REC

Z's Crew

TIPS AND TRICKS

Stop-motion *basics*

Stop-motion can be tricky at first. It takes patience and practice to perfect your technique, so don't worry if your video doesn't come out right the first time.

BEFORE YOU GET STARTED, think about the whole scene and movement you want to create with your American Girl doll. Create a plan for your scene—it's called a storyboard and will look a little bit like a comic book. Your drawings don't need to be perfect and you can even use stick figures.

ONCE YOU HAVE YOUR PLAN written out, it will be easier to film your scene and know exactly how many movements you need and what movements will be coming up next. You can also record your dialogue before you start shooting—that will give you a very good idea of how many minutes and seconds you need to film.

Stop-motion can range from having six to 12 movements within each second of video. The more movements per second, the smoother the animation will look. If you're a beginner, try starting with six movements per second and working your way up to 12.

Still, **there are 24 frames in each second of video** (frames per second, or FPS), so during the editing you will need to hold on each movement for more than one frame. Refer to the following chart to guide how long you should hold on each position:

Movements per second	Hold on each picture	Total
6	4 frames	6 movements x 4 frame hold = 24 total frames (or one second)
8	3 frames	8 movements x 3 frame hold = 24 total frames (or one second)
12	2 frames	12 movements x 2 frame hold = 24 total frames (or one second)

Advanced tips

- **Time out movements and dialogue** before you start shooting—that way you'll know how many pictures you'll have to take.

- **Lock off** your camera, tripod, and lights before you start shooting so they don't move and make your pictures look inconsistent.

- Set your camera to **manual mode** so you can control the focus and brightness of each shot and your pictures will look consistent throughout.

- To set the scene, **shoot about a second's worth of time before your character starts moving.** At the end of your video, do the same thing. This way, your video will not start or stop abruptly.

- A **pause** in stop-motion animation, like when one character stops before continuing to speak, lasts around 1.5 seconds.

- To make your character **blink**, close your doll's eyes for about a quarter of a second.

- If you have a **remote** for your camera, use it! This way, you don't have to touch your camera and risk the camera moving.

- **You don't have to film individual scenes in order**, because you can piece them back together during post-production (editing).

Types of shots

Establishing Shot
A wide view of the entire scene.

Medium Shot
Your character from the waist up.

Close-Up
Just the face of your character. Close-ups can also be of a detail like a phone or an object in your character's hand.

Side Angle
The side of your character.

Dolly Shot
When you move your camera toward or away from your character—skateboards work great for this!

Pan and Tilt
When you move your camera from side to side or up and down.

There are many of types of shots—so keep on trying new things and watching your favorite movies and TV shows to see what they do!

Lighting

THREE-POINT LIGHTING is a standard technique used to illuminate a scene. To create this setup, you need the following types of lights:

KEY LIGHT: The brightest light in the scene, usually focused right on your characters.

FILL LIGHT: A light that helps get rid of any shadows cast by your key light.

BACK LIGHT: This lights the back of the character so that she stands out from the background. It also illuminates the top of her head so that one can see her head and hair better.

If you don't have all of these lights, don't worry. You can use just one or two, and even the sun!
You can also use a piece of white paper to "bounce" (reflect) light onto your doll's face and add different-colored bulbs to make cool effects.

When using natural light for stop-motion, keep in mind that it can change quickly, making one shot look different from the next one. If you are going to use the sun, it's best to shoot very early in the day with the brightest possible light. Also, try to avoid filming on very sunny days or around noon because the sun may cast unwanted shadows on your character and sets.

Fun fact: On a set, the person in charge of lighting is called the "gaffer"!

Post-production

Post-production is the process of piecing your whole video together and is when you add in audio, sound effects, music, special effects, and credits. It's just as important as the writing and filming process!

Editing

ASK AN ADULT TO HELP you find editing software that you can use to edit your video. Most computers come with some type of editing program that you can use.

It's a good idea to WORK ON ONE SCENE AT A TIME. Make sure that all of the individual shots are in order and that in each second there are a consistent number of movements (six to 12). Once you put all of your pictures in order on your editing timeline, set the duration time for each picture. Refer to the chart shown earlier in this brochure to know how long (how many frames) you should hold on each picture.

ONCE EVERYTHING IS IN ORDER and you've set your picture duration time, you can begin exporting your video! Export each scene and label it with the scene name. Then, re-import the footage into your editing program. This process will allow you to edit full clips of video rather than editing individual still pictures.

Sound DESIGN

AFTER LAYING OUT YOUR CLIPS, you can add the dialogue that you recorded as well as other sound effects and music. This process is called sound design, and can really improve the quality of your story and video. Sound and music help bring a character's world to life.

WHEN ADDING SOUND EFFECTS AND MUSIC, adjust the volume so that it is not louder than your dialogue. This process is called sound mixing and is an important step to ensure that all of your sound effects, dialogue, and music are balanced.

Just press play

Very special SPECIAL effects

To enhance your video, you might also add visual effects and transitions.

SOME GENERAL EDITING TRANSITIONS are fading in and out from a black screen and cross-fading. A fade from black or fade to black is used when a scene is beginning or ending. You can use cross-fading (transitioning from one shot to another) to signal that you are going back in time (flashback), forward in time (flash forward), a dream sequence, or a montage sequence.

YOU CAN ALSO CHANGE THE COLORS of a video and create other fun effects with most video editors. Have fun and experiment! Try making your footage black and white to make your story look like it is from the past, or make the colors faded if it's a flashback or a memory.

DON'T FORGET TO SAVE OFTEN and save your project and video files in more than one place! Sometimes files can get damaged, so it's always a good idea to have backup copies.
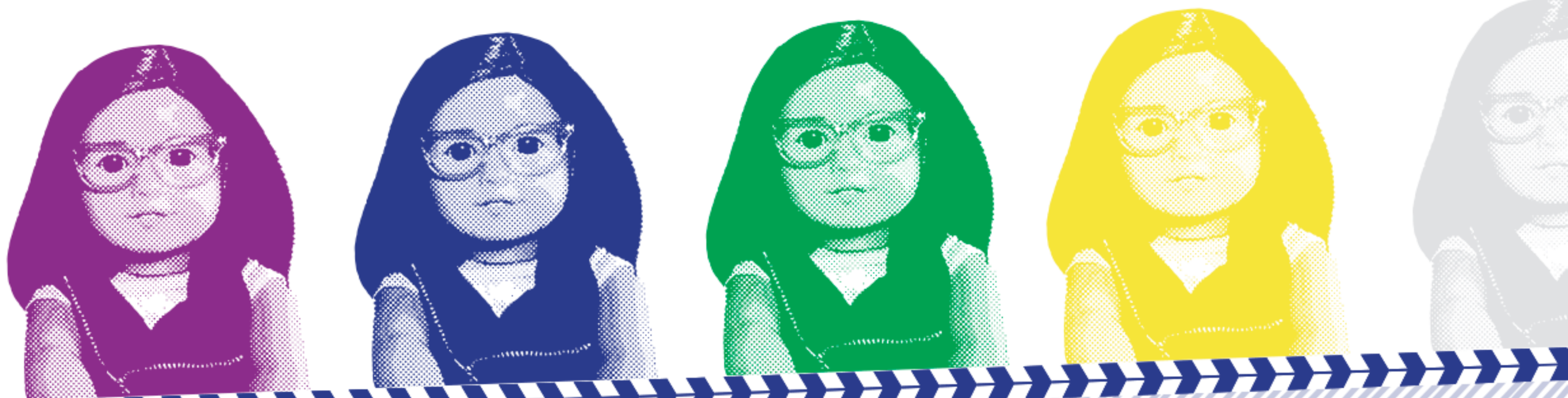
advanced filmmaking
TECHNIQUE:
green screen

This technique works via **a filter called** "Chroma Key" that is available on most semi-pro and pro editing programs. However, not all video editing programs have this filter, so check that your editing program has it before filming.

When filming, **make sure your background is a bright green** color and is tall and wide enough that it will fill the whole shot.

When you are filming, **make sure there are no bends or folds** in the background and that your character isn't wearing any green colors similar to the green screen. The light should be even and bright, and your character shouldn't stand too close to the background.
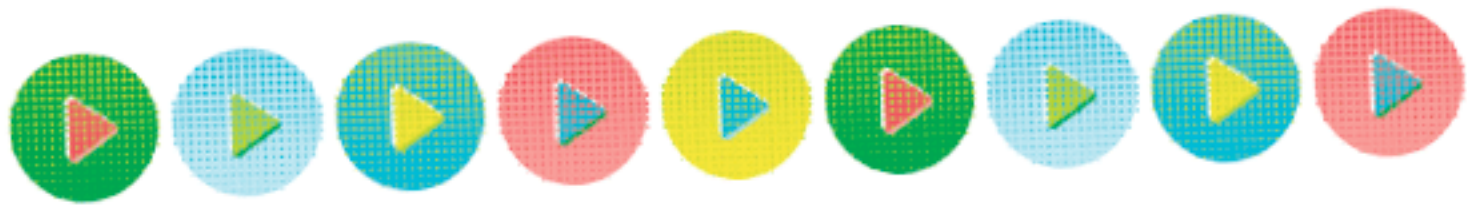
ONCE YOU ARE IN EDITING MODE, you will use "Chroma Key" to remove the green background. It is important that you apply the filter to video files, so do this step once you have put together all your still photographs and exported them to video files. To apply the filter, find the icon that looks like an eyedropper in your editing program. Use it to select the "key" color—that's the bright green background. Everything that's green should then disappear.

NEXT, SELECT A NEW BACKGROUND PHOTO OR VIDEO. Choose bright and clear images that are the right scale for your doll. For example, if you want your character in the woods, find a picture or video with a very large tree trunk in the foreground so when combined with the green screen shot of your character, the tree will be the right size.

After you have chosen which background to include in your scene, import it into your editing program and add it to your editing timeline. Your background will serve as your base layer, and you can add your video of your character on top. Now, your doll can go almost anywhere!

Green screen takes some practice, so just keep trying if you don't get it right the first time.

Have FUN!

Hi, I'm Z!
My Likes:

😊 good friends, digital cameras, bubble tea, 🥤 computers, adventure walks in Kerry Park, stop-motion animation, watching videos, and connecting with friends, plus my dog, Popcorn 🐾

★ American Girl®

See Z's stop-motion videos at americangirl.com/play/zcrew.

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