STOP ACTION WORKSHEET

Hello all! I'm Terri Fuller, more commonly known as Carmen's Mom. In my early career, I worked with digital effects and animation for video and film. So, I created a reference sheet with inspiration and tips for your stop action projects. Important vocabulary words are in bold font. Links are underlined. Enjoy!

INSPIRATION

Movies: The Lego Movie, Wallace & Gromit, Chicken Run, Nightmare Before Christmas, Coraline, Boxtrolls, Rudolph the Red-Nosed Reindeer, Shaun the Sheep, Frankenweenie, James & the Giant Peach

Music videos: Peter Gabriel – Sledgehammer, Coldplay – Strawberry Swing, Kina Grannis – In Your Arms (jellybeans!)

Stop Motion Magazine: The History of Stop Motion – In A Nut Shell

8 Stopmotion Tricks in 2 Minutes (LOVE the "smoke". Please don't destroy your parent's pillow.)

DO THE MATH

We know there are 60 seconds in 1 minute and 120 seconds in 2 minutes. *Each second* of film is composed of 24 still **frames** or images. (Each second of video is 30 frames; each frame has two **fields**. You don't need to know that for this project.) You can animate your movie as 24 frames per second, or as little as 12 frames per second. Be aware that motion at 12 frames per second will look 'jumpy'.
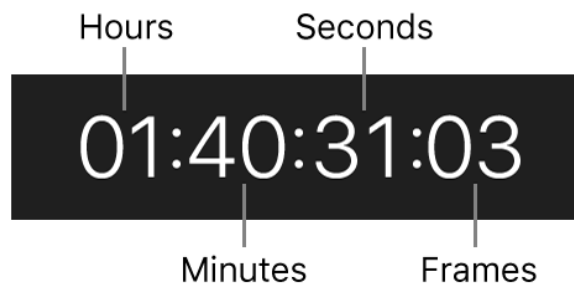
TIPS: If 1 second of film = 24 frames. . .

> 30 seconds = 720 frames
> 1 minute = 1440 frames
> 2 minutes = 2880 frames
> 2 hours of your favorite movie = 172,800 frames!

For video or film, time is expressed as hours**:**minutes**:**seconds**.**frames. Also called **timecode**. 1:40:31.03 is one hour, forty minutes, thirty-one seconds, and three frames.

PLAN AHEAD

Think of an idea for your animation. Make sure it is feasible with the resources you have.

- Legos are great! You could also consider wood blocks, clay, cut paper, Barbie dolls, Hotwheels, crayons, candy, scissors, beads, chess pieces, aluminum foil, etc. Why not more than one?

- Build a **storyboard** to express your idea. A storyboard is a graphic representation of how the video will unfold *over time*, shot by shot. (Think of it as sort of a comic book version of your script.) This will help you avoid using too little or too much time for the action.

- Find a spot to work that can be undisturbed for the duration of your project. Your film will show any changes (lighting, camera placement, moving backgrounds, the shadow of a person standing nearby) as a wobble or flicker in the image.

TIPS:

- Control the setup as much as possible. Lock down your camera. Lock down your animation table and background where the action takes place. You may need to block outside light with blinds or curtains, if clouds or other moving shadows are causing changes in brightness.

- Make sure your pieces stand on their own. If one falls over during filming, it can take quite a while to set it back up in the exact position. You can always stick it onto the surface with a tack.

Storyboard example from Nightmare before Christmas. I would suggest adding a duration to each of the storyboard images before your shoot. For example, the first shot is 10 seconds, the next shot is 30 seconds, etc. As a reference, most TV ads are 30 seconds long.
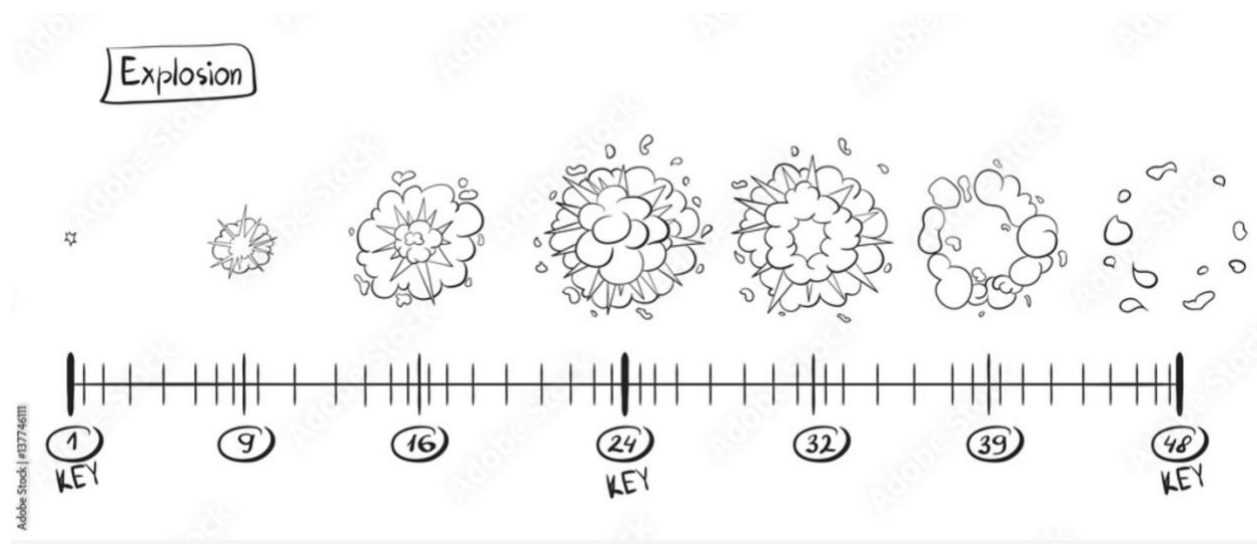

WELL, SHOOT!

Get started! Put your figure in the first position in your scene. Using your storyboard as a guide, take a picture of your figure in the first position. Then, move the figure a little bit, and take the next picture. Move it again, and take another picture. Carry on moving the figure, taking a picture each time.

TIPS:

- If you want a moment in your animation to be longer, take multiple pictures. Pausing for a full second? Snap 24 images without moving anything.

- The more pictures you take showing slight movements of your materials, the smoother the action looks in your film.

- Items can appear/disappear by 'magic' if they pop on/off from one frame to the next.

Timing for an Explosion, 1.5 - 2 seconds long. The numbers in the timeline are the frames. A **key frame** is a drawing or shot that defines the start and end points of any smooth transition. Point A to Point B. This image shows traditional cel animation, but you could easily build this with clay, paper, jellybeans, or. . .?

SCENE #: | SHOT #: | SHOT SIZE:

SCENE #: | SHOT #: | SHOT SIZE:

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