Kelly Gallagher's EPIC DIY cut-out animation starter-kit zine!
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The following animation starter kit includes various resources and a couple links to films for inspiration. I hope this helps! Though it's geared towards cut-out animation, if you skip down to the production and post production portions of this docu-zine, they will still be useful for numerous stop motion practices. All the best!------------

Here are two of my animations worth checking out before diving into your first cut-out animation!--
+ "Herstory of the Female Filmmaker" -- I made this as my senior thesis when I was an undergrad!
https://vimeo.com/16838597
+ My most recent cut-out film from 2016, "More Dangerous Than a Thousand Rioters" about Lucy Parsons:
https://www.youtube.com/watch?v=m1AOZlUflgo

Next up, let's talk about production & process—

***If you are brand new to animating and have no DSLR, tripod, editing software, or computer, etc. but you do have a smart phone, please check out the great and free phone app "Stop Motion Studio"--
https://itunes.apple.com/us/app/stop-motion-studio/id441651297?mt=8
This app is very fun and easy to get the hang of, and in no time you will be making stop-motion animations! You can still utilize many of the production notes below regarding lighting and materials!

Notes for production (filming with a DSLR):

1. Shoot your animation in JPEG (and not RAW!) file format on a DSLR. JPEG Large, or even Medium on some very high quality DSLR cameras will result in high definition photos that you will import and edit later in Adobe Premiere Pro.
2. There are many different ways of shooting cut-out animation. There are three especially common set-ups. The most popular set-up is using a "downshooter" animation rig set-up where the DSLR is shooting straight down at the cut-outs, that looks something like this:
https://cdn.instructables.com/F07/80O2/IQPFDPY7/F0780O2IQPFDPY7.LARGE.jpg
But that method may not be readily available to you, so you could try one of the following two methods. You could simply use a DSLR and tripod, and animate horizontally like this, where the camera is tilted down as much as possible (https://i1.wp.com/blog.ed.ted.com/wp-content/uploads/2014/03/TA14_SN__K3_3232.jpg?resize=575%2C383) (that image uses an ipad instead of dslr) --- but just *remember* that you'll want to animate on a surface that is slightly tilted up so that **your animation plane is the same as the plane of your camera's lens**. Above is an image of me animating on the floor, but if you look hard enough you'll see that the plastic pane I'm animating on is tilted so that it matches the plane of my camera's lens. If you film on a desk, you could put a binder behind your background to tilt it up and match your camera's lens plane.
OR: finally, you could animate "vertically" (See the other attached picture of me above), so the camera is on the

tripod but shooting straight ahead. This requires using poster tack to move cut-outs around on a plastic pane or plexiglass standing upright. This method may be fairly cumbersome for most folks, but some animators enjoy it for specific shots and various reasons.

3. LIGHTING: so in the pic of me animating vertically, you'll notice a big lighting no-no: there are windows with sunlight spilling in behind me. I covered those up before shooting and y'all will want to think about that too. Either wait to film until it's nighttime OR use black trashbags to cover any windows in the room. You might not think you'll see a difference but if you animate next to or near a window, it will greatly affect your final animation because the light outside is *constantly* changing and will create a crappy flicker in your animation that you don't want. SO: animate in a room without windows OR wait until night OR cover up those windows with black trashbags and tape so no light is leaking in. Then you get to set up your lights! I literally just use household lamps that are readily available to me. If you use magazine cut-outs on glossy paper you'll find that getting the lighting just right can be tricky and take some time so you avoid glare on the glossy paper. One common lighting set-up for animation is simply getting two lights and putting one on each side of your animation, kind of like this: https://i5.walmartimages.com/asr/95cfa699-7e44-49af-8ad3-26e2c6a4414e_1.9dbc3d6c9bdd0fd6004e38c1408bab4c.jpeg?odnHeight=450&odnWidth=450&odnBg=FFFFFF But you can mess around with lights however you want. I like to experiment and play with lighting and shadow (you can create shadow with cut-outs if you create depth between a background and foreground—for example you could take plexiglass, and animate foreground cut-outs on it, with backgrounds behind it). I sometimes use gels with my lights or play with bike lights and really whatever I can find! Below you will find a photo of me utilizing my bike light(!) while animating a scene for my film about Lucy Parsons, *More Dangerous Than a Thousand Rioters*. You can also create silhouette animations by putting a lightbox BEHIND your cut-outs, making the cut-outs look like silhouettes! Below is another image, from a silhouette animation of mine for the feature documentary *N. Scott Momaday: Words From a Bear* directed by Jeffrey Palmer.
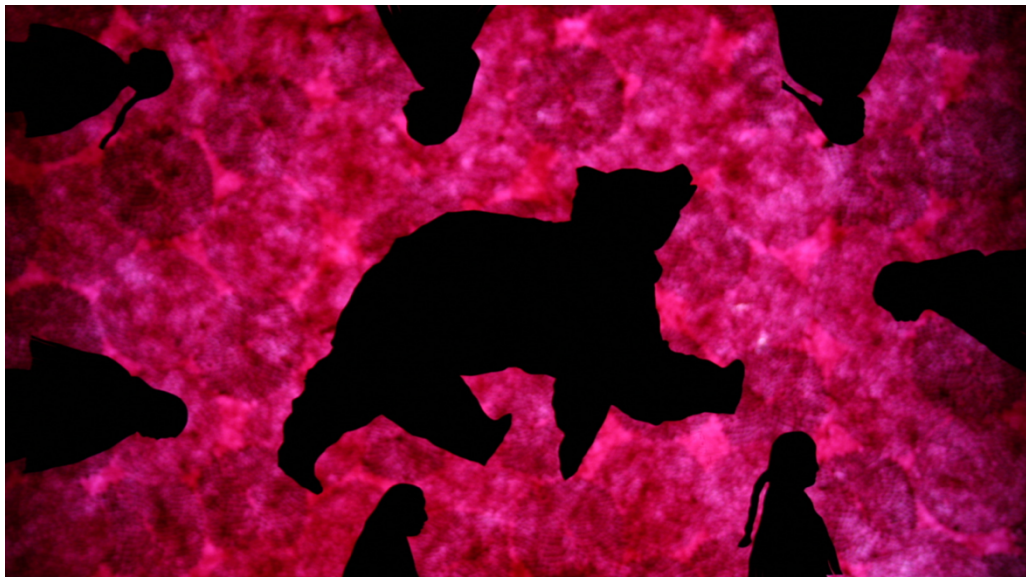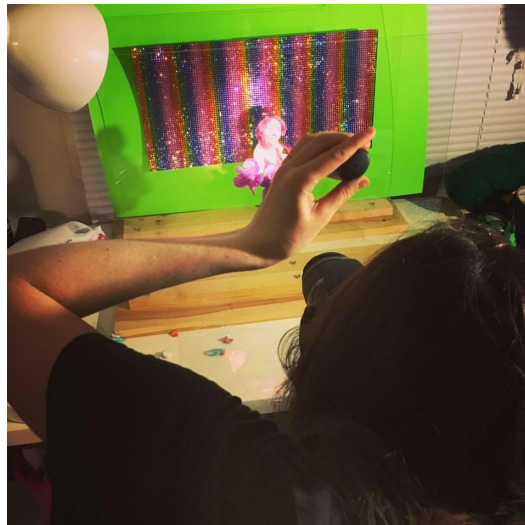
4. Cut-outs and materials! -- I often just google image and print certain things if I have something in mind I need, or I explore used picture and photo books, magazines, etc. For backgrounds I sometimes go to Michael's Arts & Crafts store or any nearby crafts stores for fun paper or sometimes I use things I find in my house, etc! It can also be interesting to use different textures and materials for background—I've used knitted fabric, velvet, etc!
5. Time to animate! Just explore and play with moving pieces around in little increments, taking a photo after each time you move things around, and you'll get the hang of it in no time! The great thing about using a DSLR is that you can usually preview your images and get a sense of how things are going while filming.

Notes for post-production (with a Premiere Pro workflow, though FCP will be similar):

1. You'll open Premiere Pro and create a new timeline and sequence - choose: Digital SLR > 1080p > DSLR 1080p24. Give your Sequence a name at the bottom of the window. Click "OK."
2. Next, you'll need to prepare Premiere Pro to import your photos at either 2 frames, 3, 4, or 5. Go to Premiere Pro > Preferences > General. Still Image Default Duration, change to "frames" and choose how many frames you want your photos to import as (2, 3, 4, etc). Next, towards the middle of the screen, make sure that "Default scale to frame size" is checked. This will make sure that PP doesn't automatically blow up your photos to 1920x1080, and will allow you to do this manually later on. Click "OK."
3. A note on importing: in animation-land, folks say "I'm animating on the 2s" or "animating on the 3s" or 4s or 5s etc. What they mean is that each picture they took while animating will either count for 2 frames or 3 frames or 4 frames etc in their film. (Reminder: there are 24 frames in one second of film/video!) You may find that you like how your film looks when it's "on the 3s" or the "4s" or whatever- you can try different speeds and see what works best when you're editing.
4. You may need to close out of Premiere Pro then re-open it for the still image duration preferences you just chose to lock into place. Next you'll want to import your photos. Make sure in the Media Browser in the bottom left hand corner of PP that you enable the "list view" in your project window so that all your images are listed there because that will ensure they are in numerical order. Copy and drag your photos to the timeline. Then you'll want to highlight them all, right click, and "nest" them. This way you can make edits to your animation way easier since the images are all grouped together. (This ensures that you can scale, do color correction, and experiment with speed, to the grouping of images instead of one at a time).
5. If you choose to play with green screening at all, you can always go to Video Effects in Premiere Pro > keying> Ultra key and get rid of any green backgrounds! Below is am image of knives I printed out onto regular copy paper then green screened out the rotating ring they were on and the background! You can see the finished effect in *More Dangerous Than a Thousand Rioters.*

Okay this should be a very thorough animation starter!! Let me know if y'all have any questions or concerns! (kelly@purpleriot.com) HAPPY FILMMAKING!