Media Lab

STOP MOTION

LEARNING RESOURCE

AFTRS

Media Lab

CONTENTS: STOP MOTION

ABOUT AFTRS' MEDIA LAB

AFTRS MEDIA LAB provides accessible media arts resources to Australian primary and secondary teachers and students. MEDIA LAB will help build core creativity and storytelling capabilities that will be required for the jobs of the future. The Australian Film TV Radio School (AFTRS) is the nation's leading screen and broadcast school that delivers future-focused, industry-relevant education, research and training.

ANALYSING A STOP MOTION FILM

STOP MOTION ANIMATION

Noun
Stop motion animation (also called stop frame animation) is animation that is captured one frame at time, with physical objects that are moved between frames. When you play back the sequence of images rapidly, it creates the illusion of movement.

To **ANIMATE** something, means to make it move. Stop motion animation is all about making things move, that normally wouldn't. You are taking something that has no life of its own, and giving it a life and a story. You can use just about anything for stop motion. Simply making the pencil on your desk go on a short journey can be enjoyable to watch. Stop motion films are as fun to make as they are to watch.
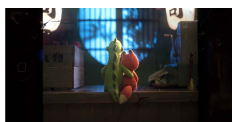
The main intention of any film is to tell a story that engages the interest of the viewer but stop motion films have an added layer. They are not only a story, but an artwork, a technical feat of magic. Something that otherwise would not move or be part of a story – is – because you made it so.

Stop motion films are essentially a series of photographs that are almost, but not quite identical. In each shot, one of your characters or props has moved slightly. When these photographs are played quickly, one after the other, your eye is tricked into believing that they are moving. This trick is possible thanks to persistence of vision.

PERSISTENCE OF VISION

Persistence of vision refers to the optical illusion whereby multiple discrete images blend into a single image in the human mind. It is believed to be the explanation for motion perception in cinema and animated films.

Some unusual examples to start with:

Lost & Found - Oscar Shortlisted (2018)
https://www.lostandfound.film/

Honda Ad – Paper (by PES)
https://youtu.be/vpyeQeTDGFA
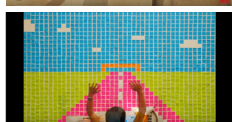
Deadline – Post-it Note Stopmotion
https://www.youtube.com/watch?v=BpWM0FNPZSs

Stop Motion Karate – (by Corridor) Human stop motion
https://youtu.be/MPNlg-cgLgE

There are many different techniques used in these stop motion films. Each will have a different effect on the way the story reaches the viewer and each will present its own challenges to the creator. Some stories are shot flat on a table or the ground with the camera pointing straight down from the top. Others are shot from the side as though the stop motion is in a little studio – just like a regular film shoot. Often they will use a variety of different materials or media to create something interesting.

Some of these include:

Clay – soft plasticine is the easiest option, you can mould and create characters quickly and easily. Professionals, like those who made *Shaun the Sheep* or *Wallace and Gromit*, use wire frames and a type of clay that you can bake hard (Sculpey is a good example of this).

Toys – Many stop motion films use small toys as their characters. Lego is a great example of a toy that can be manoeuvred easily to create a story.

Paper – there are a few ways to use paper in a stop motion. You can simply film a picture being drawn in a way that makes it look it is drawing itself. Post-it notes are another example – they can be placed on a wall in a way that looks like they are moving. Chalk drawings or a black board also work well because they can be easily erased and changed.

Human bodies – people can be used as stop motion characters, either lying on the floor or just standing up. The camera can make them look like they are doing all sorts of special effects simply by stitching the photos together in a unique way. Zach King's Vines are a great example of this.

Food – using food to create short stories on film is always fascinating. It can be easily moved, cut into shapes or even squashed and rolled.

BEFORE A FILMMAKER CAN MAKE THEIR OWN STOP MOTION, IT IS IMPORTANT TO WATCH SEVERAL AND DO TWO THINGS:

– BREAK DOWN THE ELEMENTS OF THE CRAFT SO THAT YOU KNOW HOW TO MAKE YOUR MEDIUM TO WORK FOR YOU.

– BREAK DOWN THE STORY SO THAT YOU CAN LEARN HOW TO CREATE SHORT IDEAS THAT WORK FOR THE STOP MOTION MEDIUM. EVERY FILM NEEDS AT LEAST SOME SORT OF SHORT STORY ARC.

But how do we analyse a stop motion film? Well, we do a focused viewing where we ask questions as we watch, taking notes and discussing what we find with each other at the end.

Some questions might include;

1 What materials have the filmmakers used to create the story?
  Examples could be clay, toys or people.

2 What is the story of the film? Who are the characters?

3 What style is used? Is it set to music? Does it have sound effects or narration or voice-over?

4 How is the camera used in this film?

5 What sort of set or location did the film use?

6 Did you like the film? Did it achieve what it set out to do?

Watch the short stop motion films and fill out the worksheet as you go, particularly focusing on ideas that you like and might use when you create your own films.

Suggested short stop motion films:

The Maker (a short film)
https://youtu.be/YDXOioU_OKM

Coldplay Strawberry Swing Music Video
https://youtu.be/h3pJZSTQqIg

Shaun the Sheep: Basketball Episode
https://youtu.be/XNBenfGaYa0

ETHICAL CONSIDERATIONS

When making a film there are several things a filmmaker must consider in terms of the ethics of storytelling. Ethics is "doing the right thing" and means that you must take into consideration other people's perspectives, how you handle the subject matter and the impact the documentary may have on the people in your film.

Ask yourself the following questions and discuss with your classmates:

What is your connection to the subject, whether it's an individual or community? Do you belong to this community? If not, are you the right person to tell this story? What is your intention when telling this story? Is it done with the permission of the person and/or community?

Remember if you are sharing a story about a particular community, it is very important to consult with diverse voices within the community, as a way of seeking permission from them to tell the story. Make sure one person's perspective is not skewing the representation of an entire community. The characters in documentaries will live their lives long after you've finished working with them, so it is important to consider how you represent them.

STEREOTYPES

When you are creating your characters, it is also important to avoid stereotyping a particular group of people. Stereotyping is when you make an assumption about someone based on their culture, race, gender, upbringing, social background and so on. Characters should not look or act a certain way based on these stereotypes or assumptions. Again, if you are writing a character from a community which is not your own, you should consult that community to make sure you are not creating an offensive character.

INDIGENOUS CHARACTERS AND THEMES

Australian storytellers who want to make a film with Indigenous characters, direct a documentary focusing on the Indigenous community, or write a script with Indigenous material need to be familiar with specific filmmaking protocols and practices. To learn more, review Screen Australia's Pathways and Protocols Guide:

https://www.screenaustralia.gov.au/about-us/doing-business-with-us/indigenous-content/indigenous-protocols

TITLE OF THE STOP MOTION FILM:

What material will you use to make this stop motion?

What is the story of the film in one sentence?

How is the camera being used to film this stop motion?

What is the setting of this film?
How has it been created?

Are there any special effects other than the stop motion? How do you think these were done?

What sort of music or sound effects are used in this film?

Is the film trying to sell something or make a point? What is it?

Is the film interesting and entertaining? Why or why not?

Does the film succeed in entertaining its audience?

After watching this stop motion film, what have you learned about what makes a good short stop motion film?

A VERY SHORT HISTORY OF THE STOP MOTION FILM

As you already know, stop motion works by creating the impression of movement. The static images, moving slightly faster than the eye can see, appear to your brain as though they are moving – this is what we call "persistence of vision". The speed of the images won't allow your mind to see them individually, but rather as a whole.

People have been experimenting with this for centuries but some of our first clearly documented versions of it come from the early 19th century in the form of very simple children's toys and side-show attractions. Here are some of the most well-known examples.

THE ZOETROPE

The zoetrope was a 19th-century optical toy consisting of a cylinder with a series of pictures on the inner surface that, when viewed through slits with the cylinder rotating, give an impression of continuous motion. Zoetropes have been found in artefacts from ancient China, but the ones you might have seen were created in about 1884 and are usually credited to a man name George Horner. The most well known example contains pictures of a horse in motion and when the wheel is spun, it looks like the horse is galloping.
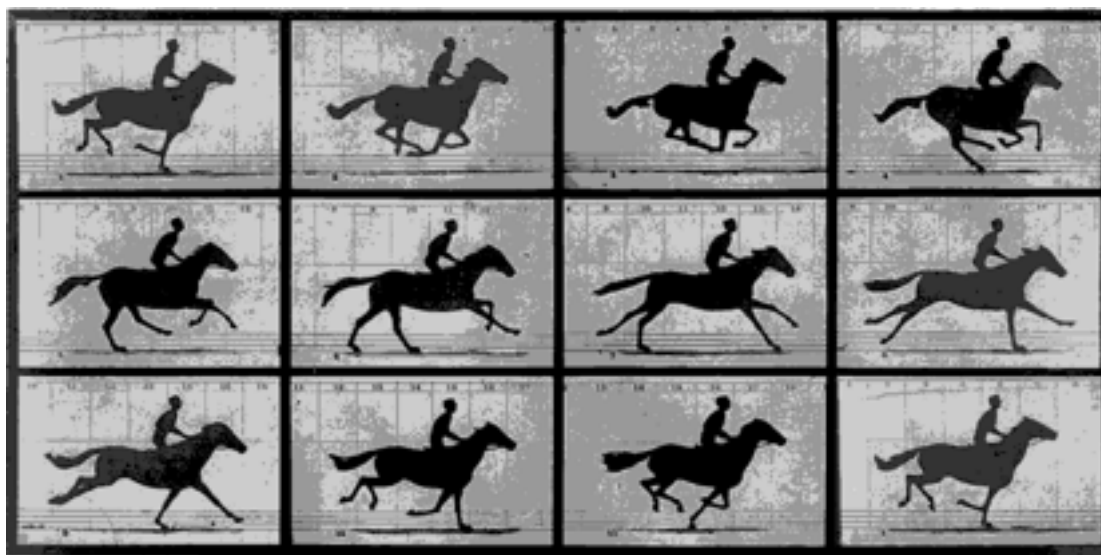
You can see that each image is very simple and is only slightly different to the one before. This means that each time the card flips passed, or rotates, there is one small change in the image the eye sees. This makes the movement seem far more smooth and the eye believes it more readily.

Another version of the zoetrope was called the thaumotrope and this was a scientific toy devised in the 19th century, consisting of a disc with a different picture on each of its two sides, these appearing to combine into one image when the disc is rapidly rotated. The most famous version of this is a picture of a bird cage and a separate picture of a bird.

When the discs are placed back to back and spun on a string – it appears as though the bird is inside the cage. It's a fascinating experiment into the way your eyes and mind work and you can try it for yourself on the worksheet provided.

▶ Here is a simple video showing a thaumotrope in action:
Mr Henry's Vids Bird and Cage Thaumotrope
https://youtu.be/46Mlr4hvW-E

THE MUTOSCOPE

The mutoscope is very similar to the zoetrope, but was more commercial. They were manufactured in the early 1900s and then placed in carnivals or movie theatres. People could put in a coin, turn the handle and it would spin a circular core and images would appear to move for the viewer.

FLIP BOOKS

Flip books are a very simple concept and have probably been around in some form or other for thousands of years, but the credit for bringing them into popular culture goes to John Barnes Linnett in the late 1800s. The idea is that a series of pictures are drawn or printed on the edge of a sheet of paper and when the papers are collated and the pages flicked, the images appear to move.

A great place to start with understanding and practicing stop motion animation is to make your own thaumotrope and flip book. They are simple, but fun and they let you really examine how the idea of persistence of vision works, on a personal level.

<div style="background:red;color:white;padding:8px">

ACTIVITY
MAKE YOUR OWN

</div>

MAKE YOUR OWN THAUMOTROPE

– Cut out the images below and punch a very small hole in the space that is marked.

– Glue the images back to back. The cage and the bird will be facing away from each other but you need to remember to put the bird **UPSIDE DOWN** so that it will appear to be up the right way when it spins.

– Tie some thin string to the holes and spin it in your fingers. The paper will spin and you can watch the images merge together. (You do have to spin the card fairly quickly for it to work).
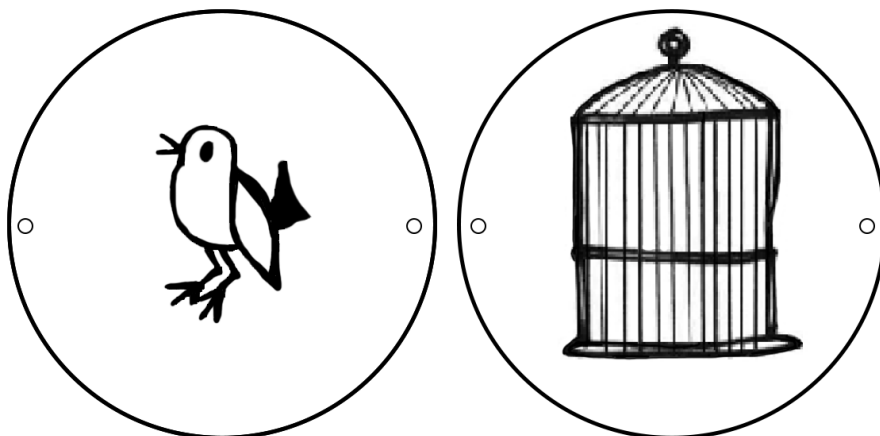
MAKE YOUR OWN FLIP BOOK

This is a simple set of about 20 small images that you draw and then cut and assemble in a way that you can easily flick with your fingers. Choose something simple to start with so that you can see how many images you need, what sort of changes to the image you need to make – and so that you can fix any mistakes easily, if you make them.

▶ This is a very simple example of one that was made using photos:
Tea Forte: https://youtu.be/wIG80aePh28

Here are a couple of examples of the sorts of images you could draw:
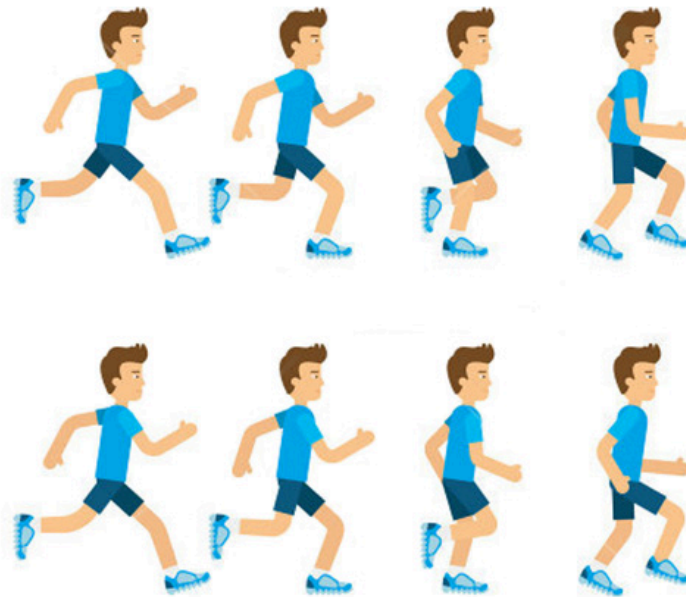
Now it's your turn. Use the spaces below to draw your images (use a pencil so that you can change them if they don't quite create persistence of vision). Cut them out and staple along the left hand side so that you can flip them and watch your tiny animation.

1		2	
3		4	
5		6	
7		8	
9		10	

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SIMPLE VIDEO STOP MOTION

The idea of the flip book can easily be extended onto the screen. One easy way to make a fun short animation is to use a blackboard and chalk (or a whiteboard and pen... or even a piece of paper and a marker pen).

By using your iPad/tablet camera, you can make it seem as though the images are being drawn by themselves. Have a look at these examples of stop motion films that have been drawn by hand. They can be very simple – or quite complex works of art.

▶ **Jocelyn Fawkes "A Short Film"**
https://youtu.be/hLkXEGeAFIw

▶ **Jonny Lawrence "The Markers Maker"**
https://youtu.be/6vZ0iqUS6sg

▶ **Aaron Blaise "Trunk Troubles"**
https://youtu.be/6i9jJsPH-L0

Now it's time to make your own tiny film: **THE OBSTACLE**.

Plan a very simple story using the following guidelines:

1   Create a simple character that you can draw easily.

2   Your character needs to get from the left of the paper/board to the right.

3   Something is trying to stop it.

4   How does your character find their way through the obstacle to the other side?

MY CHARACTER NAME:

The obstacles my character will face:

How will my character make it through the obstacle?

Get your equipment ready. You will need:

- Paper/board
- Pen/pencil/markers/chalk
- Tablet, iPad or camera
- Tripod
- Stop motion software (iStop motion is a great one, but there are lots of these. Just choose one that has the 'onion skin effect')

THE "ONION SKIN EFFECT" IS A GRAPHICS TERM FOR A TECHNIQUE USED IN CREATING ANIMATED CARTOONS AND EDITING MOVIES TO SEE SEVERAL FRAMES AT ONCE. … IN COMPUTER SOFTWARE, THIS EFFECT IS ACHIEVED BY MAKING FRAMES TRANSLUCENT AND PROJECTING THEM ON TOP OF EACH OTHER.

Set up your camera so that your board/paper takes up the entire screen with no visible edges. As you begin to draw, take photos of every single step along the way. The more photos you take the less jerky the movement will be. This is called your 'frame rate'. The typical frame rate for a stop motion film is 24 frames per second. This means that for 10 seconds of film, you should have about 240 photos. The onion skin will allow you to see what the last photo you took looks like and you can prepare for your next photo so that it lines up accurately.

Try a few small drawings to start with and watch them back and then as you become aware of how the process works for drawings – start your obstacle course film.

When you have finished, you might like to upload your film to some editing software and add some simple music or sound effects. When you are ready – share it with your class and get some feedback on what you did well and what you could have done better. And whenever you make something, take a moment to document what you have learned.

While making my tiny film 'The Obstacle', I learned the following things about stop motion animation:

SIMPLE STORIES FOR STOP MOTION

While many of the things you know about story are still important for stop motion, it is a complicated medium and so it is important that the story you are trying to tell, particularly as a beginner, is simple and easy to follow. Here are some guidelines to help you plan your stop motion stories.

MAKE SURE YOUR STORY IS STRAIGHTFORWARD AND UNCOMPLICATED

It's always tempting to have a plot with an entire cast of characters and lots of plot twists and turns, but in stop motion animation, much of your effort will go into actually executing your idea. The creation of the characters and backgrounds and the time-consuming photography means that it is very important to keep your story and the characters within it, simple. If your story is getting out of control, you might need to create some limits – perhaps you limit yourself to one set (one location), two or three characters and only one obstacle or problem they have to face.

MAKE SURE YOU CAN PITCH IT TO THE CLASS IN ONE SENTENCE

Pitching is when you try and convince a group of people that your idea is a good one. People want this to be very short and very simple. This is why it is a great idea to pitch your stop motion ideas to the class, or at least to a friend. If you can narrow what happens down to one simple sentence, then you know that you have an idea that is going to be achievable. Pitch it to you friend, or the class or the teacher and get some feedback. If there are holes in your plot, they will help you find them. Here are a couple of examples of one sentence stop motion pitches:

1   A rabbit has a race with a turtle and loses because he stops to eat carrots.

2   Two friends want to reach the lollies on top of the fridge and realise they will have to work together if they want to succeed.

3   A farmer tries to catch the worm who is eating all the apples but the worm is too smart.

4   A person wants to climb Mt. Everest but forgets to pack the most important thing – clean socks.

Why don't you try it? Take a moment and come up with 5 very simple ideas that could make great one minute stop motions films. Write a one sentence pitch and share it with your group/partner.

1 _____

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2 _____

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5 _____

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CHARACTERS

It is important to have simple, but interesting characters for your short films. They need to be ones you can create (in whatever medium you choose) so don't make them extremely complex. But it is also important that they engage your audience. Think about some of the different ways you could make a character interesting. Give them a back story, give them some interesting physical characteristics. Stop motion is very much about visuals, so think of interesting ways to make your characters unique.

A great example of this is the children's TV show 'Bottle-top Bill' which uses characters made out of scraps of rubbish.

Kids TV 'Bottle-top Bill'
https://www.youtube.com/watch?v=x4M5u2UwRgE

Now draw or design one of your own characters for your film, making it simple – but interesting.

MY CHARACTER NAME:

MAKING A STOP MOTION FILM WITH PAPER AND FOOD

Sometimes the simplest materials make the most interesting stop motion films. The challenge for you is to make a very short stop motion film with everyday objects – post-it notes or food. When you have a limited amount of freedom in terms of your materials, you have to expand your creativity in terms of story.

POST-IT NOTES

Here are a few examples of people working with post-it notes to create something simple, but fun and of course, most importantly – the behind the scenes to show you how it was done.

▶ **Bunliu 'Deadline'**
https://youtu.be/BpWM0FNPZSs

▶ **Bunliu 'Deadline – the making of'**
https://youtu.be/ArJYvaCCB3c

So – now it's your turn. In groups of 3-5, take your package of post-it notes and start the brainstorming. What can you achieve in just an hour with a camera and some paper? It might be a simple story about two post-it notes meeting, or trying to get over a wall, or it might look a little like an old-fashioned computer game. Whatever you come up with, make it simple and fun.

FOOD AND STOP MOTION

Lots of people have made stop motion films about – or using – food. Here are some examples from PES that use everyday items to look like food.

▶ **PES 'Fresh Guacamole'**
https://youtu.be/dNJdJIwCF_Y

▶ **PES 'Western Spaghetti'**
https://youtu.be/qBjLW5_dGAM

Watch the film 'Submarine Sandwich' by PES and make a list of all the different objects used by the creators to represent food.

▶ **PES 'Submarine Sandwich'**
https://youtu.be/EWEl8-PHhMI

ITEM	FOOD IT REPRESENTS

You can use food to make simple recipe stop-motions like these ones:

▶ **Alpokofilm 'Stop-Motion Cookie'**
https://youtu.be/6Bq-h3kdlq4

▶ **Alan Travers 'Stop-Motion Biscuit Cake'**
https://youtu.be/3XKz9OroWHU

Or you could use food to represent other things entirely.

Use just foods to create a very short stop motion film. Use them creatively – they don't have to represent food and you could cut them up to make them more versatile for stop motion.

What foods are you using?

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What are you going to do with the foods in your stop motion to make a small story?

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Share your post-it and food films with the class and take a vote on which films you like the best.

Which film did you like the best? Why?

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SECTION 6

USING YOUR BODY TO CREATE A STOP MOTION FILM

One of the really fun ways to make a stop motion film is to use your own body. Stop motion can be used to create special effects that make you look as though you can fly, walk through walls and a host of other things.

Someone who does this very effectively is Vine star Zach King. Have a look at a few of his very short stop motion clips to get some ideas for your own.

▶ **Zach King 2016 Compilation (teachers can choose a few minutes to share)**
https://www.youtube.com/watch?v=W8A2X12KODU

The team at Corridor also create some interesting stop motion films just using their bodies and lying on the ground. Obviously for this sort of stop motion you need to be able to film from above which may not always be possible or safe at school, so always consider what is possible with the space and equipment you have.

▶ **Corridor 'Parkour'**
https://youtu.be/g3p2TZ5q9to

▶ **Corridor 'Stop Motion Karate'**
https://youtu.be/MPNlg-cgLgE

And have a look at this great use of the human body in the 'Human Skateboard' video by the team at Sneauxshoes:

▶ **Sneauxshoes 'Human Skateboard'**
https://www.youtube.com/watch?v=MtbQ4J3RfQ8

It's a good idea to have a few people in a group for human stop motions. You can work together to make a tiny film that is fun to watch and make. With your group consider the following questions and begin to plan your film.

1   What does it look like when I take photos of a person moving and stitch them together?

2   How can I use this to create something that is different to a regular film?

3   What can I make the human body do with stop motion, that I can't without it?

4   What would be fun for my audience to watch?

Describe your idea here:

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It can be very valuable when you are creating something complicated like human stop motion to create a shotlist so that the director can make sure that they have taken all of the shots they need to complete the film.

SHOTLIST: A SHOT LIST IS A DOCUMENT THAT LISTS AND DESCRIBES THE SHOTS TO BE FILMED DURING PRINCIPAL PHOTOGRAPHY

Fill out the shotlist with the requirements for your human animation and tick off the scenes as you film them.

SHOT NO.	LOCATION	SHOT DESCRIPTION	COMPLETED
1	Basketball court	Computer game simulation: Looking down on Luke who is lying down and 'walking' towards the south end of the court.	✓
2	Basketball court	Computer game simulation: Ghost comes down from 'above' (side of court) to attack.	✓

COPYRIGHT AND SAFETY ON SET

SAFETY ON SET

A film set can be a very dangerous place to be, even a simple one. There are cords and electrical equipment everywhere and there are tripods and props just waiting to be tripped over. It is important as a filmmaker to think about risks and plan to avoid them before you start production of your stop motion. This is called a 'risk assessment'. You think about the things that could go wrong with the stop motion you are planning to make, the locations, the actors and the props, and then you write a plan to avoid it. It is important too, to look at how high the level of risk is, if you have something that is very high risk (like hanging out of the back of a car to capture a shot) – it might be best to change the plan entirely. It's just not worth hurting someone. Here is an example of the way risk levels work:

LEVELS OF RISK

LOW - - - - - - - - - - - - - - - - - Small problems may occur that are unlikely to hurt anyone

MODERATE - - - - - - - - - - - People could be hurt if steps are not taken to make things safe

HIGH - - - - - - - - - - - - - - - - It is likely that someone will be hurt

EXTREMELY HIGH - - - - - People may die if the situation is not changed

HERE IS AN EXAMPLE OF A RISK ASSESSMENT

WORKSHEET: RISK ASSESSMENT		NAME:	
RISK	LEVEL OF RISK	ACTION TAKEN	NEW RISK LEVEL
Sunburn from exterior location	Moderate	All crew and cast must wear sunscreen and when possible hats	Low
Camera person may get hit with the football while shooting the scene.	Moderate	Extra crew member tasked to watch for the football so camera person can feel safe when shooting.	Low

Now write your own risk assessment for your stop motion. Identify 4 things from the list that might be a problem for your film, fill them into the risk assessment worksheet and write a short plan for how to avoid these problems.

RISK	LEVEL OF RISK	ACTION TAKEN	NEW RISK LEVEL
1			
2			
3			
4			

Australian Government

MAKING A STOP MOTION SHORT FILM

Now that you have had some practice with stop motion techniques, it is time to make your own stop motion short film. The first thing you need to decide on is a medium – what are you going to use for your stop motion. Will it be:

- Human actors

- Clay figures

- Toys

- Building blocks like Lego

- Paper cutouts

- Drawn figures

- Everyday objects like food or cutlery

- Natural objects like leaves and stones

- Something else completely

Any of these things will work. All you need to do is move and photograph them to make even something like a fork appear to be moving on its own. Be imaginative and see how far you can push the 'persistence of vision' magic.

Choose your perspective. Will you film downwards onto the ground so that you are looking at characters from above? Or will you shoot horizontally? You also need to choose a scale – you can make your story as small as you like or as large as you can fit into your frame.

Once you have decided your perspective and scale you'll need to think about your set. The great thing about stop motion is you don't need a lot of props. If you are shooting horizontally you can draw a picture or use a large photo as your background. If shooting a little from above, you'll also need to design a floor or the ground for your action. You can also use a plain black or white tablecloth so you don't have edges on your set and the focus is just on your animated items. The idea is to start with the resources you have available and experiment.

The next part of the process is to write your story. With your group spend some time planning your characters and story using the template provided.

Group Members:	Characters in your film (try to stick less than 4):	Description of your set/ background:
One-sentence pitch:	Basic breakdown of the story in point form:	Resources needed for the film:

STORYBOARD YOUR SCRIPT

You don't always need to write a full script with a stop motion film because much of what you are creating will be visual rather than dialogue based. However, it is very useful to storyboard your film in advance.

STORYBOARD: A SEQUENCE OF DRAWINGS, TYPICALLY WITH SOME DIRECTIONS AND DIALOGUE, REPRESENTING THE SHOTS PLANNED FOR A FILM OR TELEVISION PRODUCTION.

You don't have to be an artist to draw a storyboard – you can use simple stick figures if that is easier. It just has to show what action is taking place in what part of the screen and describe how you want the sequence of shots to go during filming. Here is a sample storyboard for you to look at. This simple storyboard shows when the director wants a close-up or a mid-shot or a wide shot. It shows how they want the character to sit within the frame and it shows what action is taking place.

AUSTRALIAN FILM TELEVISION & RADIO SCHOOL
STOP MOTION
MEDIALAB.AFTRS.EDU.AU
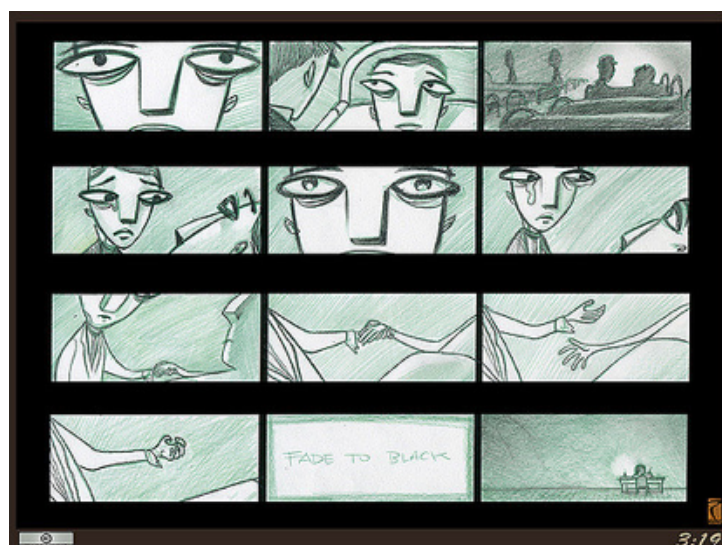
Your turn. Create a storyboard with your group for your short stop motion film.
Once you have your storyboard it will be time to create your set and characters.

Action/Notes

Action/Notes

Action/Notes

Action/Notes

Action/Notes

Action/Notes

Action/Notes

Action/Notes

TIPS FOR SHOOTING YOUR STOP MOTION SHORT FILM

1 PRACTICE

Before you start filming your story, take a series of photos to see how your set and characters look. Try a variety of angles and try close-ups as well. Make sure you are happy with the way the light falls on your set. If not, move the set or the lights to a better position. Make sure you have room to move your hands in and out of the set and that your characters are strong enough (if they are clay, paper or toys) to withstand being moved around for a few hours. Once you are comfortable with the scenario – it will be time to start filming. Use your shot list and storyboard to make sure that you are capturing everything you need.

2 MAKE SURE YOUR CAMERA ISN'T CAPTURING THINGS YOU DON'T WANT IT TO.

Sometimes while you are busy watching the action, you don't notice that the camera is also capturing other things in the background and this will distract your viewers. Check that your framing only captures your set and nothing extra and check on it quickly every time your take a photo to make sure it hasn't moved.

3 MAKE SURE YOU TAKE ENOUGH PHOTOS

About 24 photographs will make up one second of film. So, it is useful to take TWO photos of every movement and keep your movements small – about 12 movements for every second of film. The reason it is important to keep your movements small is because bigger movements make the action look faster, but jerkier. Smaller movements look smooth and realistic.

4 KEEP YOUR FINGERS OUT OF THE MOVIE.

Sometimes you can start to move a little too quickly and the camera person can get a picture of the hand or fingers of the person moving the characters around. Keep an eye out for fingers or hands in the shot and delete those photos as you go. It can also be useful to have a set of on-set commands to avoid this situation. Try something like "ready" or "action" from the person moving the characters so that the camera person knows when to take the photograph.

One very valuable exercise for a filmmaker is to keep a production diary of the work they are doing. It not only helps them keep track of the process, but is also something to look back on so that they can learn from their mistakes and successes for the future.

The diary can be in a personal style but should be technically detailed as well as describing what parts of your film you completed and what you still need to complete.

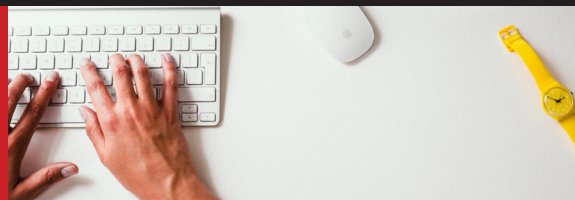## MY PRODUCTION DIARY

NAME: **DATE:**

NAME OF PROJECT:

AUSTRALIAN FILM TELEVISION & RADIO SCHOOL
STOP MOTION
MEDIALAB.AFTRS.EDU.AU

Australian Government

EDITING AND USING SOUND IN A STOP MOTION FILM

Once you have completed shooting your stop motion film it is time to edit it. To do this you will need to save your footage and move it from the camera to the computer. If you are using a tablet this will involve moving the files from the stop motion software, to the film editing software. You will need to upload the footage to video editing software and then you can add in some extra things to make your film look polished and professional. Make sure you keep backups of your footage in case you lose it due to technical or human error.

Speed: Check the speed of your film. Is it jerky and so fast that you can't even see what is happening? One thing you can do to make it better is double the amount of photographs. Most stop motion programs will have a function that allows you to duplicate every single photo at once, making everything slow down and look slightly more realistic.

Titles and Credits: One of the first things you can do is add in a title slate with the name of the film and possibly the names of the creators. Then, at the end of the film you can add a complete list of the people involved and the jobs that they did.

Voice-Over: If you are planning to give your characters voices now is the time to do that. You can do it simply – by recording in a quiet space using the video-editing software microphone and recording straight over the film. For this you might use the built-in computer/phone/tablet microphone or you could use a simple USB plug-in microphone or mic-headset. Alternatively, you could use your microphone and record sound to a program like Audacity and then layer it over the top of the film later. This will provide better quality of sound, but will be more time-consuming and require a higher level of skill.

Sound effects: Most editing programs will have a library of sound effects that you can use to enhance your film. These make a lot of difference in creating a believable and enjoyable film. Does you character run into a wall? Add in a crashing or bumping sound and it will feel much more believable. Is your character a slug? Then whenever your character is moving – add in a slimy slurping noise. It will create a more intense experience for the audience. If you can't find what you need you can always make it yourself, or use a free database of sound effects like:

www.freesound.org
www.freesfx.co.uk

Music: The last thing you need to add in is your sound track. Make sure you adjust sound levels so that it doesn't drown out your voice-over or sound effects. Pick something in the same genre as your story – for example something light and fun for a comedy or something dark and heavy for a horror film. Most editing programs will have a few free soundtrack options, but if you want to look elsewhere there are some great free soundtrack options online.

www.purple-planet.com

Use this Editing Checklist to make sure you have done everything you need to:

JOB	PRE-EDITING NOTES	
E.g. sound effects	Rabbit jumping	✓
	Rabbit eating carrot	✓
	Gunshot	✓
Speed		
Titles and credits		
Voiceover		
Sound effects		
Music		

PRESENT AND PROMOTE YOUR STOP MOTION FILM

Once you have finished your stop motion film it is important to step back and evaluate what you have learned and what you think of your final product. Don't be too hard on yourself – making any film is a challenge and stop motion films are very difficult to perfect. It's important to be proud of what you have achieved so to celebrate your creation, why not make a poster for your film and put it up in the classroom before you have a class screening of the your main film?

First of all take a look at a couple of example film posters online to see the way they feature images, text and how they use words to convince people to see their films. This is where your one-sentence pitch will come in handy.

Think about your film and answer the following questions:

1. What is an engaging title for my film?

2. What is my one-sentence pitch?

3. Which image from the film should I take as a still and use for my poster? Why this one?

4. Many film posters quote positive reviews from people who have already seen the film. Ask a friend who has seen your film to write a one-sentence review to advertise your film. Write it down here.

5. Make sure you have an accurate list of the all the people involved in the film to put at the bottom of your film poster. Write it here in a list (if it was just you… that's fine, put your name down for each of the things you did):

Producer – organised the entire film _____

Director – operated the camera and chose the shots _____

Actors – provided the voices for the animated characters _____

_____

Music – selected and added the music to the film _____

Animators – created the characters, props and backdrops _____

Writer – wrote the script _____

6. Finally, before you make your poster, make sure you've thought about its overall 'look and feel'. In other words, make sure the font, the colours and the style matches the story. Is it a comedy? Make it light and colourful. Is it a horror film? Make it dark with a jagged font and harsh colours. Pick the look that is right for your film and describe it here.

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YOUR ONE SENTENCE PITCH GOES HERE AT THE TOP

MAKE SURE YOU ADD IN THE DATE LOCATION OF YOUR CLASS SCREENING

PUT A PICTURE FROM YOUR FILM HERE

ADD IN THE QUOTE FROM YOUR FRIEND HERE AND MAYBE EVEN A 'STAR' RATING

CREDITS - LIST EVERY JOB HERE AND NAME THE PEOPLE WHO WERE INVOLVED. THIS CAN BE SMALL