

## LESSON PLAN

# INTRODUCTION TO STOP-MOTION ANIMATION

This lesson is part of *USE, UNDERSTAND & ENGAGE: A Digital Media Literacy Framework for Canadian Schools*: <http://mediasmarts.ca/teacher-resources/digital-literacy-framework>.



**LEVEL:** Grade 1 to 3

**ABOUT THE AUTHOR:** MediaSmarts

## Overview

In this lesson, students learn how animation works and make simple flipbook animations. They are then introduced to the pre-production, production and post-production process by planning and making a shot stop-motion animation. The lesson ends with a film festival of students' videos.

## Learning Outcomes

*Big ideas/key concepts:* Students will understand that...

Media are constructions

- Media works are the result of work and conscious choices by creators

Each medium has a unique aesthetic form

- Video media, such as animation, create the illusion of movement through many slightly different still images

*Key questions:*

- How does animation look like movement?
- What choices do we have to make to make a good animated work?

*Essential knowledge:* Students will know...

- Reading media: Basics of animation
- Media representation: How social media represents our friends, peers and celebrities
- Media health: How media representation of peers and celebrities affects our body image and self-esteem; how to manage the impact of social media on our well-being

Key vocabulary: Animation, pixilation, storyboard, frame

*Performance tasks:* Students will be able to...

- Use: Make an animation
- Understand: Analyze the qualities of a good animated work

*Student-friendly outcomes:*

- We will learn that movies, videos, and animations are made by real people who make careful choices about what to show us.
- We will learn the basics of how animation works and why it looks like pictures are moving.
- We will learn what choices we need to make to plan and create our own animation.

## Preparation and Materials

- Watch the [Instant Expert video on teaching stop motion animation](#).
- Prepare to show the videos [Stop-Motion Animation: Production](#) and [Stop-Motion Animation: Post-Production](#).
- Prepare to show the slideshows [Introduction to Stop Motion Animation](#), [Let's Make Flip Books!](#) and [Stop Motion Animation Stage #1: Planning](#).
- You may wish to try creating your own flipbook ahead of time, which can serve as an example for your students.
- If possible, provide students with small square bound notebooks for the flipbook animation activity. If that is not possible, you can have them use index cards or even the corners of any kind of exercise book. (It's important that the paper not be too soft, so that it will turn crisply when flipped.)
- Print enough copies of the [Stop-motion Animation Checklist](#) and [Storyboard template](#) for each team (one copy for every 4-5 students) plus a few extra copies of the Storyboard template.
- Provide cardboard or other material for making video backgrounds.
- If students are not able to draw backgrounds, you can download and print these:
  - [Desert background](#) by GigiStudio9 ([Creative Commons license](#))
  - [Jungle background](#) by Dewlshock ([Creative Commons license](#))
  - [Forest background](#) by Ackuray ([Creative Commons license](#))
  - [Snow background](#) by Kurt Kaiser ([Creative Commons license](#))

- Provide plasticine or modeling clay. (Alternatively, you can use small toys instead if you have them available. It's best if the toys are all on more or less the same scale, such as Lego figures.)
- Though not required, iPads will be the easiest device to use for creating Stop Motion Animations. Other device possibilities that will also work are tablets, iPhones or Chromebooks.
  - The basic idea is that each group of 2-3 students will need a camera to capture a photograph/frame after another, without anything moving but the clay characters. The iPad, tablet or phone will need to be anchored or secured to the table, so as not to move during the creation process.
  - See image below, with the iPad clipped into a clip, and then screwed into a tripod. A few DIY options for securing your devices can be found on the [StopMoGo website](http://StopMoGo website).

**Optional Light: Additional lighting if you are in dark room, or if you want to avoid shadows.**



- Note: You don't necessarily need a "professional" version of any of these. You can do stop-motion with a phone instead of a tablet and make a stand out of Lego blocks or similar materials instead of using a commercial stand.
- A few examples of stop motion animation apps are [Stop Motion Studio](#) and [Clapmotion](#). You can find more examples at AlternativeTo.net.
  - **Note: The section "Post-Production of a Stop-Motion Animation" uses the app Stop Motion Studio as an example. If you are using a different app, you may wish to skip or modify that chapter.**

## Procedure

### INTRODUCTION TO ANIMATION

Project the first two slides of the [Introduction to Stop-Motion Animation](#) presentation and introduce them to the word "animation."

Project the next slide and ask if they are familiar with these movies:

- *The Lion King*
- *The Lego Movie*
- The "Wallace and Gromit" series (this image is from the short *A Close Shave*)
- *Toy Story*

Explain that these are all examples of animation:

- *The Lion King* was made using hand-painted "cel" animation
- *Toy Story* was made with computer animation (which is now the most common kind of animation)
- The "Wallace and Gromit" movies were made with stop-motion animation
- *The Lego Movie* was made with a mixture of stop-motion and computer animation.

Project the next slide and explain the basic "rules" of animation:

- Start by taking a photo (or making an image by drawing or painting it, or making it on a computer)

- Move what's in the image just a little bit
- The two arrows mean to repeat that process:
  - Take another photo after you've moved it
  - Move it a bit more
- And keep doing that until you have moved what's in the image through the whole movement you want to show.

When you're done, you can press "Play" to see it move!

Project slide 5 to show the video [Flipbook Example](#).

Explain that this is an example of a kind of animation called pixilation – the person in the video moved just slightly between each photo.

Tell students that this is where the word "movies" comes from – all videos, not just animation, use the trick of showing many still images to make our brains think they see movement.

## FLIPBOOK ANIMATION

Now give students their flip book materials and show the presentation [Let's Make Flip Books!](#)

Show the first two slides and have students think of a simple shape that's easy to draw, like a ball, a star, a heart, or a fish.

Have them go to the last page of whatever they're using for their flip books, and draw the shape near one of the page edges.

Show the third slide. Have students go back one page, then draw the same shape a bit away from the page.

Have them repeat the process twenty-four times.

- If student ask "Why twenty-four?", explain that film is shot at twenty-four frames per second – so they have just made one second of good-quality animation.

If students finish their flip-book early, you can ask them to add colour if there is extra time.

Once every student has finished their 24 drawings, show the fourth slide. Have students flip the pages with their thumbs to see the drawings move.

- Some students may have difficulty flipping the pages successfully. Tell them to hold the book along the left edge and flip along the right.
  - If they still have difficulty, you can do it for them or identify which students are best able to do this and have them help others.

If you want, you can have students form pairs to show each other their flipbooks, or ask a few volunteers to show the rest of the class what they created.

If you are stopping the lesson here, you can use an animation app to turn the flipbooks into videos by taking a photo of each page. You can then have a mini-film festival if you choose.

## PLANNING A STOP-MOTION ANIMATION

Project the first two sides of the [Stop Motion Animation Stage #1: Planning](#) presentation and tell students that you are now going to plan a stop-motion animation.

Distribute the handout [Stop-motion Animation Checklist](#) and go through the three steps of making an animation: storyboard, animation, and post-production.

If students have not seen examples of stop-motion, explain to them that it works by taking pictures of real things (like the pixilation example they saw) but uses objects like toys, models or clay characters.

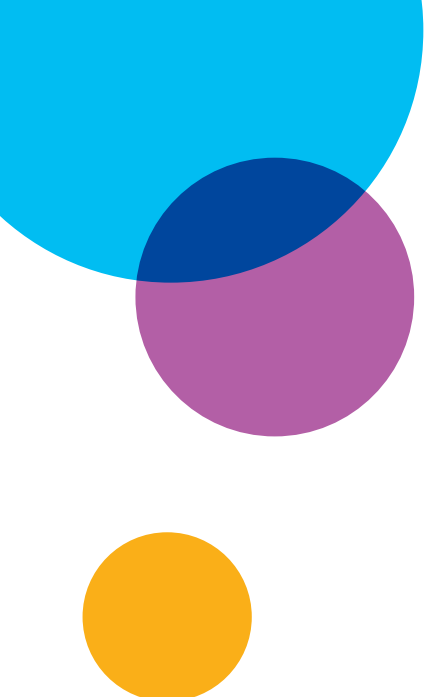
Explain that the steps will be:

1. Making teams
2. Making or choosing a background for the video
3. Making clay characters or choosing character toys,
4. Making a story board or plan for the animation

Ask students if they have ever done a similar exercise, in class or elsewhere. If so, ask them to reflect on what has changed since the last time they did.

Divide the class into teams of three to six students.

**Note:** For very young students, you may wish to make this a whole-class project instead.



If you wish to do a shorter lesson, you can have students make pixilation videos which use people instead of toys or clay figures. This will allow you to skip straight to the storyboard stage.

- If you choose to have students make pixilation videos, you may wish to show them the classic short film [Neighbours](#).

Project slide 3. Explain to students that having a **background** makes your movie set really “pop” compared to seeing the classroom behind your characters.

Provide students with cardboard, construction paper or other materials and crayons or makers, and have them draw a simple background of their choice such as:

- a park
- a beach
- a forest
- a winter landscape

Make sure students understand that backgrounds **do not sit flat** with characters on them – they stand up like a wall **behind** the characters.

If students are not yet able to draw backgrounds, you can print the downloadable backgrounds in the Preparation and Materials section at the beginning of this lesson plan.

Next, project slide 4. Tell students to decide who their main characters will be. There should be at least two but no more than four.

- If students are using toys or models, they can choose from the available ones.
- If students are making characters out of clay, they need to make sure they are able to build the characters.
- If possible, characters should fit the background. For instance, a park scene might have a squirrel as a character.

If students are making characters out of clay, show slide 5 and go through it with them, then give them time to make their characters.

Distribute the Storyboard handouts and explain to students that storyboards are used to plan before filming. Every movie, TV show, or cartoon they ever saw was once a storyboard!

- Tell students to use the boxes for quick drawings and use the text lines for a few short sentences describing what is happening. Depending on students' ability to write and draw, you may have each group choose one student to do the drawings and another to write the description.
- You may also want to have the whole class complete the storyboards together on large paper.
- If students are not yet able to write descriptions, have them describe to you what is happening in each frame of the storyboard.

Encourage students to keep their stories very simple: Tell them they are allowed to say "And then" twice, as in "Mary and Peter walk to the park, **and then** start to have a picnic. A squirrel jumps on their blanket, **and then** Mary and Peter run away."

Once each team has:

- An animation background,
- Characters built of chosen
- And completed storyboard

Students are ready to begin the Production Stage of our Animation Workshop.

## PRODUCING A STOP-MOTION ANIMATION

Begin by playing the video [Stop-Motion Animation: Production](#). Pause the video at 2:02 and ask:

- Why do we use an anchor for the tablet?" (*Answer: So that it does move when we take a picture.*)

Resume playing the video. At 5:55, pause again and ask:

- How much do we move the characters between each frame? (*Answer: About the size of an ant.*)

After the students have watched the video, have each group assign starting roles:

- Photographer (who takes pictures on the tablet)
- Animator (who moves the characters)
- Director (who watches to make sure everything is set up right before the photographer takes each picture)

If possible, provide an animation station (tablet and tripod) for each station.

Now give students time to make their animation.

- Make sure students know how to save a project on the app.
- Have students start filming their animation by taking ten pictures (shooting ten frames) without movement.
- Next, have students shoot ten frames with movement.
  - Remind them that they are telling the story in their storyboard, but that they will have one hundred shots to tell it with – so each part of their story should be around thirty frames.
- Have students change roles after every ten frames, to make sure that everyone gets a chance to do each role.

If students have finished early, they can review their animation to see if anything needs to be changed.

If you are ending the lesson here, have students export their animations. You can either have them show the animations on the tablets in small groups, or upload them to a school account and project them for the class.

## POST-PRODUCTION OF A STOP-MOTION ANIMATION

*Note: The following expert video specifically demonstrates features of the Stop Motion Studio app. If you are using a different app, you may need to demonstrate how those features work yourself.*

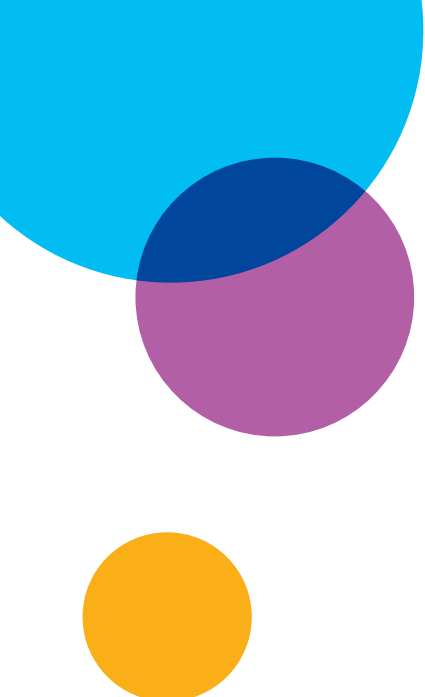
If using the Stop Motion Studio app, show students the video [Stop-Motion Animation: Post-Production](#).

Pause the video at 1:31 and ask:

- “What button do we press to record sound?” (*Answer: The Microphone button*)

Continue to play the video. Pause again at 3:37 and ask:

- How do we add frames when someone is talking? (*Answer: Tap on the first frame and then tap Pause.*)



Press play and show the next part of the video. Pause again at 6:38 and ask:

- What button do we press to add sound effects? (*Answer: The Plus button.*)

Continue to play the video. Pause again at 13:24 and ask:

- What do we put in the Credits? (*Answer: The names of the people who made the video.*)

When the class has watched the video and answered the questions, have them add a title, audio (voice, sound effects, and/or music) and credits to their videos.

Once each team has:

- Added a title,
- Added credits,
- Added voice, sound effects, and/or a music track,
- Reviewed the animation and are happy with it...

Have students export their animations. You can either have them show the animations on the tablets in small groups, or upload them to a school account and project them for the class.