasing the hop with a rotationally quiet and stable upper body.

Student loses edge and slips at takeoff (typically happens on heelside):

- ▶ Practise hopping off the heel edge in traverse if necessary to build muscle memory in the ankles to maintain an edge platform. Develop this by hopping off the heel edge when riding down the fall line.
- ▶ Focus on keeping a stable and quiet upper body whilst using extension movements in the ankles, knees and hips (toe edge) and knees and hips with active dorsi flexion of the ankle (heel edge).

## PARK JUMPS: 180S



### WHAT, WHY, HOW

Spinning frontside and backside 180s on a park jump.

To bring 180s from outside to inside the park.

- ▶ Outside the park, ride edged takeoffs in the fall line and practise 180s based on preference (forwards frontside, forwards backside, switch frontside and switch backside), depending on the preferred spin direction and whether they would like to takeoff or land switch.
- ▶ Use timing tasks to practise the approach and takeoff relative to an imaginary lip of a jump. Use drawings/lines or obstacles/snowballs/gloves as tools to create the imaginary lip.
- ▶ Inside the park, ensure that appropriate speed is taken to make the sweet spot in the landing. Refresh the concept of a safety edge in the event of under-rotation. Warm up with a few straight airs before spinning.
- ▶ Switch straight airs (or just rolling over the jump switch) could be used to develop the takeoff or landing, depending which 180s will be attempted.
- ▶ Explain what to expect for the first attempt of the trick, including where to look and commit.
- ▶ Add versatility by doing 180s in the four different directions or by adding grabs to 180 spins that are already comfortable.



## TECHNICAL DESCRIPTION

### VERTICAL & ROTATIONAL

Timing of vertical extension and rotational release relative to the lip of the jump is key. Pre-wind will be minimal in a 180 but can be used to help with timing. When releasing the pre-wound position (the legs should be smoothly extending as the upper body is rotating into the spin), the board will ideally leave the lip of the jump as the upper body passes into an aligned position with the board.

### LATERAL

Focus on smooth movements in the ankles and knees for a backside 180 and knees and hips for a frontside 180 to replicate an edged takeoff. Ensure that the upper body is kept stacked over the hips and over the board to minimise excessive directional drift off the lip of the jump.

### LONGITUDINAL

A longitudinally centred position is key to promote stability at takeoff and into the trick zone.



## TERRAIN & CLASS HANDLING

For tasks outside the park, use mellow terrain that is consistent and preferably with low traffic. Inside the park, monitor emotional changes in students when transitioning into the park environment. Take it easy to ensure that a calm approach is taken to all aspects of the first attempt, especially the pace at which you deliver information. Set the tone for a lesson that feeds progression and the desire to try new tricks.





## SELF REFLECTION

*“Do my students understand the benefits of improving their switch riding and are they prepared to practise?”*

*“Is my student able to perform 180s outside the park, down the fall line with a clean edge?”*



## ENVIRONMENTAL TEACHING EXAMPLE:

Mark out where the approach zone changes to the takeoff zone and place something level with this to the side of the jump. Have your students adjust their approach line so that they are riding onto their takeoff edge as they enter the takeoff zone. Then have them focus on timing their pop as the nose of the board leaves the lip of the jump.



## DETECT & CORRECT

Student's snowboard turns early/too much on the lip of the jump (common in frontside 180s):

- ▶ Focus on the timing of the release of the trick to make sure that rotation is not used too early.
- ▶ Ensure the setup turn is a mellow, edged/carved, open turn to make sure that more pivot is not used in a deeper, skidded, more closed turn.

Student under rotates the spin, landing with the board at 90 degrees across the landing:

- ▶ Review the use of pre-wind to help with rotational momentum into the trick.
- ▶ Encourage use of more power in the rotational movement direction when releasing the trick.
- ▶ Focus on tightening the core muscles to keep the upper and lower body turning more as a single unit.
- ▶ Review where to look to promote smooth, continued rotation from take off through the trick zone.

Student has trouble riding into or out of a trick switch:

- ▶ Review elements of the linked turns progression in switch to increase confidence riding switch.
- ▶ Reinforce movements fore and aft to aid initiation with the new front foot. Challenge your student with switch flat base tasks including hops to develop the movements required to take off and land in their switch direction. Develop if needed with switch straight airs.
- ▶ Ensure the size of the feature is suitable for their comfort and skill level.

## PARK JUMPS: 360S



### WHAT, WHY, HOW

Spinning frontside and backside 360s on a park jump.

A natural progression from spinning 180s and an essential trick for advanced park riding.

- ▶ Outside the park, ride frontside or backside 360s based on preference and desire to take to a park jump. Develop this by riding the trick on features with a flatter takeoff, such as hits down the fall line or off cat tracks.
- ▶ Hopped 270-slide-arounds or full 360s can be practised in the fall line from an edged takeoff, if confidence and athleticism allows. Remind students that the upper body will lead the first 270 of the spin and the lower body will complete the spin.
- ▶ Refresh the concept of a safety edge in the event of under-rotation. Inside the park, ensure that appropriate speed is taken to make the sweet spot in the landing. Warm up with 180s if necessary to help dial the speed in and gain consistency with the set-up turn. Use the same or a similar set-up turn to the 180 and add more rotational power when releasing the trick to perform the 360.
- ▶ Explain what to expect for the first attempt of the trick, including where to look and commit.
- ▶ Add versatility and develop by doing 360s in the four different directions (forwards frontside, forwards backside, switch frontside and switch backside) or by adding grabs to 360 spins that are already comfortable.



### TECHNICAL DESCRIPTION

#### VERTICAL & ROTATIONAL

Similarly to a 180 on a park jump, timing of vertical extension and rotational release relative to the lip of the jump is key. Pre-wind can be similar in range of movement to a 180 (slightly more if needed) but will be released with more power. When releasing the pre-wind (the legs should be smoothly extending as the upper body is rotating into the spin), the board will ideally leave the lip of the jump as the upper body passes into a rotationally aligned position with the board. The upper body and head will lead rotationally into the spin for the first 270 and the lower body will then continue to spin to complete the trick.

#### LATERAL

Focus on smooth movements in the ankles and knees for a backside 360 and knees and hips for a frontside 360 to replicate a similar edge angle to that of an edged take off and backside/frontside 180. Ensure that the upper body is kept stacked over the hips and over the board to minimise excessive directional drift off the lip of the jump.

## LONGITUDINAL

A longitudinally centred position is key to promote stability at takeoff and into the trick zone.



## TERRAIN & CLASS HANDLING

For tasks outside the park, use mellow terrain that is consistent and preferably with low traffic. Inside the park, begin on a similar feature in size and shape to that used for 180s. Hiking the feature will allow more opportunities to practise the spin; however, it can tire students out more quickly. Continue to build on how to be Park Smart. Take opportunities to place ownership on students with their choices, intervene when necessary and provide feedback on those choices when possible.



## SELF REFLECTION

*“Can my student perform a relatively level/flat spin on cut-outs and natural hits before heading to a park jump?”*

*“Can my student keep a mellow, edged/carved, open setup turn to leave the lip straight at takeoff for a 360?”*





## EXPERIENTIAL TEACHING EXAMPLE:

Spending time with the board off is extremely useful when learning 360s off park jumps. Have students visualise riding through transition between the approach and takeoff, rolling onto their edge and timing the pop and pre-wind release to suit. Use markers to identify where their upper body rotation should stop at 270 and the lower body should continue for the last 90 degrees.



## DETECT & CORRECT

Student's snowboard turns early/too much on the lip of the jump (common in frontside 360s):

- ▶ Focus on the timing of the release of the trick to make sure that rotation is not used too early.
- ▶ Ensure the setup turn is a mellow, edged/carved, open turn to make sure that more pivot is not used in a deeper, skidded, more closed turn.
- ▶ Practise frontside 180s to develop a cleaner edge at takeoff.

Student lacks rotation when spinning:

- ▶ Ensure the rotation is released as your student leaves the lip and not before. A skidded takeoff creates friction, reducing the rider's travelling speed and the power of their initial rotation.
- ▶ Focus on tightening of the core muscles to aid spin.
- ▶ Hold the knees retracted for longer when in the air.
- ▶ In backside 360s, focus on looking for the landing right from takeoff.
- ▶ In frontside 360s, focus on a clean edge takeoff (i.e. not skidding) so they have a stable platform from which to release the rotation.

Student over-rotates on landing:

- ▶ Reinforce using a slight amount of edge to aid a stable landing.
  - ▶ In backside 360s, have your students begin to open up as soon as they can see the landing. They can do this by gently extending their legs and spreading out their arms to slow down the rotation of their upperbody. This will allow more time to rotate the lowerbody and complete the spin.
  - ▶ In frontside 360s, after leaving the lip and viewing the landing, encourage your student to turn their head and look back towards the takeoff. As they see the landing beneath them, have them open up by gently extending their legs and spreading out their arms to slow down the rotation. This will provide more time to rotate the lowerbody and complete the spin.
- When your student develops more air and edge awareness, encourage them to land on a slight edge, to help stop their rotation.

## BOXES & RAILS: PRESSES

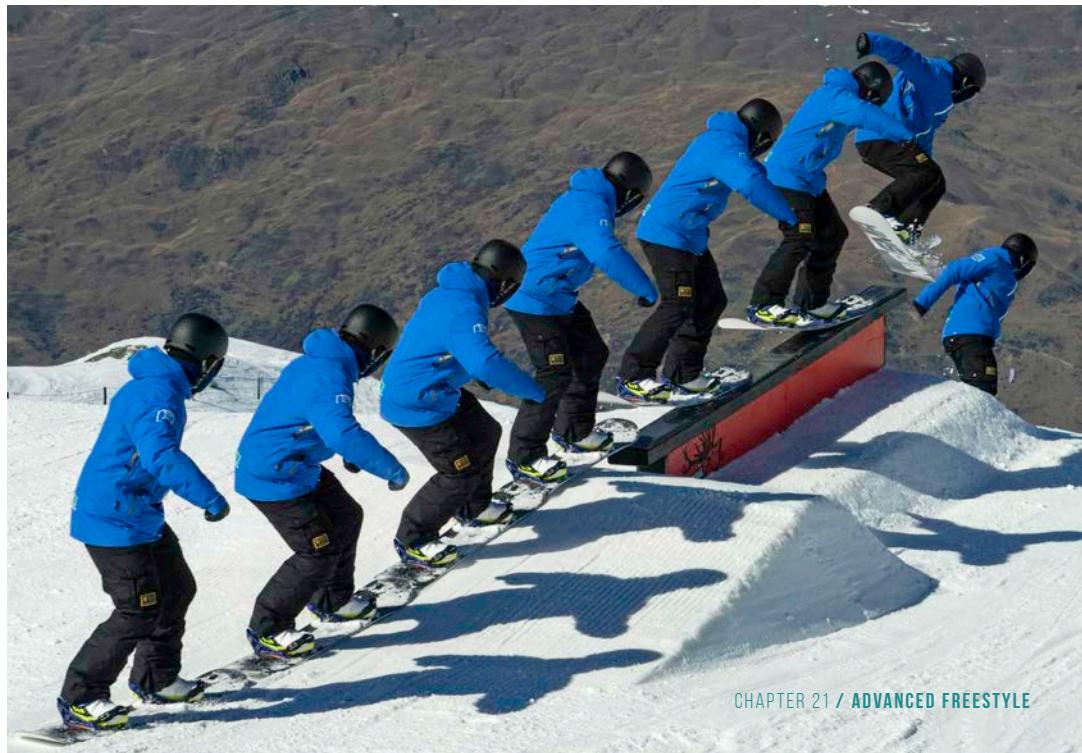


### WHAT, WHY, HOW

Rider lands in and holds a nose or tail press for the duration of a feature.

Presses add style to box and rail riding, and are a natural trick to develop from a 50-50.

- ▶ Outside the park, practise moving from a strong, centred stance to the nose and tail of the snowboard. Explore the natural flex of the board, highlight the differences between just lifting up the tail and efficiently pressuring the nose. Develop by hopping off both feet into a nose/tail press, moving the board underneath the belly button or zipper line of the jacket.
- ▶ Inside the park, on a suitable feature gradually work towards hopping into a nose or tail press. Within the trick phase of a 50-50, create the nose press earlier and earlier. Commit to hopping into the press at the beginning of the feature.
- ▶ To develop, try to ollie in and nollie out, nollie in and nollie out, or even spin in/spin out of the trick.
- ▶ To tail press, use the above tasks with the COM pressuring the tail of the snowboard.





## TECHNICAL DESCRIPTION

### VERTICAL & LONGITUDINAL

To flex the snowboard, the rider must shift the COM over the rear or leading foot. Apply pressure to the outside of the leading binding by moving the hips fore and pushing the knee towards the nose for a nose press. A soft ankle and knee in the leading leg will help with landing in the press and avoid tail tapping unintentionally. Flexing these joints along with the hip joint should also be used to help maintain the press. Apply pressure to the outside of the rear binding by moving the hips aft and down towards to tail. A soft ankle and knee in the rear leg will help with landing in the press and avoid nose tapping unintentionally. Hip flexion will likely be used also to further move the COM down and over the rear foot.

### LATERAL

Should only be used in the lower body to maintain a flat base. It's important to keep the upper body stacked over a flat board to avoid unwanted tilt.

### ROTATIONAL

Remain rotationally neutral and avoid excessive movements which may create unwanted pivot.



## TERRAIN & CLASS HANDLING

Teach presses on easy flat box features to start with, progressing as appropriate to challenge stronger students. Ensure that your group does not conflict with traffic flow within the park, focusing on appropriate timing to call a drop. Hiking features can be very useful for building kinesthetic awareness in students and should be used when possible.



## SELF REFLECTION

“Are my students able to maintain flex over the nose/tail outside of the park?”

“Are my students comfortable with the feature to start moving their COM further from the middle of the board?”



## ENVIRONMENTAL TEACHING EXAMPLE:

Sounds created by the contact of the board and the feature will help students establish the efficiency of their press. Upon landing if there are two noises: The initial landing in the press position, followed by another tap, it indicates that the board has rebounded from its pressed position into a 50-50.



## DETECT & CORRECT

Student can't land in and hold the press:

- ▶ Review how to move the COM along the board to create and hold flex in the board.
- ▶ Focus on shuffling the board fore or aft (depending on the trick) and put the foot under the COM when landing. This will promote stability over a relaxed leg, ensuring that the COM is not rebounded back to centre.

## BOXES & RAILS: BOARDSLIDES



## WHAT, WHY, HOW

The rider slides a box or rail sideways, body facing the end of the feature (technically known as a backside boardslide).

To slide a feature sideways and add to the trick bag.

Landing forwards:

- ▶ Use the movements in exploring boardslides as a baseline to build from. Outside the park, work on adjusting edge angle while in a heel edge sideslip but keeping the upper body perpendicular to the fall line. Focus students on the sensations received when the board is flatter.
- ▶ Practise the takeoff and landing in the trick zone by riding down the fall line and hopping into the heel edge speed check position. Gradually work on flattening the board to avoid unnecessary edge catches. Develop awareness of lateral balance by using small hops whilst sliding downhill in a backside boardslide body position, maintaining tension in the core.
- ▶ Practise transition from trick zone to landing by using counter-rotation to “unwind” and point the board down the fall line.
- ▶ Inside the park, review expectations for the trick and begin by entering the feature in a 50-50 before pivoting the board across the feature. Focus on using counter-rotation movements earlier in the trick zone to increase the duration of the backside boardslide.
- ▶ With confidence, develop by hopping from takeoff, counter-rotating in the air and landing in the backside boardslide on the feature. Coast off the feature in the boardslide position and “unwind” using stored core tension, in the air to prepare for the landing. Absorb the landing and ride away.

Landing switch:

- ▶ The focus shifts from use of counter-rotation to whole body rotation during the trick zone.
- ▶ Similar tasks as above can be used for a backside boardslide-out-switch. Simply, change the use of counter-rotation to instead using the whole body rotating together, with the back hand pointing at the landing as they exit the feature. This will allow the board to continue to pivot smoothly so it exits the feature in the switch direction.



## TECHNICAL DESCRIPTION

### VERTICAL & LATERAL

For many riders, learning to boardslide is a very unnatural movement. Until this point in their snowboard progression, whenever the snowboard is across the fall line it has to be on an edge. To boardslide a box or rail the snowboard must be flat. Learning to boardslide can often be harder for those with more riding experience as the edging movements are so ingrained. For this reason, lateral movements (or lack of) are the key to success in this trick. Slightly leaning forward through bending at the waist, flexing the ankles and having the rider's hands out will help the rider to stay balanced over the centre of the feet while sliding with the board sideways. This trick requires the board to pivot in the air so vertical movements are required to generate the airtime from takeoff through a quick extension of the legs. Flexing down while on the box lowers the rider's COM and helps with staying balanced over a flat base. Instructors should recognise that boardslide positions vary greatly from rider to rider, even within the instructing world. To work with this and encourage individual style it's important to understand the relationship between vertical and lateral movements. We need to know how to efficiently blend joint flexion to create a neutral lateral effect. Knowledge of this will allow us to be more specific with which joints need to flex or extend to achieve a flat base in a student with a naturally taller boardslide stance, versus a student with a naturally shorter boardslide stance. Consider this in all boardslide variations.



## LONGITUDINAL

Longitudinal movements can be used during a boardslide to adjust balance over the feature, especially when the approach did not set the student up for the most efficient entry line. This is done by moving the board fore/aft under the COM in the air before landing on the feature, or even during the trick zone to maintain stability on the feature.



## ROTATIONAL

To ride away forwards, the lower body rotates to face down the hill in order to have the snowboard slide sideways, then comes back to original position to land. The upper body counter-rotates to store the energy to bring the lower body straight again. To ride away switch, the upper and lower body rotate together throughout the trick zone to pivot the board through 180 degrees.



## TERRAIN & CLASS HANDLING

When a rider can 50-50 a variety of features with comfort and ease, teach boardslides on a smooth flat box. Ensure that your students are comfortable with the feature before attempting boardslides. Gap-on boxes help to unweight the board at takeoff, allowing it to pivot easily through the air before landing in the boardslide. Promote independent decision making within Park Smart as students gain more mileage within the park environment. As with the previous box and rail tricks, hiking features can be useful to gain quick mileage without having to spend lots of time lapping chairlifts.



## SELF REFLECTION

*"Is my student making unnecessary adjustments in their approach line and speed without realising?"*

*"Is my student able to create rotational separation over a flat base without edging?"*



## EXPERIENTIAL TEACHING EXAMPLE:

Your student's board is an iron and the box has a big crease down the middle of it. After the first 50-50 the crease has spread in multiple directions and the iron needs to turn sideways to smooth it out. Keep the iron (i.e. their snowboard) completely flat, yet moving steadily along smoothly.



## DETECT & CORRECT

Student slips back over the heel edge in boardslides:

- ▶ Encourage your student to feel pressure under the entire soles of their feet to ensure the base of the board is flat. Other sensations might include pressure from the boot evenly around the lower leg.
- ▶ Encourage your student to use a larger range of flexion in the hips to bring the upper body and COM laterally more on top of the board to keep it flat.
- ▶ If the park features and traffic allow, have the student stand on top of the box in a boardslide without forward momentum and focus on the sensations they are aware of when doing so.

Student rides off the feature in the boardslide and lands in a side slip:

- ▶ Encourage either the front hand or back hand (depending whether they are planning to come out forwards or switch) to remain pointing down the landing during the trick.
- ▶ Focus on a tightening of the core muscles during the trick to help create the rotation necessary when exiting the feature.

## BOXES & RAILS: FRONT BOARDS



### WHAT, WHY, HOW



Sliding a box/rail sideways, with the heel edge towards the end of the feature.

To learn a new variation and to add a timeless classic to the trick bag.

Landing forwards:

- ▶ Use the movements in exploring boardslides as a baseline to build from. Outside the park, work on adjusting edge angle while in a toe edge sideslip but keeping the upper body perpendicular to the fall line. Focus students on the sensations received when the board is flatter.
- ▶ Practise the takeoff and landing in the trick zone by riding down the fall line and hopping into the toe edge speed check position. Gradually work on flattening the board to avoid unnecessary edge catches. Develop awareness of lateral balance by using small hops whilst sliding downhill in a frontside boardslide body position, maintaining tension in the core.
- ▶ Practise transition from trick zone to landing by using counter-rotation to unwind and point the board down the fall line.
- ▶ Inside the park, review expectations for the trick and begin by entering the feature in a 50-50 before pivoting the board across the feature.
- ▶ Focus on using counter-rotation movements earlier in the trick zone to increase the duration of the backside boardslide.
- ▶ With confidence, develop by hopping from takeoff, counter-rotating in the air and landing in the frontside boardslide on the feature. Coast off the feature in the boardslide position and unwind using stored core tension, in the air to prepare for the landing. Absorb the landing and ride away.



Landing switch:

- ▶ The focus shifts from use of counter-rotation to whole body rotation during the trick zone.
- ▶ Similar tasks as above can be used for a frontside boardslide out switch. Simply, change the use of counter-rotation to instead using the whole body rotating together. This will allow the board to continue to pivot smoothly so it exits the feature in the switch direction.
- ▶ Explain the differences in where to look with this variation of boardslide compared to a backside boardslide-out-switch.



## TECHNICAL DESCRIPTION

### VERTICAL & LATERAL

Keeping a flat snowboard is key here. Feeling weight throughout the flat of the foot while on the box, plus a soft and flexed front ankle, will help this. This trick requires the board to pivot in the air so vertical movements are required to generate the airtime from takeoff through a quick extension of the legs. Flexing down while on the box lowers the rider's COM and helps with staying balanced over a flat base.

### ROTATIONAL

To ride away forwards, the lower body rotates to face uphill in order to have the snowboard slide sideways, then comes back to original position to land. The upper body counter-rotates to store the energy to bring the lower body straight again. To ride away switch, the upper and lower body rotate together throughout the trick zone to pivot the board through 180 degrees.

## LONGITUDINAL

Aiming to have the box slide between the bindings is recommended so students can keep balance over the entire board on the feature. You may find some students naturally favour the front foot, so in this case the COM will be mostly over the front foot.



## TERRAIN & CLASS HANDLING

Generally speaking, most people will learn a standard boardslide first, then progress onto front boards. That being said, if your student is more comfortable with the idea of a front board, do not hold them back. Either way, use a box that they are familiar with already and promote independent decision making within Park Smart as students gain more mileage within the park environment.



## SELF REFLECTION

*"Is my student approaching in a stance that will allow for the necessary range of movement to create the trick?"*

*"Are nerves holding my student back from performing or making them stiff in the body?"*

*"Do we need more time getting mobile on the feature before committing to a front board?"*



Rider: Cayley Alger  
Photo: Keith Stubbs



## EXPERIENTIAL TEACHING EXAMPLE:

The body position of this trick can be likened to the follow through made when throwing a Ten Pin bowling ball. The rear leg sweeps behind the front leg, the arms and shoulders open towards the direction of the bowling alley and the hips naturally flex with a low, stable COM.



## DETECT & CORRECT

Student slips out over the toe edge in frontside boardslides:

- ▶ Encourage weight centred laterally over a flat base with relaxed ankle joints as the main focus.
- ▶ If the park features and traffic allow, have the student stand on top of the box in a front board position, without forward momentum, and focus on the sensations they are aware of when doing so.
- ▶ Focus their attention on the sensation of keeping the heels down and the soles of the feet remaining flat. Increasing flexion through the hips slightly can help to balance as long as the COM remains over the board.

Student catches the heel edge in frontside boardslides:

- ▶ Encourage your student to feel pressure under the entire soles of their feet to ensure the base of the board is flat.
- ▶ Encourage your student to look for the end of the feature around the side of their body and over the nose of their board. This will promote a more laterally aligned position whilst spotting the end of the feature. Often students will become overly extended and look for the end of the feature over the lead shoulder, creating a slight lateral movement of the whole body (a large lever) towards the heel edge.

Student freezes up, unable to use their full range of counter-rotation to create the trick:

- ▶ On flat ground, explain how the vertical height of the rider can influence the range of rotational movements and counter-rotational range that can be used.
- ▶ Focus on an optimal vertical height during approach and takeoff as not to block any movements.
- ▶ Use verbal cues to encourage students to stand taller as they approach the feature.

## BOXES & RAILS: FRONTSIDE & BACKSIDE ENTRIES



### WHAT, WHY, HOW

Learning to ride side-entry features.

To be able to ride a wider variety of features in the park with side-entries.

- ▶ Outside the park, explain the difference between backside and frontside entries.
- ▶ Practise riding over a slight edge down the fall line and hopping laterally towards either the toe or heel edge, depending on the entry you are working on. To do this, lead with the shoulders and upper body, bringing the legs back under the upper body from takeoff to trick zone. Absorb the landing over a flat base and continue to ride away on a flat base. To build edge awareness and the ability to lock onto a box/rail, develop this task by using appropriate ankle dorsi or plantar flexion to create a little tilt so that the base of the board is laterally facing slightly towards the landing/feature.
- ▶ Develop timing of this edge set and hop using tracks in the snow, drawings or even bamboo poles if available. Vary the task with ollies too to develop for a wider selection of features.
- ▶ Inside the park, start small and warm up with 50-50s on a variety of box/rail features that are flat and down in pitch. Identify the easiest, or a suitable side-entry feature (box or rail) that can be used for the first attempt. Usually this will be a medium flat bar, medium tube/round bar or similar features with a down pitch and a minimal height to jump onto.
- ▶ Spend time watching others hit the feature to observe approach line and movements used to lock into the frontside 50-50 on the feature.



- ▶ Ride next to the feature to get a full visual of the approach, the lip and height of the feature. This can help provide comfort with the feature and realistic expectations of the feature itself. Further build comfort and overcome fear of landing on the feature by first hopping over the entire feature. This allows full visual of the feature passing underneath the student when in the air.
- ▶ With comfort, explain where to look throughout the entire trick and offer expectations for what it sounds like and feels like to land on metal as this can often cause surprise. Explain how to safely spill from the feature early to either side.
- ▶ Monitor student emotion and level of fear before first attempt, address Park Smart if needed and commit to the frontside 50-50.
- ▶ Develop with a variety of features, spinning out, presses and boardslides.



## TECHNICAL DESCRIPTION

### VERTICAL & LATERAL

For frontside entries, soft ankles play a key role in a balanced takeoff and being able to adjust whether dorsi or plantar flexion of the ankles are needed to lock onto the feature. Flexion is needed in the ankles, knees and hips together to move the COM lower to prepare for takeoff and also to keep the COM laterally stable over the toe edge. When extending for takeoff, the knees will provide the most range to help move the upper body laterally towards the feature so that the shoulders can lead the rest of the body onto the feature. On the feature in the trick zone, the COM is kept stable by using small adjustments to amounts of flexion/extension required in the ankles, knees and hips to help keep the board flat (on a tangent) to the feature. For backside entries, focus and effort is required to use dorsi flexion in the ankles during approach and takeoff to ensure that a stable, consistent platform is kept to push away from. Flexion is used in the knees and hips, (dorsi flexion in the ankles too) to lower the COM to prepare for takeoff and to keep the COM laterally stable over the heel edge. When extending at takeoff, use the hips and knees evenly together and allow the dorsi flexed ankles to provide the platform to push against to keep the COM moving laterally towards the heel edge. On the feature in the trick zone, the COM is kept stable by using small adjustments to amounts of flexion/extension required in the ankles, knees and hips to help keep the board flat (on a tangent) to the feature.

### LONGITUDINAL

Begin in a longitudinally centred position during approach and depending on the entry speed and height of the feature, the COM can be shifted slightly aft to allow for more of an ollie onto the feature if required.

### ROTATIONAL

Rotational movements should be kept to a minimum to avoid unwanted pivot during any zone of the complete trick.



## TERRAIN & CLASS HANDLING

Outside the park, at this level, be creative with terrain available and possible features that can be used to prepare students for a side-entry feature. A fun example is a cat track with ledges at the sides. Inside the park, choose a suitable side-entry feature (box or rail) that is either flat or has a slight down pitch. Focus attention on student emotion and levels of fear to make sensible decisions for the timing of a first attempt.



## SELF REFLECTION

*"Are my students able to ride a variety of features consistently and when they drift off a feature do they remain calm and balanced in order to ride way safely into a spill zone?"*

*"Does my student have the patience to wait for the peak of their confidence for their first attempt?"*



## EXPERIENTIAL TEACHING EXAMPLE:

Keen cricketers will understand how to catch a cricket ball to soften the impact. In the same way the arms quickly soften to cushion the catch, the student softens the ankles, knees (and hips if necessary) to catch the feature.



## DETECT & CORRECT

Student bangs the nose or edge of their board on the feature just after takeoff:

- ▶ Build awareness in the approach line and watch others if necessary to develop a clear picture of a safe entry line.
- ▶ Review the amount that the student is travelling laterally towards the feature from takeoff and adjust accordingly.

Student drifts off the feature as soon as they jump on to it:

- ▶ Review the size of feature relative to student capabilities.
- ▶ Focus on setting the approach line nearly parallel with the feature.
- ▶ Encourage the student to keep the shoulders stacked over the feature.
- ▶ Review where to look throughout the complete trick.

Student loses grip when taking off (common for backside entries):

- ▶ Review the use of dorsi flexion to create a stable platform to push away from on the heel edge.
- ▶ Gain mileage with heel edge tasks involving hops and encourage use of dorsi flexion.
- ▶ Focus on alignment associated with an active or high performance stance to ensure that rotation of the upper body does not create unwanted pivot at takeoff.

## BOXES & RAILS: 50-50 WITH SPINS IN & OUT



### WHAT, WHY, HOW

50-50s with a spin before landing on the feature or when leaving it.

To add more technical variety to your box/rail trick bag.

50-50 with 180-out:

- ▶ Outside the park on flat ground, explain how to create separation between the upper and lower body. Develop by explaining how to activate the muscles from this separated position to utilise counter-rotation to create a spin out. Try in flat base tasks from an on-snow 50-50 focusing on feeling the entire soles of both feet when extending at takeoff.
- ▶ Inside the park, choose a suitable feature and focus on creating separation during the trick zone of the 50-50. The timing of this is dependent on feature size and this position can be held into the landing.
- ▶ Commit to the full trick by utilising counter-rotation when transitioning from trick zone to landing to spin the board 180 out.
- ▶ Develop this trick by trying it from a switch 50-50, taking to a new feature, spinning out from a press or spinning a same-ways or pretzel 270 out.



180 into a 50-50:

- ▶ Outside the park, at a comfortable speed, practise the desired 180 (frontside or backside) in the fall line focusing on landing flat base (50-50). Try to keep the body as still as possible upon landing with the flat base. From takeoff to trick zone, lead into the 180 more with the upper body and slightly delay the 180 with the board. This is beneficial for unwanted over-rotation of the body or board.
- ▶ Develop the approach line by using drawings of features in the snow and ensure that flat base tracks are left on the snow upon landing.
- ▶ Inside the park, choose a suitable ride-on feature and focus on the approach to ensure that students slide the length of the feature without drifting off the side. Explain where to look and then commit to the trick.
- ▶ Develop by trying switch, adding a spin-out, taking to a new feature, landing in a press on the feature or spinning a frontside or backside 270 in.



## TECHNICAL DESCRIPTION

### VERTICAL & LATERAL

For 180s-in, flexion is used in the ankles, knees and hips to prepare for takeoff. Extension should be used evenly from the ankles, knees and hips to avoid too much lateral movement of the COM at takeoff. For 180s-out, flexion used in the ankles, knees and hips to prepare for the transition from trick zone to landing zone must be done so in a proportion that keeps the board flat. Extension from this position should be used evenly from the ankles, knees and hips to avoid any lateral movement of the COM at takeoff. With appropriate speed and the right feature, minimal extension will be needed as the student can coast off the feature into the landing with enough time to spin in the air.

### ROTATIONAL

When spinning on to a feature, a slight upper body rotational lead can be useful to help with spotting the transition into the trick zone. By leading into the spin with the upper body, a slightly separated position is created from which counter-rotation can be applied to help control the amount the board rotates in the air before landing on the feature. When spinning off a feature, the use of rotational separation and counter-rotation to create rotational momentum is key to success for any spin out. The head and upper body will always separate from the lower body in the direction of the spin out. The core muscles used to create counter-rotation will largely dictate the speed of the spin. The amount that the upper body can separate and lead into the spin will largely dictate the amount the lower body and board can spin out of the trick.

### LONGITUDINAL

A longitudinally centred stance will promote a stable takeoff and allow an optimal range of other movements to be used when needed throughout the complete trick.



## TERRAIN & CLASS HANDLING

Ensure that students can 50-50 a variety of features, switch 50-50 the feature being used and spin frontside and/or backside 180s depending on trick preference. It is beneficial if a student can boardslide (frontside or backside) out switch. Starting small is key with feature selection to build confidence in the movement patterns and where to look for spinning onto a feature. With any spin-out trick, ensure that taking it easy is the focus as it's common to think that power is a key component to spin out. This can promote explosive movements over a flat base from a flat surface which when timed poorly can result in slip outs and unwanted edge catches. Instead, focus on efficient range of rotational movement explained with adjectives that promote smooth, predictable and calm movements.



## SELF REFLECTION

*“Can my student show discipline by landing on a flat base on-snow?”*

*“Can my student perform backside/frontside 180s with minimal edge set?”*



## EXPERIENTIAL TEACHING EXAMPLE:

Just like playing with bar magnets in physics at school, the snowboard can repel, spin and lock onto or repel and spin away from the takeoff or feature, based on polarity. To spin on, the snowboard is one bar magnet that is repelled from the takeoff (the other bar magnet), to spin 180 so its polarity matches the feature and is attracted to it to lock in. To spin off, the feature repels the snowboard to spin 180 off and be attracted to the landing.



## DETECT & CORRECT

Student drifts left/right too much at takeoff causing them to miss the feature:

- ▶ Develop the use of minimal edge set for approach and takeoff to avoid travelling left/right from takeoff.
- ▶ Review the approach line relative to the length of the feature.

Student edges on the feature as they transition from trick zone to landing:

- ▶ Review how to create rotational separation over a flat base.
- ▶ Focus on feelings under the entire soles of the feet to promote a flat base.
- ▶ Lower the COM to reduce the effect of any unwanted lateral movements.

Student under-rotates the spin out:

- ▶ Explore individual natural range of rotational separation on flat ground or simple tasks.
- ▶ Establish individual fitness levels and develop awareness of core strength.
- ▶ Focus on using a larger range of rotational separation during the trick zone and review where to look.

## PIPE: INTRO TO HALFPIPE



### WHAT, WHY, HOW

Introducing the basic skills necessary to ride halfpipe.

Halfpipe is a fun but technical discipline within snowboarding. Halfpipe riding helps to create strong and versatile riders.

- ▶ Spend time outside of the pipe riding banks and gullies, focusing on maintaining a strong stance and keeping the body perpendicular to the snowboard.
- ▶ Introduce hop turns on banks, purely as an option, should it be needed. With a large carved back-up turn, introduce the timing of the movements necessary for ascent up the pipe's wall. Start each back-up turn with a strong edge and progressively flattening while travelling uphill. Focus on the feeling of the flat base as momentum decreases.
- ▶ Take this into large carved turns with timing changes, using the flat base across the fall line, then directly down the fall line, then a combination of both. This can be adjusted into patient turns, bringing in the use of upper body rotation to re-direct the board.
- ▶ Look at the halfpipe from different viewpoints, e.g. the drop-in, the bottom of the pipe looking up, or the top of one wall. Explain the different parts, e.g. flat bottom, frontside and backside walls, transition, vert and lip. Watch a few riders go through if possible.
- ▶ Have your student follow you through the halfpipe making turns in the lower part of the transition, focusing on stance. Ensure that the line ridden is shallow, using the time travelling across the pipe's flat bottom to control speed and check stance/alignment.
- ▶ Take more laps in the pipe to get mileage. The front arm can be used as a way to lead body movements through the transition and take a smooth line. Use the hop turn if necessary to change edges, but focus on flattening the board through the transition and carrying momentum further up the pipe's wall as confidence grows.



### TECHNICAL DESCRIPTION

#### VERTICAL

A gentle vertical movement will help the rider to maintain speed and blend other movements, extending slowly when travelling up the wall and flexing when travelling down. The timing and power applied here can be increased as confidence grows, turning it into a pumping movement through the transitions. Subtle vertical movement is also required when making hop turns to maintain balance in the air and absorb landings.

## LATERAL

Holding an edge across the flat bottom using angulation in the lower body will help to maintain speed. Reducing the edge angle of the board as the rider moves through the transition will help them to take a good line in the pipe and encourage the rider to keep their body away from the pipe's wall. The edge change should happen at the pinnacle of the rider's trajectory on the wall, out of the pipe's lip, or during a hop-turn, and the down transition will be ridden on the uphill edge.

## ROTATIONAL

Rotational movements of the shoulders and hips will allow the rider to make turns on the pipe's walls or when making hop turns.

## LONGITUDINAL

A centred stance is important to maintain throughout all transitions initially.



## TERRAIN & CLASS HANDLING

Before introducing halfpipe riding, make sure your student has strong awareness of their edges and a well-balanced, active stance. Without this, your student is likely to struggle in the pipe, which could create a feeling of intimidation and may lead to them becoming afraid of it.

Ensure that the pipe is in appropriate condition before taking ANY students there. Try to time your students' first visit with softer snow conditions and less people. Encourage students to enter the pipe without dropping in on the wall at first. Use the hop turn as an option but not as the main turning mechanism if possible. This will be useful for those who struggle to flatten their board on the wall and change edges. When working on line through the pipe, remember that speed can increase very quickly. Encourage speed control across the flat bottom of the pipe with speed checks or bigger pivot movements if needed.





## SELF REFLECTION

*"Do my students have the edge and flat base awareness to go into the pipe?"*

*"Have we spent enough time riding natural features with similar transitions before going in the pipe for the first time?"*



## ENVIRONMENTAL TEACHING EXAMPLE:

Experimenting with edging and flat basing on banks and in gullies is an ideal way to prepare someone for the halfpipe. Find a suitable bank/gully transition with appropriate snow conditions, and have your student try to ride up it on an edge, do a hop 180 and come back down again. Now have them try to progressively change their trajectory on the bank to a longer arc, drawing out the shape more and more each time, and removing the hop. Draw attention to the edge angle of the board when doing this.



## DETECT & CORRECT

Student struggles to control speed when first riding the pipe:

- ▶ Begin your run by entering the pipe in the flat bottom, rather than dropping in from the wall. This will reduce the initial riding speed.
- ▶ Encourage your student to take a shallower line across the pipe and make their traverse across a little skidded.
- ▶ Use speed checks in the flat bottom if necessary.

Student struggles to keep their body perpendicular to the snowboard (i.e. not maintaining a centred stance):

- ▶ Have the rider perform a floating leaf through the pipe focusing on maintaining an upside-down T-shape between their body and snowboard.
- ▶ A sliding 180 can be added in the flat bottom of the pipe to allow the rider to stay in the normal stance when approaching the wall.

Student leans laterally over their heel edge when riding up the backside wall:

- ▶ Focus your student on flattening their base as they ride through the transition towards the vert, keeping their body away from the pipe's wall. This will allow your student to maintain momentum and rotate the nose back into the pipe. This should only be used if your student is comfortable moving through the transition already.
- ▶ Reduce the riding speed and focus more on the timing of lateral movements lower down the transition. Once the movement is becoming more natural, slowly increase the riding speed to increase amplitude.
- ▶ Remind your students that we are riding down the pipe. Often the perception of amplitude is seen as riding up the walls. By re-directing the line down the pipe you are encouraging lateral movements more on top of the board as your student climbs higher on the wall.

## PIPE: DROPPING IN



### WHAT, WHY, HOW

Learning to drop-in to the pipe from the highest point on the wall, when approaching the entrance from above.

Dropping in from a higher point allows more time on the wall from which to generate speed.

- ▶ Begin with an explanation of how to drop in on the backside wall. With the board running completely parallel to the lip, slightly roll onto the toe edge and retract the board over the lip, turning the nose into the pipe and balancing on the uphill edge with even weight on both feet. Using the front arm as a guide for this will help.
- ▶ Set points at which to drop in on the backside wall, starting fairly low and progressively moving higher up the pipe as confidence grows. This can be done with a follow-me approach or by making marks on the entry wall.
- ▶ As speed increases add a gentle pop at the drop-in with a more active retraction of the legs over the lip. The aim is to keep the board in contact with the wall and use as much of the transition as possible. Riding the top part of the wall with a flat base before balancing actively on the uphill edge will help to generate speed. Focusing on a line that enters the wall at 45 degrees will help to achieve this.
- ▶ Take the same set of skills to the frontside wall, focusing on rolling in from (and landing on) the heel edge.
- ▶ Eventually, these skills can be progressed to flat-deck drop-ins further down the pipe, where the rider can practise “one-hit airs/tricks”. Note that dropping in from the flat deck (as opposed to the pipe entrance) takes much more commitment and riders should already have the capability to air out of both walls before trying this.



### TECHNICAL DESCRIPTION

#### VERTICAL & LATERAL

The timing of lateral and vertical movements is the key to a successful drop-in. Gently rolling or popping (depending on the speed) from the edge that is closest the lip and retracting the legs over the lip takes time to perfect. Movements here should be through the ankles and knees predominantly. Landing high on the transition in a compact position but balancing effectively on the uphill edge is important.

#### LONGITUDINAL

The ability to maintain even weight on both feet is essential here. Encouraging slight pressure on the front foot as they enter the transition of the pipe wall may help students to achieve a centred position.

**ROTATIONAL**

Rotation should be through the hips and shoulders. Initially, a 90 degree angle will be needed when retracting over the lip. As confidence increases, a shallower angle can be taken over the lip, i.e. less rotation is needed.

**TERRAIN & CLASS HANDLING**

A quieter pipe is best but not always possible. Make sure that your students understand the etiquette around dropping in. Riders typically take it in turns to drop from either side, calling their drop and ensuring they give the person in front of them enough room, being conscious of the speed at which they're travelling. Most people find it easier to drop-in from their backside wall, allowing the frontside to be the first hit. This is not the same for everyone, so be flexible for those that wish to drop in from their frontside wall. As with all freestyle, start small and work your way up. The higher the drop-in occurs, the more speed they will generate through the transition. If your student isn't riding at, or close to, the lip of the pipe yet, a higher drop-in is not necessary. The drop-in should complement their abilities in the pipe, not hinder them.

**SELF REFLECTION**

*“Can my students adjust longitudinally as they retract over the lip, ensuring they can maintain even weight on both feet?”*

*“Are they dropping in too high on the wall for their abilities to maintain balance and manage pressure through the transition?”*





## ENVIRONMENTAL TEACHING EXAMPLE:

Begin working on this skill outside of the pipe using cat track drop-offs. Have your students follow your track whilst running parallel with the cat track edge. Choose a suitable point to pop gently and retract the legs, lifting the board over the edge and pointing the nose into the fall line. Each time you do it, move the takeoff slightly further back from the edge or look for steeper drop-offs. Hip features can be used in a similar way.



## DETECT & CORRECT

Student turns the board into the pipe before the lip, instead of running parallel with it:

- ▶ Ensure that the speed they are taking at the drop-in is manageable.
- ▶ Encourage patience and focus them on the track they leave in the snow compared to yourself or other riders.
- ▶ Draw an imaginary line directly down the lip of the pipe from the drop-in waiting area. Side slip down to ensure speed is minimal and point the board on this imaginary line, roll over the lip into the transition without pivoting or skidding the board.

Student gets too much air and lands halfway down the transition:

- ▶ Encourage more retraction of the legs over the lip with a very gentle pop.
- ▶ Focus on the timing of movements and being light footed.



## PIPE: FRONTSIDE & BACKSIDE AIRS



### WHAT, WHY, HOW

Airing out of the frontside and backside wall in the pipe.

To get air out of the halfpipe for the first time.

- ▶ Once the student has an appropriate line in the pipe, start encouraging them to look further up the pipe's wall and pump the transition gently.
- ▶ Have the student aim to reach a certain point on the wall each run, e.g. top third or nose at the lip.
- ▶ Focus the rider's attention on leaving the wall with a flat base. This will help them to maintain their line and hold speed up and out of the pipe. To do this, encourage them to take a 45 degree angle up the wall and move the front hand over the downhill edge.
- ▶ Use the eyes to draw a smooth arc in the air ahead of the board. Putting more emphasis on using the back eye will encourage a smoother rotation.
- ▶ Encourage retraction of the legs in the air (rather than popping off the lip) to help maintain balance and allow the rider to adjust the direction of the snowboard back into the pipe on landing.
- ▶ Landing on the uphill edge should be encouraged as riders progress. This will provide more stability and help to maintain speed.
- ▶ Once riding consistently above the lip, work on including a variety of grabs.
- ▶ Traditionally, a backside air is with a melon grab and a frontside air is with an indy grab. Other grabs that can easily be learned in the pipe include mute, lean air, nose, tail and stalefish (see the Tricktionary in Chapter 23 for definitions). Encourage patience with any grabs to ensure the rider doesn't begin to pop off the wall.



### TECHNICAL DESCRIPTION

#### VERTICAL & LATERAL

Pumping through the transition will help the rider to maintain and generate speed. Reducing the edge angle of the board as the rider moves through the transition into the vert section of the wall will help to maintain momentum up and out of the pipe. Extending slightly when riding through the transition will help achieve this; however, it's important to maintain a fairly constant pressure throughout the transition. Leaving the pipe wall with a flat base is ideal. Use a slightly open body position (on both frontside and backside) and focus on flattening the back foot as the nose reaches the lip. Vertical movement is required in the air to aid balance, help the rider to grab and prepare for landing, which will ideally happen on the uphill edge.

#### LONGITUDINAL

A slight centre-to-aft movement can be introduced to help pumping, ensuring that the COM remains relatively centred on the board.

## ROTATIONAL

Rotational movement in the air should be generated through the shoulders and hips. Frontside airs happen quite naturally as the rider turns to look back down into the pipe for a landing. Backside airs are less natural and a stronger rotation of the shoulders and hips is necessary. To help with this, focus on the front arm leading the rotation and pointing back into the pipe for the landing.



## TERRAIN & CLASS HANDLING

Learning to flatten the base of the snowboard on the pipe wall can be tricky. Use edging and flat base tactics/drills out of the pipe to increase awareness of this. Drills inside the pipe that focus on line and edge angle, rather than speed, will help to increase awareness here. Speed should only be added when everything else is flowing well. Using quarter pipes is often a less intimidating way to introduce frontside or backside airs, but keep in mind that any feature that has an under-vert transition will require more pop from the rider, which can create movements that aren't ideal when riding a pipe with lots of vert.



## SELF REFLECTION

*"Do my students understand the best line to take in the pipe?"*

*"Are they able to flatten their board progressively through the transition, before adding more speed?"*





## EXPERIENTIAL TEACHING EXAMPLE:

The analogy of a rainbow works well for taking a good line in the pipe and learning to get out of the lip. Imagine a rainbow on the pipe wall that begins in the bottom of the transition and continues two thirds up the wall before coming down again. Ride the imaginary rainbow on each wall, then progressively move the rainbow higher up the wall as confidence grows, eventually taking it out of the lip.



## DETECT & CORRECT

Student turns on the wall too early before their momentum has run out:

- ▶ Encourage your student to be patient and let the snowboard travel up the pipe's wall, looking progressively up towards the lip, rather than looking directly at the wall or back into the pipe too early.
- ▶ Encourage smooth vertical movements and focus on the sensation of forward momentum increasing and decreasing. Remind your student to rotate when their speed has decreased substantially and they have reached their peak on the wall or their whole board has left the lip of the pipe.

Student pushes away from the wall towards the centre of the pipe to get air:

- ▶ Review the timing of their extension to get air in the pipe. This should be smooth and timed to match the length of transition, resulting in a trajectory that flows out of the lip. Often, a late, powerful extension is made to get a sensation of jumping out of the pipe, which results in a trajectory that moves away from the wall. This can become quite dangerous when riding pipe, especially when speed and pipe size are both increased.
- ▶ Focus on the feeling of the tail leaving the lip of the pipe before retracting the legs for a compact position in the air. This will help to avoid pop off the wall yet still allow for a stable position in the air.

Rider: Kakie Tsuyuki  
Photo: Keith Stubbs



## PIPE: 360S & ALLOYOOPS



### WHAT, WHY, HOW

Frontside 360s and allyoop spins (see Tricktionary in Chapter 23 for definitions).

Because variety is the spice of life!

- ▶ Spending time with similar spins away from the pipe is a good way to begin. Toe-to-toe turns (earlier in this chapter) and 360s on banks, are an easy starting point.
- ▶ Back in the halfpipe, let your student choose the spin that is least daunting, out of frontside 360, switch frontside 360 or allyoops on either wall. Try to include this trick in their run on the last or second to last hit, keeping it below the lip initially.
- ▶ For frontside (or switch frontside) 360s, focus timing the rotation to match their forward momentum. Wind-up should be encouraged, followed by a rotation that is perpendicular to the transition. Using a slight two-footed pop, with even weight on both feet, will be necessary if below the lip, but put more focus on the retraction of the legs during the spin, than on popping off the wall. This will be important as confidence grows and spins start happening above the lip. To help get the full rotation, focus on the back hand coming all the way around and pointing back across the pipe, whilst landing on the toe edge.
- ▶ In allyoops, the rotation is fairly easy at first. As the trick moves above the lip however, more patience will be necessary. Using the front hand as a guide for this will help. With all allyoops, try to maintain a flatter board through the transition as the tendency here is to edge harder. With allyoops on the backside wall, encourage a scissoring of the legs to rotate the board past the upper body in the air and maintain a toe edge landing.
- ▶ Once any of the above spins are comfortable, perform them earlier in the run and consider how you can link them up. Air-to-fakies and switch air-to-fakies are a great way to tie these tricks together with frontside and backside airs. Eventually, backside 3s and frontside 5s can be introduced.



### TECHNICAL DESCRIPTION

#### VERTICAL

A slight pop will be required when performing spins below the lip. This pop then needs to become a slower extension as the tricks are taken above the lip, ensuring that pressure is maintained constantly through the transition, until leaving the lip, when a retraction of the board can be used.

#### LATERAL

As with frontside and backside airs, a board that flattens through the transition is necessary to aid amplitude.

## ROTATIONAL

Upper body rotation is important for 360s in the pipe. Separation between the upper and lower body will be needed for allyoops on the backside wall. All rotational movement should be perpendicular to the transition.

## LONGITUDINAL

A centred stance is important to maintain throughout these tricks.



## TERRAIN & CLASS HANDLING

Using the last few hits in the pipe will allow your student to keep practising their pipe riding techniques without sacrificing speed. Consider which is the sunny wall (i.e. the softer one), as the ideal time to learn new tricks is on a wall that is just starting to soften in the sun.





## SELF REFLECTION

*"Will teaching spins in the pipe to my students at this stage negatively impact their ability to take a good line in the pipe, i.e. increased edging on the walls?"  
"Are they popping too hard off the wall, rather than retracting their legs?"*



## EXPERIENTIAL TEACHING EXAMPLE:

Spend time on natural transition features experiencing different spin variations, using a more exploratory approach. Try spinning all directions, from different edges, using a stronger edge and a flatter board. See which ones work best for the student, then take that to the pipe.



## DETECT & CORRECT

Student under-rotates the frontside or switch frontside 360 and lands on the heel edge:

- ▶ Make your student aware that landing on the heel edge initially is okay to build confidence, but it will limit their ability to maintain speed and that landing on the toe edge is ideal.
- ▶ Focus on the wind-up and timing of the release to match the peak of their arc on the wall, then add the feeling of a tightening core to help bring the rotation around. Retracting the legs during the spin will help with this.
- ▶ Make sure the back hand is pointing down the transition and across the pipe upon landing.

Student lands nose/tail heavy, or catches the tail on the wall during their 360:

- ▶ Ensure that all rotations are happening perpendicular to the point in the transition where the rider is spinning.
- ▶ Focus on an even two-footed takeoff and an even retraction of both legs when in the air.

Student edges too hard through the transition of an allyoop:

- ▶ Have your student consider the angle they are taking up the wall. Is it a steeper angle than they would normally take for a frontside or backside air?
- ▶ Draw attention to the feeling of flattening the back foot through the transition.
- ▶ Ensure that the rotation is applied at the top of their trajectory and not before.

## SECTION G - EQUIPMENT &amp; GLOSSARY

22

# Snowboard Equipment

**SNOWBOARD LENGTH & WIDTH****SNOWBOARD SHAPE & FLEX****BOOTS & BINDINGS****IN THIS CHAPTER WE WILL EXPLORE...**

The design of snowboard equipment, the makeup of a snowboard, plus binding and boot considerations.

Snowboards first began appearing in the 1960s. Since then they have progressed through many eras and had many influences. The basic makeup of a snowboard includes the nose and tail, base and top-sheet, waist and side-cut, edges, and the inserts where the bindings go.

There are many different measurements that apply to snowboards, helping to give each snowboard different riding characteristics. It should be noted that new technology and concepts are continually coming into the marketplace, some will be around for ever, while others are fads or become outdated and will disappear.

## Snowboard Length & Width

Snowboards come in many different shapes and sizes, catering to a variety of body types and riding styles.

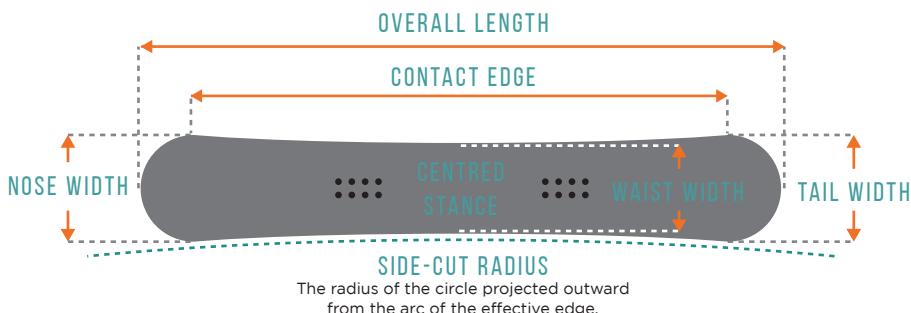
### Snowboard Length

Most people ride snowboards in the 140 to 165cm range; however, snowboards for children can be as short as 90cm. It is a myth that the height of the rider solely dictates the length of the snowboard. The length of a snowboard also corresponds to the style of riding, weight and preference of the rider. A good rule of thumb is to stay within the recommended manufacturer weight range. The longer the snowboard, the more stable it is at high speed, but it is also a bit tougher to manoeuvre. Shorter snowboards are obviously more maneuverable, but less stable. Another factor riders consider when selecting a snowboard is the type of riding it will be used for, freestyle snowboards generally being shorter than all-mountain, racing and freeride-specific snowboards.

### Snowboard Width

The width of a snowboard is measured at the waist, directly in the centre of the board at the narrowest point. A standard men's snowboard will have a waist width between 250 and 255mm. A mid-wide will be from 255 to 260mm, and wide boards are generally 260mm plus, catering to those with larger feet. Women's boards are typically narrower, usually between 235 and 245mm. Board width is typically in proportion to the length of the snowboard. Wider boards can be a little slower from edge to edge, but provide more surface area underneath the rider and less chance of toe/heel drag. In recent years, snowboard width has become more relevant in the style of design too. A number of specific powder boards are being designed with shorter running lengths but much wider underfoot, giving it the same surface area.

There are many other measurements that makeup different styles and designs of boards, from running length to side-cut depth.



## SNOWBOARD SHAPE & FLEX

Most snowboards are designed with a purpose in mind. That purpose might be to ride the whole mountain, go fast, jib rails, ride powder or help beginners learn more easily.



The shape and flex of a snowboard is crucial to its purpose. On one extreme we have alpine race snowboards, with flat tails, short noses, long effective edges and a very stiff flex pattern. At the other end of the spectrum we have “jib-sticks”, which are much shorter in length, have an identical shape in the nose and tail, and are much softer in flex. In between, there are many variations, from tapered powder-specific models to standard all-mountain snowboards. The

flex of a snowboard is dictated by the core materials used in its design and manufacturing. Most snowboards have a directional flex pattern, meaning the tail is usually slightly stiffer than the nose. Snowboards described as “twin” are typically twin in shape but still directional in flex. That said, there are “true twin” snowboards out there that have an even flex in the nose and tail as well as a twin shape. These snowboards are specifically designed for park riding.

## TORSIONAL FLEX

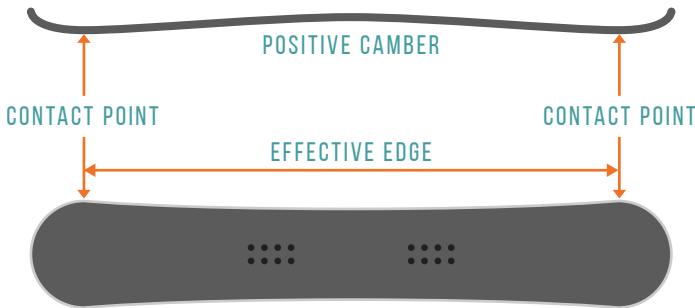
Snowboards have another form of flex known as torsional flex or torsional stiffness. This is the amount a snowboard can twist. Torsionally softer models, such as beginners’ snowboards, are easier to ride at slower speeds, but they provide less edge grip when riding at higher speeds. Higher-end models and freeride, pipe or race-specific snowboards are torsionally stiffer.

## VARIATIONS OF CAMBER

Camber refers to the bend of the snowboard from nose to tail.

### POSITIVE CAMBER SNOWBOARDS

Traditionally, snowboards have a positive camber, meaning that if you were to lay it flat the snowboard comes off the ground in the middle between the contact points. This camber provides resistance when flexed and tilted onto an edge, and rebound when unweighted aggressively. Cambered boards generally feel very responsive and stable when riding and are the predominant choice for most advanced riders.



### REVERSE CAMBER SNOWBOARDS

Reverse camber snowboards, also known as “rocker”, start by lying flush in the middle, and elevate as they progress towards the nose and tail. Designers state that this reverse arch is in the same shape as a turn. Therefore, when the snowboard is put on edge, it naturally falls into the correct position for a turn. Reverse camber snowboards are known to provide a more buttery/surfy feeling, but are typically less responsive.

### MULTI-CAMBER AND ZERO CAMBER SNOWBOARDS

Multi-cambered snowboards offer combinations of cambered and reverse cambered areas. The placement of these areas depends on the outcome the manufacturers are trying to achieve. Some common multi-camber profiles include.

- ▶ Reverse camber between the feet, with regular camber from the feet out towards the nose and tail.
- ▶ Camber between the feet, with a slight spoon-shaped reverse camber under the nose and tail.
- ▶ Zero camber, which is completely flat throughout, with no camber at all.
- ▶ Flat or camber between the feet, with reverse camber from the feet outwards (as shown below).

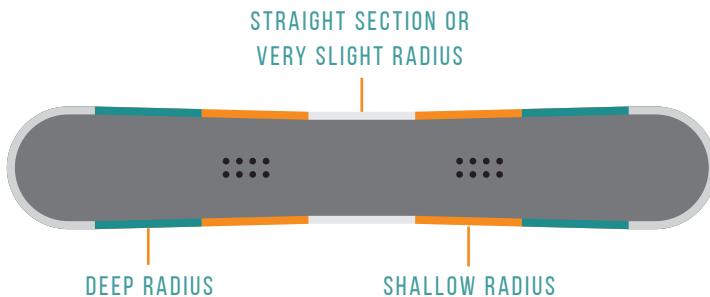


## SIDE-CUT & EDGES

The edges of the snowboard are curved concavely, so that the width at the nose and tail is greater than the centre. This curve aids turning and affects the snowboard's handling. The curve has a radius that might be as short as five metres on a child's snowboard or as large as 17 metres on a racer's snowboard. Most snowboards use a side-cut radius between eight and nine metres. Smaller side-cuts (for tighter turns) are generally used for all-mountain riding while longer side-cut radii (for wider turns) are used for racing. Freestyle-specific boards are typically somewhere in between; however, some halfpipe boards have recently been designed with longer side-cuts too.

### TRI-RADIAL SIDE-CUT

The tri-radial side-cut makes use of three different side-cuts. Not all tri-radial sidecuts work in the same exact manner, but the basic concept is this: A moderate centre radius helps to stabilise the snowboard at higher speeds, whereas a more aggressive radius helps to initiate or complete turns faster.



### ASYMMETRICAL OR OFF-AXIS SIDE CUT

These boards have two separate side-cut radius. The heelside edge will have a smaller radius than the toeside edge. The side-cuts may also be offset. This is to help make it easier to create a heel turn that is a similar size to the toe turn.

### MAGNE-TRACTION

This incorporates several bumps on each side of the snowboard which are designed to improve edge-hold by having more contact points with the snow. The idea is similar to a serrated knife. Magne-Traction was designed by Mervin Manufacturing, who manufacture Lib Tech, GNU and Roxy snowboards. Several other manufacturers have created their own variations of this concept.

## BOOTS & BINDINGS

There are a few different things to think about when it comes to snowboard boots and bindings. The most important thing is to get a proper fit, both with the boots themselves and the boot-to-binding fit.

### SNOWBOARD BOOTS

For boots to fit well, toes must feel snug against the front of the boot and the heel should fit snug in the back of the boot. The foot should have little movement within the boot. That said, your toes should not be curling up inside the boot.

After boot fit, comes support. This is dependant on the individual's riding style. Someone who rides a lot of park will generally have a softer boot for forgiveness, compared to someone who rides a lot of off-piste who may want a stiffer boot for better response. Stiffer boots will also be useful for those riders who carry a little more body weight with them.

Remember the boots are the first contact of the body to the gear; well-fitting boots make a massive difference in how effectively and efficiently we ride.

### LACING SYSTEMS

These days there are a number of different lacing systems available, such as BOA, zone lacing, or just standard laces. This is a personal choice and relative to comfort and longevity more than anything. Riders and instructors who spend 100 plus days a year on snow, should consider how strong a lacing system is before purchasing. It is also important to make sure there is very little room between your shin and the tongue and the boot. This can be adjusted by tightening the laces of the inner liner.



## SNOWBOARD BINDINGS

Think of bindings as being the interface between the boots and the snowboard. Much like boots, well-fitting bindings are key to a good setup.



### STRAP BINDINGS

The foot is held onto the snowboard with two buckle straps; one strapped across the top of the toe area and one across the ankle area. They can be ratcheted closed for a tight fit and good rider control of the snowboard. Straps are typically padded to evenly distribute pressure across the foot. Cap straps are the industry standard for most bindings nowadays, providing a snug and tight fit to the toe of the boot. Numerous companies have adopted various versions of the cap strap.

### REAR-ENTRY BINDINGS

With rear-entry bindings (e.g. Flows), the highback folds back and the ankle strap lifts up, allowing the system to open so you can place your foot in the binding. This is a binding that seeks to combine the convenience of the old step-in systems with the control levels attainable with strap-ins.

## BINDING PLACEMENT & STANCE SETUP

Where you place the bindings on the board is important to the overall performance. There are a number of factors to consider here...

### STANCE WIDTH

This is the distance between your feet or, more specifically, it's the width between the centre point of each binding. Most snowboards have a recommended binding placement marked on the top sheet that can be used as a guide. The size of the rider, their natural flexibility and their style of riding is important when determining a proper stance width.

A common measurement used for new riders is to position the bindings so that the feet are placed on the outer edge of shoulder width. This generally gives a good natural measurement for how wide a base your body uses to properly balance itself when the knees are bent. Another way is to measure from the middle of your kneecap to the sole of your snowboard boot, keeping the tape measure vertical and your leg straight. Experienced riders will adjust the stance width to suit personal preference and comfort.

## BINDING ANGLES

On the centre disc for each binding there are angle measurements. On most bindings, but not all, each notch represents three degrees, with numbers showing at 15 degree increments. The binding angles should be adjusted to suit riding style and to help learn new skills. For example, a duck stance can help switch riding, whereas forward angles will aid a rider's ability to carve. Generally speaking, we shouldn't have more than about 30 degrees between our two feet (e.g. +21 on the front foot, -9 on the rear). More than 30 degrees between your feet can lead to serious knee problems in the long term.

## LONGITUDINAL POSITION OF THE BINDINGS

Ideally we want to place our bindings equal distance from the centre of the snowboard's side-cut (this is not always in the centre of the snowboard's length). Take a look at the inserts (the holes in which the screws go); the centre four holes in each insert will usually be sitting in this position. Note that Burton Snowboards make a few different versions of insert systems, with the EST channel and the 3-hole system. To check the longitudinal placement of your bindings, place your snowboard upright against a wall but at 90 degrees so one edge of the snowboard's nose and tail is touching the wall. Slide your fingers or a piece of paper along the side-cut, and spot where the waist is narrowest (i.e. where the gap is biggest). Now mark this point and place the bindings equal distance from this middle point, using your previously established stance width.

## LATERAL POSITION OF THE BINDINGS

The binding's centre discs usually have different holes in which to place the screws, helping us to finely tune our stances. We can move the binding more towards either the toe or the heel edges allowing for a suitable amount of boot overhang or more performance to a specific edge.

## HIGHBACK FORWARD LEAN

The highbacks provide stability and response to our riding, particularly on the heel edge, and are crucial to the overall setup. Adjusted through a mechanism on the back, this is the amount of forward angle the highback creates. The greater the forward lean, the more our highback tilts forward pushing our ankles and knees into a flexed position and therefore a strong riding stance. Forward lean gives us quicker response when turning to our heel edge but it can reduce our range of movement vertically and tire our legs out quicker when used in excess. A lower degree of forward lean will allow a larger range of vertical movement and will be easier on the quadricep muscles.



## HIGHBACK ROTATED POSITION

This is the sideways position our highbacks can be rotated into in relation to the bindings and snowboard. We can create more response when turning on to our heels by rotating the highbacks in-line with our heel edge. Using the necessary adjustments, either the holes at the bottom corners of the highbacks or the sliding adjustment on the base plate, move the highback on the front binding until it sits in-line with the heel edge. It is not necessary to do this with the rear binding unless you ride with particularly high stance angles.

## BOOT TO BINDING FIT

A good boot-to-binding fit is also important. Bindings that are too large for the boot give the rider less response. Bindings that are too small will cause discomfort. A small amount of overhang of the boot over the edge helps to provide leverage laterally. However, too much overhang can create drag in the snow compromising our edge hold and consequently make us fall.



### ADJUSTING THE HEEL CUP

Some bindings have a heel cup that is adjustable back and forth, helping achieve the necessary boot position in the bindings. If there's more overhang on the toeside than the heelside of the binding, loosen the screws attaching the heel cup to the base plate and move it backwards slightly.

### TOE AND HEEL RISERS

Many bindings have risers or ramps that sit under the boots. These are designed to lift the boot up above the edges and help avoid 'booting out'. Some bindings have adjustable risers allowing them to be fitted to the boot. If necessary, move them out so the curve on the sole of the boot sits flush in the base of the binding and on the risers themselves. Make sure there is no gap between the boots and the risers, and that they come just past the end of the risers.

### STRAP ADJUSTMENT

The fit of a boot can also be compromised by poorly fitting straps. Every heel strap should have the capability to lengthen or shorten. Heel straps are shaped to fit across boots. The centre of the strap's shape should be sitting in the middle of the boot when fully tightened. Toe straps should be sitting snug across the boot and may also need adjustment in a similar way.

## SECTION G - EQUIPMENT &amp; GLOSSARY

23

# Glossary & Appendix

**SNOWBOARD JARGON****PARK & PIPE APPENDIX****TRICKTIONARY**

**IN THIS CHAPTER WE  
WILL EXPLORE...**

Definitions for all the snowboard instructing jargon used on the mountain between instructors and inside this manual. It also has a Park and Pipe appendix explaining the ATTL model and a variety of features found in parks. Finally, there is a Tricktionary that describes the majority of snowboard tricks in the industry today.



## SNOWBOARD JARGON

### ABSORPTION

Flexion or extension of the joints (e.g. ankles, knees and hips) to aid pressure management.

### AFT

Movement towards the tail of the snowboard.

### ALIGNMENT

The basic upright position of the body aligned in relation to the rest of the body, the equipment and terrain.

### ALL-MOUNTAIN RIDING

Meaning to ride the entire mountain, on and off-trail.

### AMPLITUDE

The amount of air a rider achieves out of a vertical feature (e.g. pipe).

### ANGULATION

Forming angles between bones through flexing and extending joints.

### ANTICIPATION

Preparation of the body for an upcoming turn.

### ALPINE

A racing style with hard boots, high binding angles, narrow snowboards and generally high speeds.

### AUDIO (LEARNING STYLE)

Taking information in by listening.

### BACKCOUNTRY

Away from resorts, out of bounds or out of the ski area boundary.

### BACKSIDE SPINS

Your back rotates towards the downhill first.

### BACKSIDE ENTRY INTO RAILS/BOXES

The rail is toward your heel edge or behind you.

### BACKSIDE IN THE HALFPIPE

The wall behind you if you point your nose down the middle.

### BALANCE

The body making adjustments to keep in equilibrium with the forces acting upon it.

### BALL AND SOCKET JOINT

The joints in your body that flex and rotate, e.g. the hip joint.

### BANKED SLALOM

A race event through a gully or banked course, where snowboarders ride one at a time.

### BASE PLATE

The base of the binding that your foot sits on.

### BERMS

A banked feature with a curve to it, often found in Banked Slalom and SBX events.

### BIG MOUNTAIN

Used to describe the competitive discipline of freeriding or just riding huge backcountry lines.

### BIOMECHANICS

The principles of the mechanical movements of the human body.

## BOARD PERFORMANCE

How the board performs. This can be explained using the concepts edge, pressure and steer.

## BOOTING-OUT OR BINDING-OUT

Boots/bindings hitting the snow when riding on edge or in variable snow conditions, due to overhang.

## BOX

A feature found in terrain parks that riders slide along, similar to rails.

## BUMPS (MOGULS)

Specific areas of resort terrain with formed mounds of snow to ride around or over.

## CAP CONSTRUCTION

An older style snowboard construction type where the top sheet folds over to connect to the metal edges.

## CAMBER

The convex rise in a snowboard. The snowboard rises up from the contact points near the tip and tail and reaches an apex in the middle.

## CARVING

To turn leaving clean arcs and a thin line in the snow. This comes from higher edge angles, using the snowboard's side-cut.

## CAUSE

A position or movement we make that has a resulting effect on our snowboard.

## CENTRE DISC

The round disc that screws to your snowboard, holding your binding in place at the specified angles.

## CENTRE OF MASS (COM)

The 3-dimensional balance point of a body.

## CENTRIFUGAL FORCE

The force you feel as a result of acceleration and turning across the fall line. Similar to riding a bike, this is the force that pulls you outside the turn. We counter it by leaning (inclining) inside the turn.

## CENTRIPETAL FORCE

The force you create by pushing against the centrifugal force that is pulling you outwards. This is how strongly you move inside the turn (science debates the actual presence of this force currently).

## CHATTER

The result of the snowboard's edge releasing from the snow's surface and vibrating, usually near the end of a turn. Often caused by inadequate vertical movements to manage pressure. Also caused by high edge angle.

## CHUTE

A narrow snow covered path found in steep terrain navigating between cliffs.

## CLIFF DROP

To launch from a cliff, dropping onto the snow below.

## CORN SNOW

Spring-like snow conditions after freeze-thaw.

## CORDUROY

Freshly groomed trails with a ridged surface usually found early morning and great for carving.

**CORNICE**

An overhanging ledge made from a buildup of snow, often found on top of cliffs or on exposed ridgelines.

**COUNTER**

When the body is in a rotated position in opposition to itself. A countered position could be caused from just the upper body rotating and the lower body not, and therefore you end in a countered position.

**COUNTER-ROTATION**

When the upper body physically rotates in the opposite direction to the lower body and the snowboard at the same time.

**CRUD**

Typical in New Zealand off-trail snow conditions.

**DEMO (DEMONSTRATION)**

Short for demonstration, to give information visually.

**DETUNE**

To blunten or round-off the sharp edge near the nose or tail of the snowboard, helping prevent edge catches.

**DIRECTIONAL**

A snowboard designed to ride better in one direction, due to its shape and/or flex pattern.

**DORSI FLEXION**

Flexing of the ankle joint, i.e. toes towards the shinbone or knee.

**DROP-IN**

Start a run in the pipe or park.

**DUCK STANCE**

Where the binding setup consists of the front foot being a positive angle and the back foot being a negative angle.

**EDGE**

The steel that wraps the perimeter on the base of a snowboard.

**EDGE ANGLE**

The measurement of the angle of the board in relation to the slope.

**EFFECT**

The result on our snowboard from a movement we make.

**EFFECTIVE EDGE**

The longest part of the edge that can be applied to the snow at any one time.

**EURO CARVE**

To carve whilst leaning the whole body into the turn, near to the snow's surface.

**EVERSION**

Rolling of the leg inward making the sole of the foot face outward. You would then be standing on the inside of your foot.

**EXTEND**

To straighten the joints or to stand up. The opposite to flex.

**EXTRUDED BASE**

A type of low-cost base construction that is very easy to repair, but equally easy to damage.

**FAKIE**

To ride the snowboard backward.

**FALL LINE**

The path in which a ball will roll with gravity down the slope.

**FIBULA**

One of the two main bones in the lower-leg.

**FEMUR**

The largest bone in the body, found in the upper-leg.

**FLEX**

To bend or close the joints (opposite to extend). Can also be used to describe the flex of the snowboard.

**FLOATING LEAF**

An exercise where the snowboard is directed left and right alternately, across the hill on the same edge.

**FORE**

Movement towards the nose of the snowboard.

**FORWARD LEAN**

The measurement of angle on your binding's highback.

**FREERIDE**

A style of riding based around exploring the mountain off-trail, but involving a variety of terrain features and snow conditions. (Can also be used to describe the competitive discipline of Big Mountain events.)

**FREESTYLE**

Riding based around jumping, spinning, buttering, etc. on-trail or off-trail, or in the park/pipe.

**FRONTSIDE ENTRY TO RAILS/BOXES**

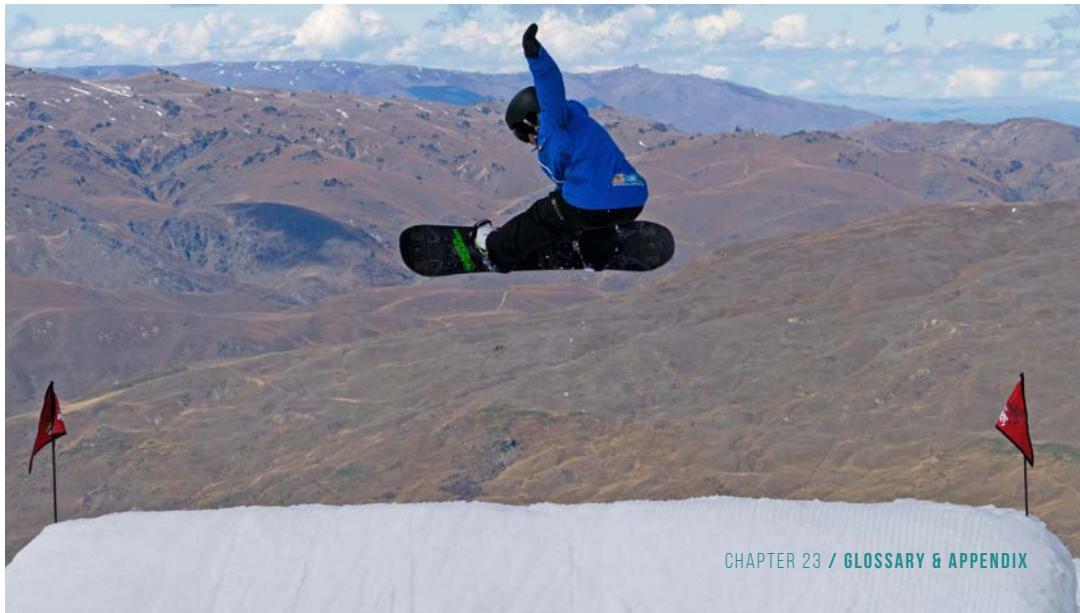
Feature is on your front (or toe edge) when approaching.

**FRONTSIDE IN THE HALFPIPE**

The wall on the front of you if you point your nose down the middle.

**FRONTSIDE SPINS**

Your front rotates towards downhill first.



**GATES**

Tall poles used to mark out courses in any race discipline.

**GAP**

A part of a freestyle feature that you must jump over.

**GARLAND**

An exercise used to practise the initiation and completion phases of a turn but without having to make an edge change.

**GOOFY FOOT**

The stance in which the right foot is the preferred front foot.

**HALFPIPE**

A machine-made feature, in the form of a half a pipe, in which riders travel from one wall to the other getting airtime from the lips.

**HAMSTRING**

The muscle group on the back of the upper-leg, that pairs with the quadricep.

**HARD PACK**

Firm, icy snow conditions.

**HARD BOOTS**

Hard-shell boots, similar to ski boots, designed for alpine boards and hard-plate bindings.

**HEEL EDGE**

The edge under the heels of the rider.

**HEELSIDE TURN**

A turn that is completed on the heel edge.

**HIGHBACK**

Plastic or carbon supportive part of the binding that is hinged near the heel and raises up towards your calf.

**HOP TURNS**

To jump up and rotate the snowboard and body as one unit, changing edges while suspended in the air.

**ICE**

Hard, fast snow conditions.

**INCLINATION**

To lean and shift the COM toward the toe or heel edge.

**INSERTS**

The threaded metal holes in a snowboard, used for attaching your bindings.

**INTENSITY**

The amount of effort we physically apply.

**INVERSION**

Rolling of the foot inward. Rolling of the leg outward making the sole of the foot face inward. You would then be standing on the outside of your foot.

**INVERT**

To go upside down (head below snowboard level).

**JIBBING**

Performing tricks on man-made features such as rails.

**KICKER**

Jump, booter or hit that creates airtime.

**KINESTHETIC (LEARNING STYLE)**

Learning through feelings and sensations.

**LATERAL MOVEMENT**

To move across the width of the snowboard, i.e. from heel edge to toe edge.

**LONGITUDINAL MOVEMENT**

To move along the length of the snowboard, i.e. from nose to tail.

**MOUNTAIN RESPONSIBILITY CODE**

The code outlining the safety and responsibility conduct required on all mountains.

**OFF-PISTE / OFF-TRAIL**

The ungroomed slopes.

**PELVIS**

The large bone in your hips, connecting the femur to the spine.

**PIVOT**

The way the snowboard responds to rotational movements with no edging.

**PLANTARFLEXION**

Ankle extension; to move the toes away from the shin, knee or the leg.

**POP**

Spring obtained from flexing the snowboard.

**POWDER**

Cold, dry and fluffy snow, Mother Nature's gift.

**PRESSURE**

An aspect of board performance managed and created using vertical, longitudinal movements and/or lateral movements.

**PROGRESSION**

A series of exercises that increase in difficulty, to gradually improve the student's ability.

**P-TEX**

The most commonly used base material, made from thermoplastic.

**QUADRICEPS**

The muscle group on the front of the upper-leg, above the knee, that pairs with the hamstring.

**QUARTER PIPE**

A large machine-shaped wall with a transition, in the form of quarter of a pipe.

**QUESTION-BASED LEARNING**

A style of learning and teaching which revolves around a process of questioning from the instructor to encourage self awareness and thought in the student. (Also known as Coach Approach.)

**RAIL**

Feature found in terrain parks which riders slide along, similar to a box.

**RECIPROCAL**

Acting in return, mutual, giving and receiving. E.g. pairing up students during a task so they can help and learn from each other.

**REGULAR FOOT**

Left foot forward in the rider's stance.

**REVERSE CAMBER (ALSO CALLED ROCKER)**

The concave shape of a snowboard that rises up from the middle.

**RIDER ANALYSIS**

The process of observing the student and assessing their needs.

**ROTATIONAL MOVEMENT**

Movement of the body around a vertical axis to make the board pivot and help it steer.

**SBX**

Standing for snowboarder-cross, this is a race discipline involving four to six riders at one time through a course of tight turns, berms, whoops, bumps and jumps.

**SEPARATION**

When the upper and lower body have a different rotational alignment.

**SIDE-CUT**

The convex shape of the snowboard edges, used to help us carve.

**SIDE SLIPPING**

Edge awareness exercise, where the snowboard is perpendicular to, or across, the fall line and slides down the slope.

**SIDEWALL CONSTRUCTION**

A snowboard construction type where a strip of material, the sidewall, connects the top sheet with the metal edges.

**SINTERED BASE**

A type of base construction that is very strong and durable.

**SKATING**

Pushing oneself around using the rear foot, on flat areas with the front foot strapped in to the snowboard.

**SKETCHY**

When something looks a bit suspect.

**SLUSH**

A soft and wet snow condition created by warm weather, usually in spring.

**SLOPESTYLE**

A competitive discipline of snowboarding in terrain parks, involving jumps and rails.

**STANCE**

The general term indicating the way we stand on the snowboard. This includes body position, orientation (regular/goofy) and binding width/angles.

**STEEPS**

Snow covered terrain with a particularly high pitch.

**STEP-INS / STEP-ONS**

A boot and binding system where the boots click in, to attach to the bindings.

**STRAIGHT RUN**

To glide on the snowboard down the fall line (normally a one footed exercise).

**STUBBY**

A small, flexible race gate commonly used in SBX.

**SUPERPIPE**

A super-sized halfpipe, with walls between 18 and 22 feet (6-7 metres).

**SWITCH**

Riding in the opposite direction to normal. E.g. a goofy riding with their left foot leading, or a regular riding with their right foot leading.

**TABLETOP**

A machine-made jump feature in terrain parks, which riders use to get air.

**TERRAIN PARK**

A controlled environment consisting of man-made freestyle features.

**TIBIA**

One of the two main bones in the lower-leg.

**TIILT**

A word used to describe how the snowboard responds to lateral movements of the body. Also called edging or edge angle.

**TIMING**

The duration or sequence of a movement or movements.

**TOE EDGE**

The edge under your toes.

**TOESIDE TURN**

A turn that is completed on the toe edge.

**TORSIONAL FLEX (TWIST)**

The way a snowboard will twist along its length from nose to tail. This will result in a difference in edge angle along the length of the snowboard.

**TRAIL (PISTE)**

A groomed, marked run on a mountain.

**TRANSITION**

The curve found on jumps and halfpipes taking a rider from the flat to the lip or vertical.

**TRAVERSE**

To move across a slope.

**TWIN TIP**

A symmetrical snowboard designed to ride the same in both directions (normal and switch), due to its shape and/or flex pattern.

**TWIST (TORSIONAL FLEX)**

The torsional twist of the board generated through lateral movements (generally in the leading half of the body rather than the whole body as with tilt).

**UNWEIGHT**

To release pressure on part or all of the snowboard.

**VERT**

The vertical or wall part of a halfpipe, quarter pipe or superpipe.

**VERTICAL MOVEMENT**

Movement of the body up and down, raising and lowering the COM.

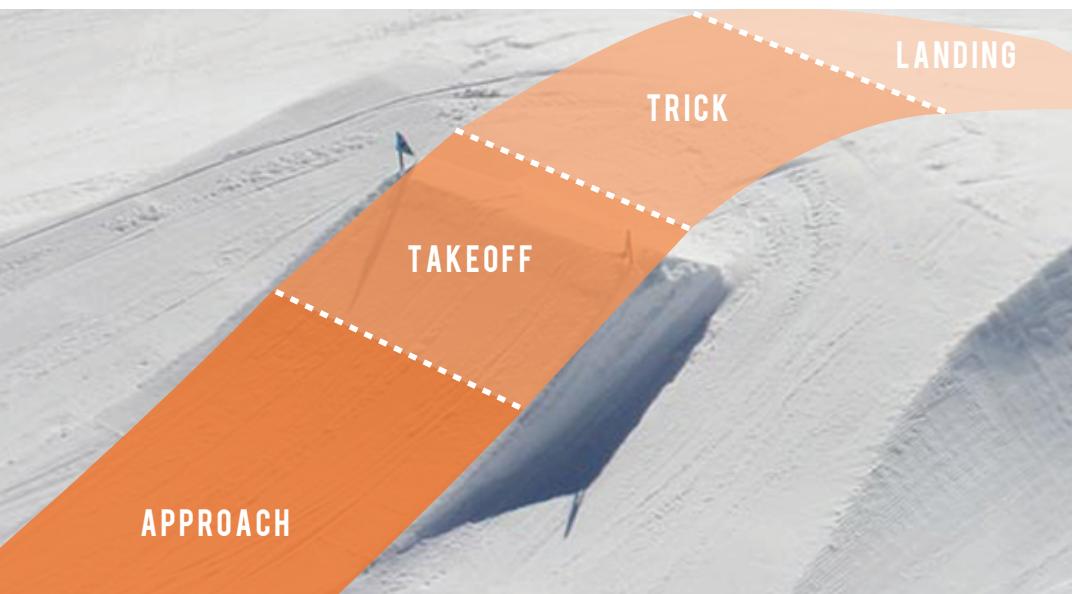
**VISUAL (LEARNING STYLE)**

Learning through watching demonstrations / other riders and seeing pictures.

## PARK & PIPE APPENDIX

### ATTL

The ATTL model is a tool for park riding to breakdown any feature into four clear zones: approach, takeoff, trick and landing. The movements students must make in each stage can be described in detail for each trick. Instructors teaching in the park can use ATTL to break down a trick and create a plan for learning or teaching a new trick on any feature. Students can also watch other park riders move through these zones to watch their riding speed.



#### APPROACH

This is where you choose the correct speed and adjust stance suitably for the feature. There may be tactics involved here such as edging the snowboard or adjusting your line onto the feature. Always call your drop ("dropping") so you are not competing with someone else on the approach. Keep clear of the approach area unless you are using the feature.

#### TAKEOFF

This is where you make the necessary body movements to start your trick. This could be a controlled extension of the legs to match the forces you can feel when riding up the wall of a pipe or to takeoff a jump. It is usually the point where the rider leaves the ground, e.g. the lip of the jump.

## TRICK

This is the actual trick or manoeuvre you attempt between takeoff and landing, controlling your body in the air or on the feature. Compact body positions are more balanced and grabbing is a great way to stabilise in the air. Spotting the landing throughout your trick will help you prepare for it.

## LANDING

This is the down slope after the knuckle or feature, and before the run-out beyond. Absorbing vertically is almost always necessary here. If the speed was correct during approach, the takeoff was clean and well-timed, and the trick was balanced, then the landing should be smooth and in the correct part of the feature. Remember, this is not a safe place to stand. Always stay clear at all times.

## PARK FEATURES

There is an increasing variety of park features available and they can be categorised into jump features, box/rail features and pipe/transition features. All of these features can be sized S, M, L, XL to represent the skill set and experience required, the inherent risks associated and equally important the level of confidence and ability to commit to the feature.

### JUMP FEATURES

Jumps are all similar in that they have a takeoff transition ending in a lip and a required trajectory distance to the landing. The style and build of a jump will dictate the speed required to make the landing, the airtime and forces that students will experience. Common jumps types include tabletop, step-up, step-down, step-over, hip (left and right), whale tail and gaps.



## BOX/RAIL FEATURES

There are too many variations of box/rail features to list in this manual and the rate that park riding is evolving the list would keep on growing. Detailed here are some common variations of what to expect in your resort terrain park. Box/rail features can broadly be defined by their shape and change in pitch or kink angle. From the rider's view down the fall line they can be straight, curved (C) left and right, S and elbow kink left/right. From the rider's view from the side the box/rail can be flat, rainbow, banana, up, down, roller coaster (variation of rainbow and banana), flat-down, down-flat-down, flat-down-flat, up-down, up-flat, down-flat kick (or down donkey) and waterfall (flat-drop-flat). The width of the box/rail can vary. A wide "dance floor" box can be as wide as two metres. A typical beginner's box is typically 30 to 50 centimetres wide, and a narrow rail can be as skinny as five centimetres. The surfaces to slide on can be flat (box or bar), round (handrail, tube or "tubby") or multiple round features side-by-side (two are known as a shotgun rail).



## HALFPIPE & TRANSITION FEATURES

Most transition features including halfpipes, quarterpipes, berms and bowls all share commonalities. Each will have a flat bottom (ridden through on approach to transition), transition (the curvature of the feature that is ridden), a deck (at top of the feature) and a coping or lip (to mark the change from transition to decking). Resorts are shaping transition parks to focus on providing versatile lines within terrain parks for riders to enjoy.



## TRICKTIONARY

### 180/360/540 (ETC)

A rotation/spin consisting of the appropriate amount of degrees.

### 50-50

Sliding a rail or box straight-on with the board pointing along the feature.

### ALLY-OOP

Any rotation performed spinning up the pitch of the halfpipe towards the top.

### BACKSIDE RODEO

An inverted trick with a backside spin of 540 or more, performed when the rider flips backwards over their heel edge in the direction of travel.

### BARREL ROLL

A flip/roll over the toe or heel edge of the snowboard whilst in the air.

### BOARDSLIDE

A rail slide with the snowboard across and the rail/box between the feet.

### BUTTER

To spin around on one end of the snowboard.

### CAB SPIN

To rotate frontside when taking off switch.

### CHANGE-UP

Performed on boxes and rails, where a rider changes their trick part way through a feature.

### CORKED SPIN

To perform an off-axis spin.

### CRAIL

Rider grabs the toe edge or nose with their rear hand in front of their leading foot, with an extended rear leg.

### CRIPPLER

A backflip over the heel edge with a 180, performed on the frontside wall in the halfpipe.

### DOUBLE CORK

A spin usually of 1080 or more degrees where the rider goes off-axis twice.

### FRONTBOARD

A boardslide with the heel edge travelling towards the end of the feature.

### FRONT FLIP (TAMEDOG)

A full, forwards flip over the nose of the snowboard.

### FRONTSIDE RODEO

An inverted trick with a frontside spin of 540 or more, performed when the rider flips forwards over their toe edge in the direction of travel.

### HALF-CAB

When the rider spins a frontside 180 from switch to normal.

**HAAKON FLIP**

A switch rodeo out of a halfpipe feature, named after the snowboarding legend Terje Haakonsen.

**HAND PLANT**

An invert out of a pipe feature where the rider places a hand on the lip.

**INDY GRAB**

Rider grabs the toe edge between the feet using the trailing hand.

**INDY NOSE BONE / POKE**

An indy grab whilst extending the front leg.

**JAPAN AIR**

Rider grabs the toe edge on the inside of the front foot with the leading hand, bending the front leg in order to tweak the snowboard up similar to a method.

**LIEN AIR**

A frontside air in the pipe where the rider grabs the heel edge with the leading hand, similar to a method.

**LIP SLIDE**

A boardslide or frontboard where the tail passes over the feature on entry.

**LIP TRICK**

Any trick that is performed at the lip in a halfpipe.

**MCTWIST**

A front flip over the toe edge with a 180, performed on the backside wall in a pipe.

**MISTY FLIP**

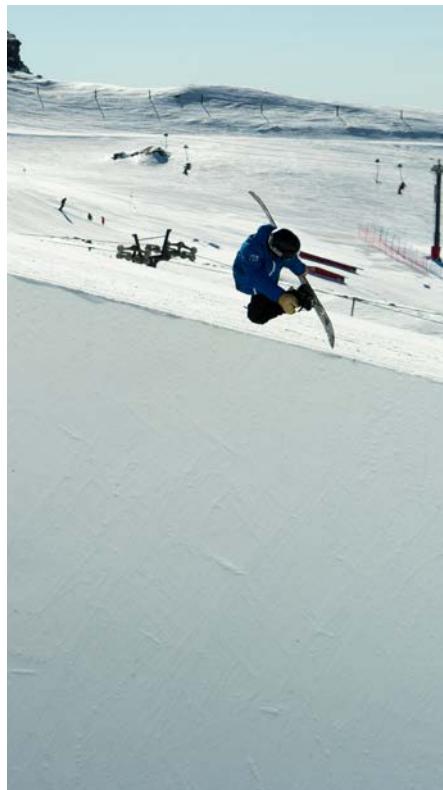
An inverted trick with a backside spin of 540 or more, performed when the rider flips forwards over their toe edge.

**MELON GRAB**

Rider uses the front hand to reach behind the front leg and grab the heel edge in between the bindings.

**METHOD**

Rider grabs the heel edge between the feet with the leading hand, whilst tweaking the snowboard up when in the air.



**MUTE GRAB**

Rider grabs the toe edge between the feet with the leading hand, whilst in the air.

**NOLLIE**

To jump springing off the nose, helping the rider get more air.

**NOSE PRESS**

To ride or slide a rail/box straight on, whilst balancing solely on the snowboard's nose.

**NOSE SLIDE**

To slide a rail or box on the nose of the snowboard with the tail out at an angle.

**NOSE ROLL**

A 180 degree spin whilst balancing on the nose.

**NOSE GRAB**

Rider grabs the snowboard's nose whilst in the air.

**OLIE**

Moving aft on the snowboard to build pressure in the tail which is then quickly released to provide pop, lifting the rider into the air.

**QUAD CORK**

A spin usually of 1440 or more degrees where the rider goes off-axis four times.

**SHIFTY**

Using counter rotation the rider rotates the board up to 90 degrees in the air and then returns to the original position for the landing.

**STALEFISH GRAB**

Rider grabs the heel edge inside of the rear foot, using the trailing hand, whilst in the air.

**TAIL GRAB**

Rider grabs the snowboard's tail.

**TAIL SLIDE**

To slide a rail or box whilst leaning towards the tail of the snowboard with the nose out at an angle.

**TAIL PRESS**

To slide a rail or box in a straight line while balancing on the tail.

**TAMEDOG (FRONT FLIP)**

A full invert flip towards the nose of the snowboard.

**TRIPLE CORK**

A spin usually of 1260 or more degrees where the rider goes off-axis three times.

**TWEAK**

To extend an end of the snowboard out whilst grabbing.

**UNDER FLIP**

An invert where rider flips backwards underneath themselves with at least a 540 degree rotation.

**WILDCAT (BACK FLIP)**

A full inverted flip towards the tail of the snowboard.

**WHEELIE**

To ride whilst balancing solely on the snowboard's tail.

## SECTION G - EQUIPMENT &amp; GLOSSARY

24

IN THIS CHAPTER WE  
WILL EXPLORE...

*Basic terms and phrases in Maori that can be used to teach snowboarding.*

# Maori Translations

## INTRODUCTION & GREETINGS

Hello: kia ora

Welcome to the mountains: nau mai haere mai ki maunga

Welcome to the snow: nau mai haere mai ki hukapapa (snow on the ground)

Snow falling/in the air: hukarere

Hello my name is... and I'll be your instructor: kia ora ko.... taku ingoa, ko au to kaiako

I am from... : no ... ahau

Good bye: ka kite ano

## QUESTIONS

Are you beginner, intermediate or advanced?

- he kai timata? he ahua pai, he tino pai aua?

Are you from the north?

- no te huauru koe

Are you from the south?

- note tai tonga koe

Can you make turns?

- ka taea koe ki te huri

Do you/would you like help?

- kei te pirangi koe he awhi?

Do you understand?

- kei te marama koe?

## USEFUL TERMS

Go faster: kia tere  
 Stop: kia tau  
 Start/begin: timata  
 Up: ki runga  
 Down: ki raro  
 Left: maui  
 Right: matau  
 Spin: e huri  
 Flex/bend: tuturu  
 Thank you, come for another lesson:  
 kia ora, hoki mai ano  
 Stand up: e tu  
 Stand up taller: tu kia tika  
 Watch me: matakitaki mai, matakita-  
 ki ahau (same thing)  
 Follow me: whia mai ki au  
 Have a go: tou huri inaeanei  
 Keep going: heare tonu  
 Well done / good job: ka pai  
 Keep trying / don't give up: kia kaha

## NUMBERS

One: tahi  
 Two: rua  
 Three: toru  
 Four: wha  
 Five: rima  
 Six: ono  
 Seven: whitu  
 Eight: waru  
 Nine: iwa  
 Ten: tekau

## SNOWBOARD PARTS

Nose: ihu  
 Tail: whiore  
 Edges: mata  
 Toeside: taha mua  
 Heelside: taha muri  
 Bindings/straps: tuinga  
 Boots: putu

## BODY PARTS

Body: tinana  
 Hips: hope  
 Feet: waewae  
 Stomach: puku  
 Head: mahunga  
 Shoulders: pokowhiwhi

## NOTES

## NOTES



© 2017 SBINZ / NZSIA. All Rights Reserved.