

### Learn basic animation using the Stop Motion app

Stop-motion animation has a long history in Hollywood from films like *King Kong*, *Coraline*, and *Fantastic Mr. Fox*, but it can also be a *fun and relatively easy weekend art project!* Stop Motion is intuitive and easy-to-learn. It's a perfect tool to get students to learn about the art of animation and unleash their creative storytelling and filmmaking potential. Animation can be an affective learning tool to the development of students' understanding of creating. It enables students to apply imagination and rational thinking with artistic literacy to enhance learning in other content areas.

Animation is a series of still images that play back rapidly. If we see enough still images per second, our brain blends them all together into smooth motion. Stop motion (also known as stop action) is an animation technique to make any object or image you choose appear to move on its own. The object or image is moved or manipulated slightly in small increments and captured in individually photographed frames. This creates the illusion of movement when a series of frames is played as a continuous sequence.

Attached to this CORD worksheet is the Stop Motion manual, which we will refer to from time-to-time. This manual can also be found online at:

<https://www.cateater.com/support/en/stopmotion/stopmotion-main.html#Where%20do%20I%20begin?>

#### *Download and install Stop Motion*

Using an iPad or iPhone, download and install the **Stop Motion** app from the Apple store.

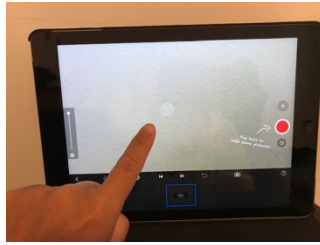
It's a good idea to wipe the camera lens clean before getting started to ensure your shots will be clean. Then, place your iPad or iPhone on a tripod, rig, or any apparatus that would keep it steady and stable.

#### *Adjust your camera settings*

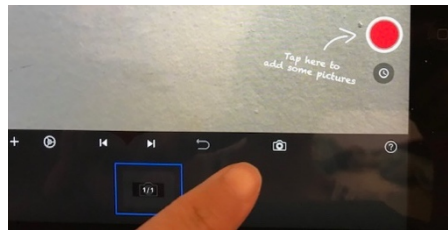
Now that you've installed Stop Motion, tap on the app to open the program. Tap on **New Movie** to create a new movie project. For this activity, we will create a simple animated text, "I LOVE SCHOOL!" by writing the text one letter at a time on the classroom white board.

1. Setup your camera lens so it frames the white board. Make sure you have the ideal frame space to fit the text animation we will create.
2. Set your focus. For this particular activity, we begin with a blank white board i.e. the white board is the first shot. Simply tap your finger in the middle of the screen to set your focus. As

you do, a circle will appear where you tapped to set the focus. In future projects where you begin with a subject, set your focus on the subject.



3. Set your camera's mode. On the home screen, click on the **camera icon**.



To adjust your camera's settings, click on **M**. This will take you to the different exposure settings (Auto, AL, P, M). For this exercise to learn basic animation, it's suitable to set the camera on **Auto or AL**. However, if neither of these modes look right on your screen, e.g. if the shot is too dark or too bright, feel free to move on to the other modes.

#### Camera modes

**AUTO:** In automatic mode the camera will continuously adjust focus and exposure. A fully automatic mode may be best for beginners but will result in a movie with more light flickering.

**AL:** In automatic locked mode, a tap on the screen will lock exposure and focus. This is best for beginners. AL mode allows you to adjust exposure.

**P:** In program mode, a tap on the screen will change the focus but will not change the exposure. A good tradeoff between the complexity of changing all camera settings manually and light flickering. P mode allows you to adjust the white balance, exposure, focus, and zoom. For all of these settings, click on the different options and choose what looks best on your screen.

**M:** In manual mode, all camera settings are set manually. A tap on the screen will not change the focus. This is best for advanced film makers to minimize light flicker. M mode allows you to adjust the white balance, exposure, focus, zoom, ISO, and shutter speed.

For more detailed information on learning your camera's settings, refer to pp. 6-7 of the attached Stop Motion manual, *Camera Settings*.


4. Let's do a quick checklist before we begin.

- Stabilize your iPad or iPhone on a tripod, rig, or any apparatus that would keep it steady and stable.
- Set the camera lens to frame the classroom white board, making sure there's ideal frame space to fit the animation you will create.
- Set your camera's focus
- Set your camera's settings or mode

*Begin the exercise*

Remember that animation is a series of still images that play back rapidly. With Stop Motion, we take a series of images and put them together to create a video effect.

Let's begin to create the simple animated text: "I LOVE SCHOOL!"

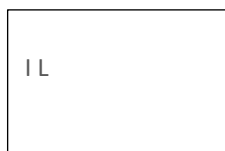
1. Capture four images of the white board to set your beginning shots. We begin with four images instead of one so it has a longer time to play on the screen. To capture an image, tap on the **red capture button**  on the righthand side. Once you've taken the four white board images, they should show up on the **timeline**, or what's also known as the **frame-by-frame editor**, at the bottom. If you need to delete, move, or add an image, see pp. 9-13 of the Stop Motion manual.

*Tip: You may use the volume button on your headphone to capture each image. Using the volume button means you don't have to touch the device, which might cause the device to move. You can also use a bluetooth remote shutter or your Apple watch. Whichever devices you use, just make sure they're plugged into your iPad or iPhone.*

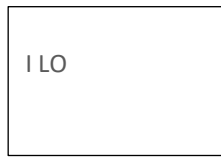
2. Write the letter "I" on the white board and capture the image. This shot should show up on the timeline.



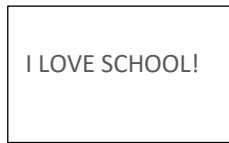
3. Next, write "L" and capture the image. This shot should show up on the timeline.






4. Then, write “O” and capture the image. This shot should show up on the timeline.






5. Continue with this process until you get to the end. When you reach your ending shot, “I LOVE SCHOOL!”, capture four images so it has a longer time to play on the screen, just like our beginning shot.



6. You can play back the animation by tapping the **Play**  button. The animation will loop back and play continuously over and over again. This is the default setting, but you can change this in your **project settings**  at the **frame-by-frame editor**.

Once in your project settings, tap . The first option, **Play Last Frames Only**, will playback only the last frames you captured to allow for a more precise control (**Short Play**). The second option, **Play as Loop**, allows you to disable the loop playback so the movie will not start from the beginning after playback has finished.

7. You can also adjust the speed of your animation to your desired effect. Tap your **project settings** . Once in your project settings, tap  to adjust the speed of your movie. The speed is defined as frames per second or FPS. Keep in mind that the more photos you shoot, the smoother the video will be. Drag the slider to the left to slow down the movie or to the right to speed it up. Tap anywhere outside the project settings to close it.

8. Once you’re satisfied with your animation, you can render a movie file to share with your friends. Tap on the **Share icon**  at the top left-hand side of the screen, which will give you options to export a movie, animated GIF, all images, or a flipbook. Refer to pp. 18 of the Stop Motion manual, *Share Your Movie with Friends*, for more information.

### *Additional exercises*

The sky is the limit for creating animation with Stop Motion. You can play with creating animated shapes and objects using the same concept of capturing single frames, and then playing them back to create a video effect. When animating objects, the key is to *make small subtle movements with each captured frame*, which will make for smooth animation. Also, a little bit of randomness when moving objects in a scene can be beneficial as this creates a natural and organic moving effect.

### *Stop Motion Editor*

Stop Motion is equipped with an intuitive, efficient, and easy-to-use editor. You've already learned to use the editor in this activity. You can bring your animation projects to the next level and maximize the app's movie-making potential by mastering the Stop Motion editor. Refer to pp. 7-30 of the Stop Motion manual, *The Movie Editor*.