Momentum Website Climbing Basics Proposal

Sean Patterson, Sandy Youth Club 1 Head Coach

What I propose:

I propose a new addition to the "Instruction" page of the Momentum Climbing website (www.momentumclimbing.com) entitled “Rock Climbing Basics.” This new section of instruction will provide new climbers, parents, and anyone else who is interested, with basic information on terminology, safety procedures, and basic concepts/ techniques of climbing. The purpose of this new section is to help those interested in climbing integrate into the sport, streamline the belay certification process, and builds interest in the sport and legitimacy of Momentum offering all aspects of indoor climbing - all without encroaching on the various classes Momentum offers such as Climbing School or Experience Climbing. The “Instruction” section will adopt a tab-format just like the “Getting Started” page of the Momentum website. The first tab will be “Momentum Climbing School” and contain the existing content in the “Instruction” page. The second tab will be “Rock Climbing Basics” with all proposed content.

What I offer:

I have been an athlete all my life. I climbed several times as a child for various friend’s birthday parties, but I did not continue as I was heavily involved with competitive youth soccer. After youth soccer ended, I casually rock climbed with some friends and slowly became more and more addicted. About five years ago I finally decided to buy a gym membership and immerse myself fully into the sport. Soon I began volunteering as Momentum floor-staff for the late-night-climbs and staff for local competitions, and eventually was invited to substituted as a youth program coach (Base Camp). I loved coaching and started as an official volunteer as soon as a position was available. I stayed with Base Camp – which became Youth Club 1 – and am now the Head Coach for Sandy YC1.
I just graduated with a bachelor’s in English – writing studies and a minor in technical communication. my educational background – and the experience that came with it – improved my teaching ability and program curriculum as I was able to organize a logical progression for beginning climbers to learn techniques and jargon.

- Topic Knowledge - I am currently the Youth Club 1 Head Coach at the Momentum Sandy location and have coached for over 3 years. I have created my own curriculum of teaching introductory (and advanced) topics, AND taught the topics to both kids and teenagers. My program and curriculum is oriented towards new climbers, but functions well with anyone with previous climbing experience. I will provide all topic material.

- Technical Writing education, certification, and experience - I will present the topic material (which I provide) with a professional standard and also match my material with the tone and style of existing Momentum online content.

- Coding knowledge and experience - I can work with the existing stylesheet to integrate the new section of the site.

Required Materials:

- Access to the website code and stylesheet

- Contact information of current company web developer
- Momentum Climbing logos, graphics, color scheme, etc. for brand consistency and page customization
- Authorization to take photos or make a video on-location at any of the 3 Utah Momentum gyms, and/or use photos from the new Momentum gym locations in Texas
- 2 models for on-location photos/video

Estimated Time for Project Creation:

I estimate one month of work necessary from start to finish. All material and content already exist and must be adapted to fit the coding parameters of the Momentum website. This time estimation may be affected (positively or negatively) by either potential collaboration with the existing web developer, or my own effort in working within another developer's code.

Budget:

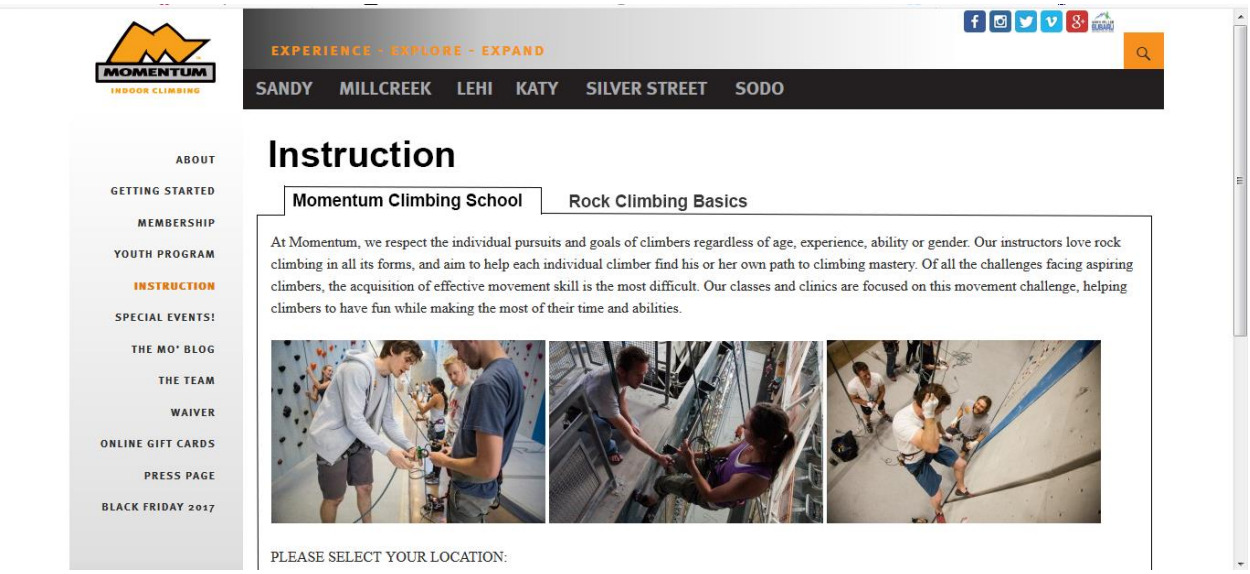
This project requires no cost aside from compensation for work, which is negotiable, as I am currently an employee of Momentum Climbing and I already enjoy benefits of gym membership and special gear pricing.

Projected Outcomes:

Increased integration of new and potential climbers into gym climbing. More efficient belay lessons which decreases required staff time and attention, and increases amount of belay lessons taught. Also enhances Momentum's image as the total gym for rock climbing and pioneer in establishing and legitimizing the sport in general.

Proposed Instructional Material:

The following is an outline (including content) for the "Rock Climbing Basics" section of the Momentum website as part of the "Instruction" page. This outline and content must be appropriately adapted for the website, therefore some notes in parenthesis specify certain adaptations, such as the first header "(Second tab of "Instruction" page)." An example of the new tab-format of the "Instruction" page is shown below.



Basics of Climbing (Second tab of "Instruction" page)

Hit the wall climbing at Momentum Indoor Climbing! If you are looking to try rock climbing, need to brush up on your terminology, or simply want a refresher on the basics, check out our "Basics of Climbing" page for information on top-rope belaying, knot tying, and foundational climbing techniques.

Tying the Figure-8 Knot

A figure-8 knot is the knot used to attach the climbing rope to the climber's harness. This particular knot is a self-tightening knot, which helps keep the climber safe as the knot will not un-tie as the climber moves up and down the wall. The figure-8 may tighten significantly when the rope/belayer hold the climber's weight, but will un-tie without much effort if tied correctly. Learn how to tie the two parts of the figure-8 knot below.

Note: some of the "terminology" are used to teach both adults and young children. For example, no matter your age, an alien head is an apt description of the loop made during the first part of tying the figure-8.

Note: there are multiple methods of tying a figure-8 knot. This is one way that is easy to remember with fun terms.

Figure-8 Part 1 – Alien Head

Part 1 of the figure-8 knot creates the form which part 2 will follow. Most of the top-ropes at the gym will already have part 1 tied, but sporadically a climber will need to tie the first part. Follow these steps to tie the first part of the figure-8 knot: (A photo will accompany each step, or a video for the entire knot)

1. Pull an arm's length of rope from the end of the rope (3-4~ ft).
2. Bend the rope in half, keeping the two sides of the rope parallel, and pinch with your right hand where the parallel sides touch. This creates a loop that looks similar to an alien head. Make sure that the end of the rope is away from your hand.
3. Wrap the end of the rope around the alien head counter-clockwise with your left hand.
4. Poke the end of the rope through the loop. (He's a bad alien, so we put him on a leash and poke him in the eye!).
5. Pull the rope through the loop until the knot looks similar to the number "8".

Congratulations! You have tied the first part of the figure-8 knot.

Figure-8 Part 2 – Racecar

Part 1 of the figure-8 knot is usually already tied on the top-ropes at the gym. Part 2 of the knot is tied ***after*** attaching the rope to your harness. Follow these steps to attach the rope to your harness and finish the figure-8 knot:

1. Poke the end of the rope with the part 1 of the figure-8 knot up through the loop on the front of your harness. Most rental harnesses have one single loop. Personal harnesses typically have two loops – therefore the rope must go up through both loops.
2. Pull the rope through until part 1 of the knot is close to your harness loop(s).
3. Use the end of the rope to "follow" itself back through the part 1 of the knot. It may help to think of part 1 as a race-track and the end of the rope as the racecar. Drive the racecar back through the track as seen in the diagram.

Your knot should now look like a double "8". To check whether or not you have tied your knot correctly – and you need to check your knot every time – count how many pairs of ropes you have. You should have five pairs of 2 ropes, or 10 ropes. Also make sure that the "tail" of the rope, or the end of the rope sticking up from the top of the figure-8 knot, is at least 1 fist-length long.

Top Rope Belay

Belaying is the act of managing the rope while another person climbs up the wall to keep the climber safe. The belayer stands on the ground below the climber and takes-up the slack in the rope as the climber ascends the wall, or pulls the rope tight when the climber falls, finishes the route, or needs to rest. The belayer also safely lowers the climber to the ground when they are ready to come down from the wall. One method of climbing with a rope is with a top-rope, meaning the rope is already attached at the top of the route (or climbing wall), and the belayer and climber sides of the rope both hang down on the ground. This section covers preparing the belay device and rope, managing the rope, and verbal commands.

Preparing the Belay Device and Rope

The outdoors industry provides a variety of different belay devices to assist belayers and keep climbers safe. Regardless the type of device, the basics of belaying and managing the rope are almost all the same. Currently, the devices which Momentum gyms use are called ATC's. This section explains how to properly set-up your rope and belay device to begin belaying your climber.

First: connect the ATC and rope. You can do this by pinching the rope (creating another "alien head") and squeezing the loop down through the center of the ATC. Another method is to poke the end of the rope down through the center, create a loop, then bring the rope back up through the center of the ATC.

Note: many ATC's have "teeth" which help create friction with the rope. If your ATC has teeth, make sure that the end of the rope touches the teeth.

Second: You want the end of the rope facing away from you, and the side of the rope leading up to the top of the wall closer to you. With the end of the rope facing away from you, hook the caribiner through the 1) loop in the rope and 2) through the cord of the ATC, then clip the caribiner to the loop at the front of your harness. Most carabiners have a locking sleeve that covers the gate of the carabiner from opening. Once the carabiner is hooked to the rope, the ATC, and your harness, lock the carabiner by screwing the locking sleeve up until it stops.

Note: It is important to always check your figure-8 and belaying setup to ensure that both parties have safely and properly hooked into the rope and are ready to climb. Safety checks must be done before every climb.

Managing the Rope

Managing the rope while belaying entails two actions: taking slack and giving slack, or pulling rope through the ATC and allowing rope through the ATC. As the climber climbs up the wall towards the anchor point at the top, the distance between the climber and the anchor point shortens. If the belayer does not take up this excess rope – or slack in the rope – then the climber will fall more distance than necessary if they let go of the wall. Therefore, the belayer must take up the slack in the rope as the climber moves up the wall. One method of learning the safe process to take in slack is through the P.B.U.S acronym, described below:

Note: there are many methods of teaching proper belay techniques, this is merely one solid method often used in the industry

Taking Slack. P.B.U.S. is an acronym that stands for Pull Break Under Slide, and describes each step of the process when taking slack. The following instructions explain these steps in further detail:

Pull: Pull slack through the carabiner. If you are right handed, grab the side of the rope facing away from you (the "end-side" of the rope, not the side that goes directly up to the anchor point on the wall) near the ATC with your right hand, and pull up on the rope. With your left hand, simultaneously pull down on the opposite end of the rope. These two motions should make a "V" shape. Pulling down with the rope with your left hand and up on the rope with your right hand. The rope will easily move through your ATC. (Think of the ATC as the bottom of the "V")

NOTE: If you are right handed, your right hand is your "break" hand, and holds the end-side of the rope. If you are a lefty or using your left hand as your break hand feels more comfortable, feel free to do so. Regardless which hand is your break hand, it NEVER lets go of the rope while the climber is climbing.

Break: "Break" the rope by moving your break hand straight down until the rope is tight. After breaking the rope, it creates a squiggly path through the ATC. When the break hand is up – after pulling slack through the ATC – notice that the rope moves easily through the ATC, as it is going down into the ATC then back up and out. After breaking the rope down, the rope moves down to the ATC, then up through

the other side of the ATC, then back down to your hand. This extra change in direction stops the rope from easily moving through the ATC, and with a small amount of pressure from your hand the rope stops completely. This keeps the climber safe, as the rope will not move whatsoever and the climber can hang on the rope.

Note: At the Momentum Climbing Gyms, the top ropes are wrapped around our steel posts twice at the top of the wall, which creates the "anchor point." This extra wrap allows the belayer to easily hold their climber's weight, even with a significant weight difference. However, we do not want younger children belaying their parents.*

Under: Take your non-break hand and grab the rope under your break hand. Remember, your break hand never leaves the break. By grabbing the rope underneath your break hand and continuing the tension on the rope, you allow yourself to easily perform the last step: slide.

Slide: Slide your hand up the rope back near the ATC, and put your non-break hand back onto the top side of the rope. Notice that your break hand is at the same position it started in and is ready to repeat the process by pulling up more slack.

Giving Slack/Lowering the Climber. As a top rope belayer, you will rarely need to *give* your climber extra rope. You will, however, need to lower your climber every time you belay. You can achieve both actions in the same manner, therefore here are the instructions for lowering your climber:

When the climber is ready to come down from the wall, you will need to allow rope to pass through the ATC, which is the opposite of taking up slack in the rope. Think back to the concept behind pulling and breaking the rope while belaying. When you pull the rope through the ATC, you pull up to easily move the rope through the ATC, and breaking the rope *down* stops the rope from moving. Lowering your climber means you need to allow rope through the ATC, which means you need to lift up the rope.

1. Grab the break-end of the rope with both hands.
2. Lift the rope up slowly– you will feel the tension in the rope increase.
3. Loosen your grip on the rope and allow it to slide through your hands. As the rope slides through your hands you will see the climber begin to move down the wall.

Pay attention to the speed at which the climber is descending. Maintain some friction on the rope with your hands to safely lower the climber at a reasonable and appropriate speed.

Verbal Commands

The most important thing a climbing partnership can do is communicate. There are several standard verbal commands climbers must know to safely climb with another person, described below:

After Safety Checks: (C – climber, B – belayer)

C: On belay?
B: Belay is on. -or- On belay.
C: Climbing?
B: Climb on.

This brief communication confirms that both the belayer and climber are both ready for the climber to begin climbing.

Climber Commands:

"Take!" telling the belayer to take up the slack in the rope and tighten the rope.
"Lower!" telling the belayer they are ready to be lowered.

Belayer Commands:

"Gotcha!" (Got you!) telling the climber that the belayer has taken up the slack and the rope is tight, meaning the climber can relax and let go of the wall. "Gotcha" can be substituted for another affirming expression like OK, I have you, or Alright.
"Lowering!" telling the climber that the belayer will begin lowering them.

Foundational Climbing Techniques

There are many different styles of climbing, however, there are basics that every climber needs to know to maximize their body's potential. Here are some key basics for rock climbing: (Photos or videos/gifs will accompany each item)

Straight Arms: Generally keep your arms straight as you climb. They will naturally bend as you move in different ways – or even use a specific technique – but you should still strive to keep them straight if you can. If you keep your arms bent and climb like a T-Rex, you're using too many muscles to hold yourself on the wall. Climbing does not entail pulling yourself up the wall, but rather walking up the wall. Your arms usually keep you from falling off the wall and your legs do most of the work. When your arms are straight, your weight is mainly on your legs/feet, therefore you are only using some forearm muscles to grip the handhold. This conserves energy, meaning you can climb longer without tiring out or falling off the wall.

Use your toes: Use your toes to climb, not the side of your feet. This allows you to do many things, such as: extending your foot (standing on your tippy-toes) to reach farther, pinpoint pressure onto a small foothold which makes your foot more secure and able to stick on the wall, or pivoting your heel side to side which allows easier and smoother lateral movement or other useful techniques like flagging. By climbing on your toes, your heels will generally protrude away from the wall.

Flagging: Performing these complex maneuvers up the wall in an efficient manner requires steadiness and balance. You do not need to have both feet on the wall at all times; you can stand on one foot and handle all of your bodyweight, can't you? Therefore, you can move one leg off the wall and use it similar to a ship's rudder to help you balance as your body moves in certain ways, this is called flagging. A basic flag would be a counter-balance. If you are reaching up and to the right for your next handhold, you can flag your *left* foot out to the left as a counterweight as your body tilts to the right to reach the handhold. The purpose is to keep your center of gravity centered. There are several different flagging techniques, such as a back-flag, so test out the basic counterbalancing flag, then try to think of other ways to creatively use your legs to help you balance as you climb.

Types of Holds: (photos will accompany each item)

- Jug – almost like a handle, with a thick edge to grab. Use your entire hand to grab these large holds, just like grabbing a milk jug.

- Crimp – thin holds. Only use the last "pad" of your finger (or fingertip) to grip these.
- Sloper – rounded hold without a solid edge. These are usually slippery, so hang low on these holds and try to palm it like a basketball.
- Pinch – think of a crab. Engage your thumb and your fingers by pinching together on either side of these holds.
- Pocket – these holds are essentially holes that can fit only a few fingers. Many climbers use two or three fingers for pockets. Do you prefer using your 2^{nd} and 3^{rd} fingers? Or 3^{rd} and 4^{th}?

Directionals: may be any of the above types of holds, but are used in a specific relation to your body.

- Undercling – a hold that may appear upside down. Get your feet up high and pull up on this hold.
- Side-Pull – most of the time we are reaching up, or up/diagonal for our next hold. These holds are to the side of our body, meaning we are not pulling *down,* but are pulling sideways.
- Gaston – how's your French? This action entails pulling away from your body in the same direction of the arm/hand you're using. For example, a right hand pulling to the right. Bend your arm into a "chicken wing" with your thumb facing down, and apply pressure away from your body.