

Geek Squad
Academy

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**GEEK SQUAD ACADEMY
STOP MOTION ANIMATION
ONLINE GUIDE**

Welcome to Stop Motion Animation!

For best results, be sure to read the full guide first before you get to work!

Did you know that you can make a movie, with just a mobile device and some items that you already have in your house? This course will explain how stop motion animation works, give you the opportunity to develop a story for your video, and show you how to film it!

During this activity, experimentation is key - take the chance to discover, change things, and make mistakes. This is going to be awesome!

WHAT YOU'LL LEARN:

- Understand what stop motion animation is
- How to create storyboards to develop a plot
- How to create stop motion animation videos using the Stop Motion Studio app

MATERIALS NEEDED:

- Mobile device (Smartphone or Tablet)
- Tripod for mobile device (Optional)
- Small toys or figurines (To create the video)
- Pencil
- Downloaded and installed app: Stop Motion Studio
 - **Please ask your parent/guardian before downloading the app!**
 - Links to download: [Apple Store](#), [Google Play Store](#) (or search in your app store for “Stop Motion Studio”)
 - NOTE: Stop Motion Studio is free to download, though some features may require in-app purchases. The free version will still allow for a lot of video creation! Stop Motion Studio Pro includes all features, and is available on the Apple Store (\$6.99) and the Google Play Store (\$6.49).
- 2-3 copies of the Storyboard (see Appendix)
 - NOTE: If you don't have access to a printer, regular paper will also work
 - Cateater™ also provides a free landscape storyboard template: <https://www.cateater.com/edu/A4-landscape-6-storyboard-template.jpg>
- “What is Stop Motion” video: <https://www.youtube.com/watch?v=wVjMFU11hVA>
- For further reference, go to the Cateater™ website (developer of the Stop Motion Studio app):
 - For iOS: <https://www.cateater.com/help/stopmotion/en/>
 - For Android: <https://www.cateater.com/help/stopmotion-android/en/>

MODULE 1: INTRO TO STOP MOTION

Long before your favourite animated movie was ever created, there was (and still is!) stop motion animation. Stop Motion Animation is a technique used to bring static (not moving) objects to life on screen. This can be done by making changes to the object in very small movements, while filming a frame with each move. When the frames are played in sequence, the object will appear to move on screen.

According to the Smithsonian, the very first stop motion film was produced in 1898! Since then, stop motion has been used in many famous movies, such as the earliest Star Wars films, Terminator, The Nightmare Before Christmas, and James and the Giant Peach. Can you think of any other movies that have used stop motion?

To see stop motion in action, check out this video:

<https://www.youtube.com/watch?v=wVjMFU11hVA>

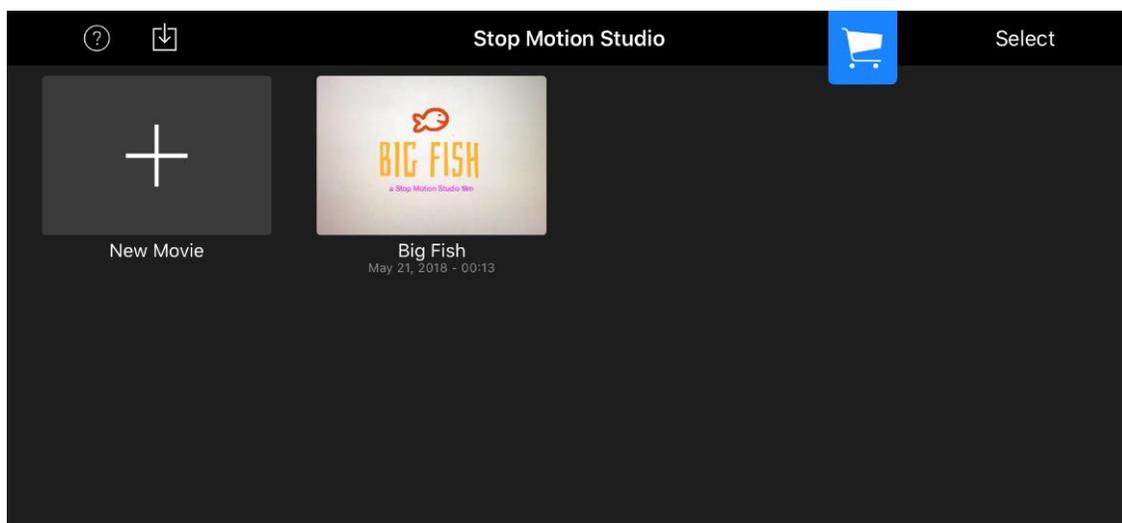
Unlike recording videos, when creating stop motion animation, you can take as much time as you like between photos. Animators use this time to adjust their subjects, add pieces to the background, or even add special effects with bits and pieces of craft materials.

GETTING STARTED

1. Download and launch the Stop Motion Studio app.

STOP: Please consult with a parent or guardian before downloading the app.

2. Click on “New Movie”.

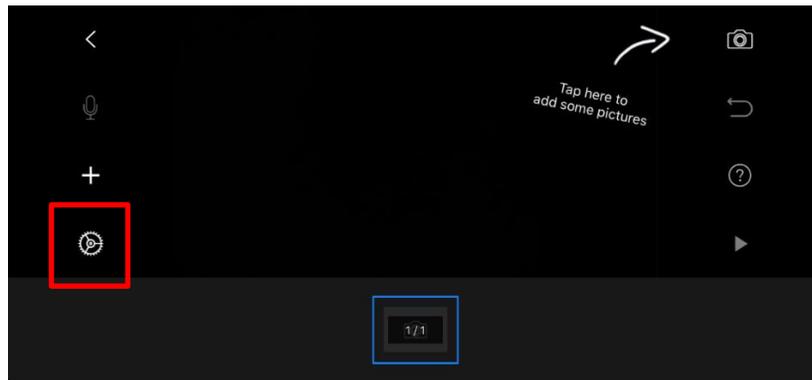


WHAT IS FRAME RATE?

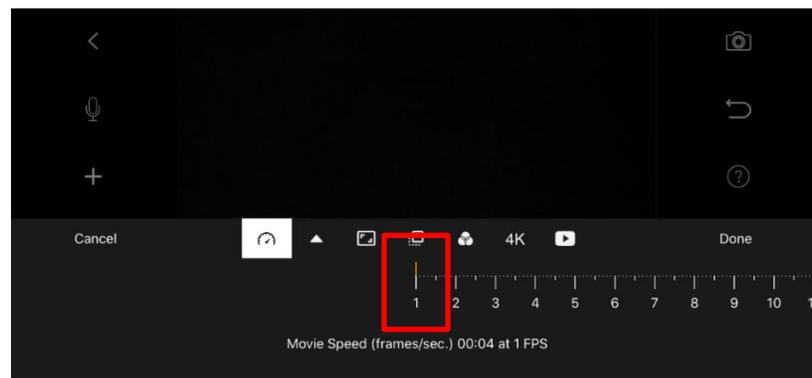
Believe it or not, every video you've ever watched is just a slideshow of many pictures stitched together. Each of these pictures is referred to as a "frame". The standard frame rate for cinema is 24 frames per second (fps). This means every second of the video you're watching is 24 pictures stitched together to create the illusion of motion.

We'd have to take thousands of photos to stop motion animate at 24fps, so instead we're going to make things a little easier for ourselves and adjust our frame rate in Stop Motion Studio to 1fps.

1. Tap the gear icon on the bottom left corner.



2. Choose the speedometer icon to adjust the frame rate down to 1fps. Place your finger on the ruler, and move it left/right to change your frame rate.



If we do some quick math, in order to create a 12 second animation at 1fps, we will have to take 12 photos.

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