The Animation Process ----------→ Lesson 4

2D animation software brings animation capability to the desktop and makes it easier to do some detailed tasks. However, just launching an application and starting to animate without a plan is not always the best way to produce a good movie.

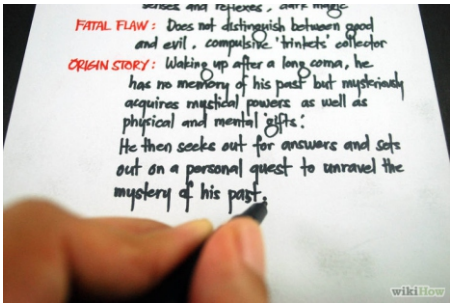
The outline below provides a workflow that has proven efficient and useful in professional and amateur animation projects alike. When you have a tool like Anime Studio there's a temptation to just jump in, launch the program and start making things move.

This is fine if you just want to do something quick and simple, and it can go a long way towards familiarizing yourself with the tools and workflow of the program. If you've got a longer project in mind, though—something that goes beyond a simple five or ten-second sequence—it's usually a very good idea to take a minute, sit back and do a little planning before launching your program of choice and getting started.

If you'll be using more than one program to produce your movie, this can be especially important and help minimize the time spent recreating effects or sequences that just didn't work in one application or another. Here is the process that we use:

1. Develop Your Story

The first thing you'll probably want to do is to sit down and make a few notes on the story you're trying to tell. Professional animators always have a story—even if it's a simple one—and knowing what's supposed to happen and whom it happens to is very important in making a good movie.

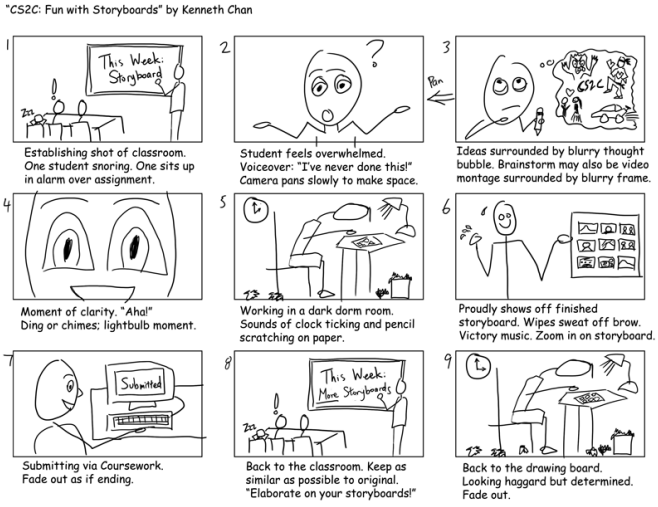


Who are the characters? Where are they located? What happens to them, and what do they do about it? Having these ideas clearly in mind is crucial to making an interesting movie. You might or might not need to write anything down at this point; thinking it through is the key (although it helps to have notes to help with the next step.)

2. Create Scenes and Storyboards

Once you have a story, it helps to break it down into scenes. Very few movies (at least those longer than a minute or so) are filmed as one long scene.

Although using multiple scenes may present certain complications, it also allows you to work with smaller files with shorter timelines and render individual clips more quickly. For each scene, it will be helpful to sketch out a storyboard—a sequence of simple drawings that show what the scene is supposed to look like.



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At this point, don't try to put too much detail or make everything look realistic—just sketch in the things that you'll show in that scene in a few quick pictures. If you can't draw people, use stick figures. Just get something on paper. This helps you to visualize where people and things need to be on the 'set' and how the camera will see them.

You can write down any dialogue or audio effects that will be in the scene on the storyboard as well, which will help a great deal during the next step.

3. Record the Sound

Now that you have the dialogue noted for each scene, you should record it and save the sound files you'll need. At the same time, you can record any sound effects you'll want and even add music if you like.

Also, having a soundtrack with noises, dialogue, sound effects etc. will be a huge help with the timing of the animation; you can get a good idea of which movements need to happen at what points by what the audio is doing. We can't stress this point enough—the animate-over-sound workflow was developed in the early days of sound movies and has proven itself over and over throughout the years.

Almost every professional animator in movies and television works this way. At this point, depending on how you'll be doing your dialog (if there is any) you'll want to also save separate copies of each character's audio files—just the things they're saying in the scene—to facilitate lip-syncing later on.

4. Prepare the Files You'll Need

So when do you start animating? Don't worry, we're almost there. This step is the last preparatory step before you can begin to animate the scene. Here it's important to make sure you've got everything you need. With the audio ready to go, you can easily make your characters talk using the built-in lip syncing functionality, build or buy any props you'll need, prepare video clips or special image files, etc.

Before getting started with your animation, it will be important to make sure that any image or video files you use as backdrops are ready to go and that any other assets—props, prepared figures etc.—are readily available and working properly.

5. Ready, Action, Animate!

With everything in place, you can finally start animating. By now the scene will be very familiar to you. You've worked out your story, drawn the storyboards, reviewed the dialogue, rehearsed the timing and assembled all of the pieces you'll need as props. Now it's time to put it all together and build the scene that you'll be rendering.

One nice side-effect of the process you've been following is that it tends to reveal story and dialogue elements that don't work before you spend a lot of time animating and rendering them. Properly done, animated features typically don't have much that winds up on the cutting room floor. The stuff that doesn't work gets left out long before any rendering takes place.

As you animate, be sure to save frequently (and save backup copies too). Remember to back up your work on a regular basis. Nothing spoils the enjoyment of a satisfying project like losing a week's worth of work that cannot be recovered.

6. Preview Rendering

It's a really good idea to do periodic checks to make sure that the timing of your scene works properly. We recommend that you create preview renders from time-to-time. These files can be discarded after viewing, but a fast preview-mode render is an excellent reality check for your work in progress.

In Anime Studio, you can export half-size, half-frame-rate versions of some or all of your frames as video clips. Rendering a sample still-frame image every now and then at full size and full quality can be a good way to check the effects, lighting and overall 'look' of the scene as well.

7. The Final Render

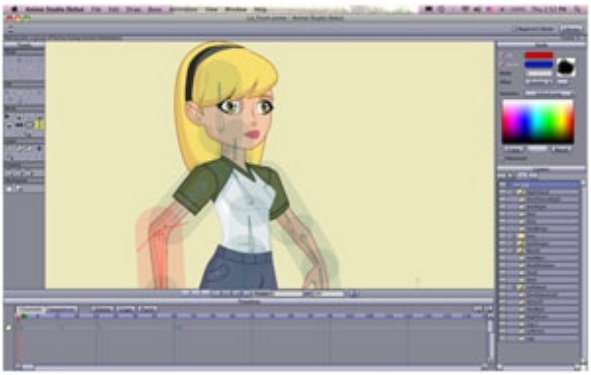
Once you're happy with the scene and you think it's as good as it's going to get, it's time for one final review: Is the timing right? Are things moving naturally? If so, it's time to do the final render.

Turn on any features you deactivated for previews, choose the quality level and frame size you want, run any simulations you need to have, save your file one last time and then start the render. Make sure your computer won't be needed for a while—a full-size, full-quality render of a movie can take some time. It might also be a good idea to turn off any scheduled events—automatic shutdown, etc.—that you normally use to avoid disrupting the render process.

Once it's rendering it's best to leave the computer alone—there will be a temptation to do other things on it while the render progresses, but doing this slows the render process and will quickly make you frustrated with your computer's performance. Render at the largest resolution you'll be using—it's easier to scale down images than to scale up. Also, save the rendered file at the highest possible quality settings (save it uncompressed or as an image sequence if you have enough hard drive space).

8. Editing

Once the scene has been saved as a movie file, back up the scene file and the rendered movie to a secure location (an external hard drive or server, a CD, etc.). Now you can go back and do it all over again with the material for the next scene. Remember to save early and often, and back up your work regularly.



9. Resolution and Scaling

For DVD or video, 640 or 720x480 is a good resolution; for movies played back on the Web you'll be better off at 450x337 or smaller (320x240 also works well.)

Following these steps won't necessarily make you an expert in all of these areas, but it'll save a lot of time and frustration and ideally help your talents speak for themselves.

Part 1

Fundamentals of Animation

Laboratory Manual

Lab 1.4

Work File: DigitalAnimationTechniques.ist

Directions:

1. Launch Inspiration
2. Open the template DigitalAnimationTechniques.ist.
3. Group the pictures and complete each box with descriptions respectively.
4. Save your activity file in your folder.