



Stop Motion

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What is Stop Motion

- **Stop motion** (also known as **stop action**) is an animation technique to make a physically manipulated object appear to move on its own. The object is moved in small increments between individually photographed frames, creating the illusion of movement when the series of frames is played as a continuous sequence. - Wikipedia
- Stop Motion animation is animation that is captured one frame at a time and then

Types

- 2D – An example could be drawings on paper or dry erase board
- 3D – real objects – Examples could be inanimate objects moving, models or clay figures moving

How do you do it?

- ◉ Set up a camera capable of shooting one frame at a time.
- ◉ Calculate the time you want the animation to last
- ◉ Light the scene
- ◉ Take a photo, adjust the scene, take another photo...

Examples

- www.patrickcarter.net
- This PPT can be downloaded there as well

Timing

- How many shots will I need?
- Playback speed – 24fps is popular with smooth animation
- You might want it to look like stop-motion and use a slower frame rate like 12fps, though I would not go slower because of persistence of vision
- Example: A 5 second animation at 24fps would need 120 frames

Stabilization

- You need a tripod or solid surface
- Any bump to the camera will cause the image to jump
- Pressing the exposure button will shake the camera unless it is really tightly on a tripod
- Use a shutter remote

Lighting

- Beware of shooting outside as lighting changes quickly
- You can shoot outdoors at night
- Light with continues lights
- The flash will cause slight fluctuations in the lighting from frame to frame
- Light does reflect off of you – so you might wear black clothing
- Watch out for reflections
- Watch for shadows

Camera

- Manual settings – plug in shutter remote
- Check focus
- Set the exposure and do not change it between frames
- The more light you have – the higher the aperture – the more depth of field
- The less light – the lower the aperture setting – more stuff in focus
- The shutter will need to match the amount of lighting or desired depth of field.
- Shoot a couple of test frames to see if the focus and lighting are good in various parts of the screen

Post Production

- You can use a variety of programs to assemble your frames
- After Effects is my preferred tool
- When you import make sure sequence is checked
- From interpret footage you can select the frame rate
- You will usually want to scale down the final product since HD is only 1920X1080

Workshop Examples

- “The End”
 - Shot on 7D with shutter control
 - Tripod mounted – no camera movement
 - Used a video light
- “Ski”
 - Shot on 7D with shutter control
 - Set on flat surface
 - No lights

Summary

- Use a tripod
- Use a shutter control
- Manual settings
- Capture the smallest megapixel the camera will allow. 2mp is 2048×1536 which is still larger than 1920X1080 HD Video