



After Effects Motion Graphics

Fayetteville Public Television
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Getting Started:

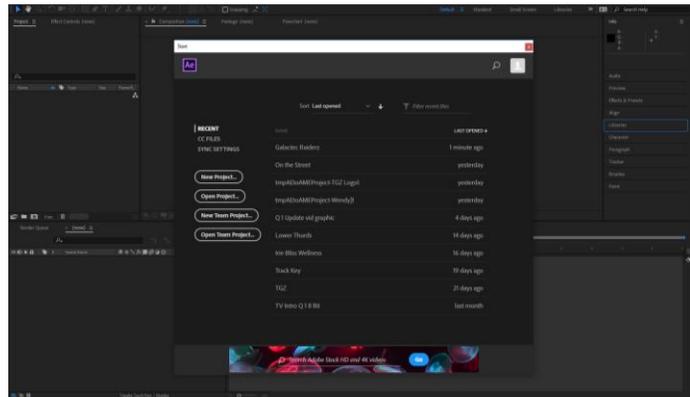
In order to edit in the Fayetteville Public Access Television edit rooms you will need to log-in. You can do this by first clicking on the “**Public Access User**” icon (in the editing bays). The password for the edit bay computers is always the same as the username. For example, if the username is “Person1” then the password would also be “Person1”.

Video projects take up a LOT of storage space. We strongly suggest that you use your own external USB drive. Your instructor can give you a recommendation about what type of hard drive, where you can purchase it, and offer suggestions on size depending upon your planned usage.

If you don't have your own hard drive, you will be required to create a personal folder for your working files, either on the “**Media Raid 0**” hard drive (in the editing rooms) or on the desktop (if using the laptops).

Introduction:

Adobe After Effects is a completely different type of program than Premiere Pro. While many of the concepts are the same, the layout of the interface is much different than what Premiere offers. When you click on the After Effects Icon, the program will open you up to a start screen that shows the recent projects that have been created on that computer.



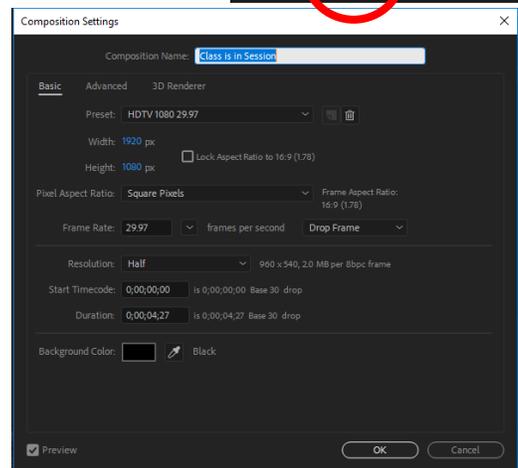
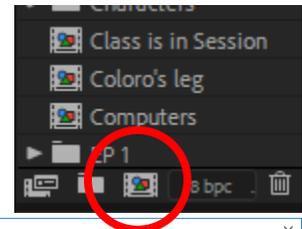
Once you have began a new project, you will be greeted by a layout that is a bit different than Premiere's. At the left side of the screen you should see the Project panel that houses all of your imported media and compositions. Below that lives the Composition Layer viewer. This panel is where all of the individual layers and their



respective settings will live. We will be doing a lot of our work from this panel. Next, you should see the Composition Video Viewer. This Viewer shows what is playing back from your composition. It works in a very similar fashion as Premiere Pro's playback viewer. At the far right of the screen you should see several different tabs that each are titled differently. We will go each of these tabs later in the class session. Lastly, at the top of your screen there is a toolbar that contains several different arrangements of tools that can be used to make and apply unique effects to your videos.

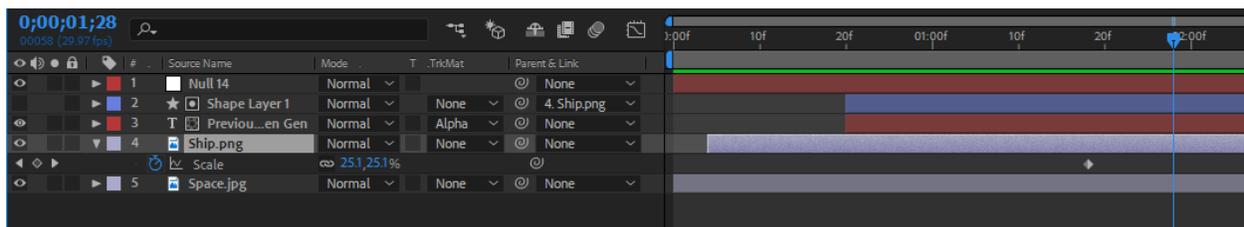
Compositions:

Think of compositions in the same way that you think about sequences in Premiere Pro. They are self contained miniature projects that each have their own settings and can contain any number of layers. To create a new composition click the button at the bottom left of the Project Media Panel. You should receive a pop-up window that allows you to choose and enter in compositional settings. Once you have done that you can import assets into the composition to begin creating. Make sure your composition is long enough to accommodate what you're wanting to create!



Composition Layer Viewer:

The Composition Layer Viewer is where you can go about organizing, keyframing and timing all of your layers. One of the basic concepts of the Layer Viewer is that anything that is on top is going to have priority over the layers that are underneath. This timeline works in a "top down" type of approach in that regard. If you click on the arrow to the left of the layer name it will drop a menu down and give you access to all the parameters of the layer that can be adjusted. Additionally, all of these parameters can be keyframed and animated as well. Any parameter that you add or that the layer has can be keyframed and, therefore, animated. Hovering your cursor over the top of the edge of a layer will turn your cursor into a trimmer that you can use to trim the timing of clips down with. In this way it is much like Premiere.

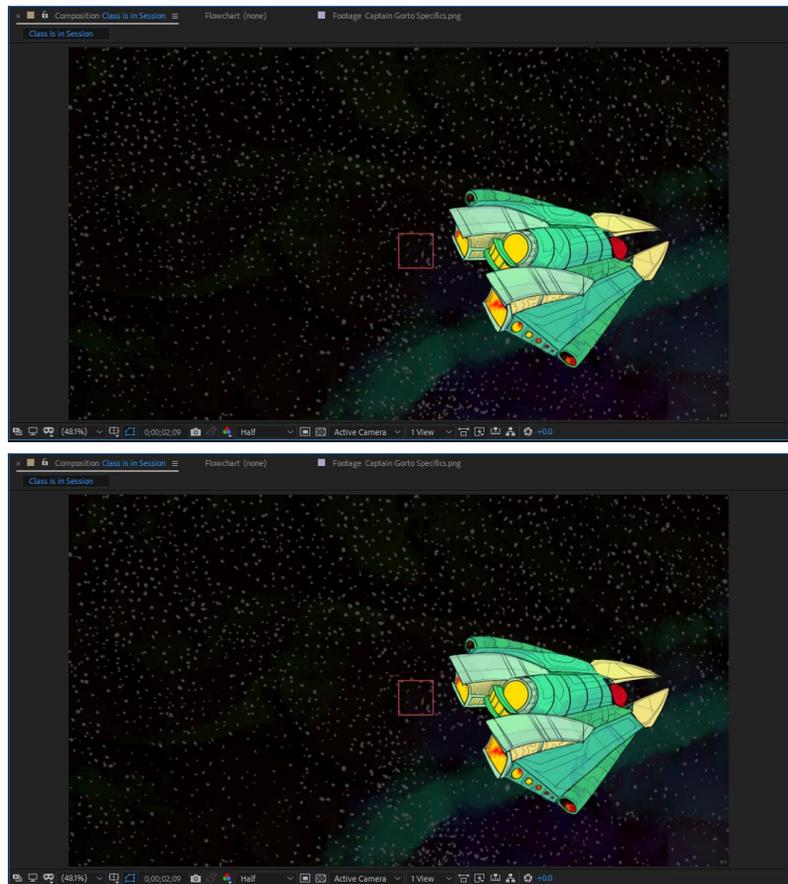


Composition Video

Viewer:

The composition video viewer is much like the video viewer in Premiere Pro. Though, this viewer is much more interactive in nature than what Premiere has to offer. What is meant by this is that you can select and manipulate objects and layers in this video viewer in a much simpler way than in Premiere.

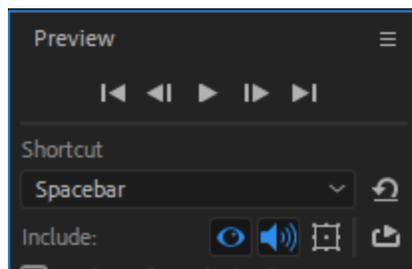
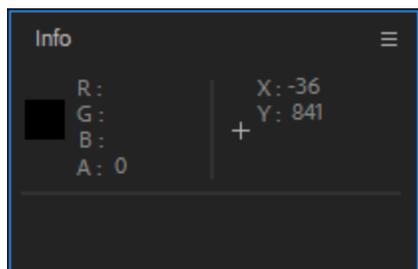
You should see several different options at the bottom of the video viewer. The drop down menu on the bottom left is the scale of the composition view. This is especially handy for instances where you need to be able to see more of your composition than what is on your screen at the moment. Using the scroll wheel will also zoom you in and out on your composition depending on which way you spin the wheel. Another option located on this bottom bar is the playback resolution. This option does not affect the actual resolution of your project, but it does lower the resolution for playback only in order to allow the computer the power to render your video at a decent framerate. If you bump your playback resolution down to a half or a third you are going to see much better playback times to the point where you shouldn't have to render very often in order for smooth playback. There are several other options there that can be useful, but the last one that we will talk about is the fast previews button. You can use this to, once again, help your computer along as it tries to playback all of the things that you are doing in After Effects. The "adaptive resolution" option is the broadest and best option as far as rendering goes. Adaptive resolution will decrease the resolution when you are in the animating process and then restore the resolution when you are ready to play it all back. This is a



great tool because of how it allows the freedom of RAM to render out your video every single time you make an adjustment.

Panels:

On the right side of the After Effects layout you will see several panels that expand downward if clicked on. The top panel is the info panel. This panel will display the color space of the object that your mouse pointer is hovering over at the moment. The audio panel displays the audio levels of your composition and also allows you to make basic gain adjustments to audio levels. Located directly underneath, the preview panel allows you to preview your project using the onboard RAM of your computer. There are different settings that you can adjust to your liking in this panel. The effects and presets panel is one of the most powerful aggregation of tools in After Effects. Once dropped down, you will be able to see the different categories and groupings of effects that can be applied to your footage. This is the panel to use if you need to apply any effect. The Align panel allows you to align certain layers to different positions of the frame. Libraries is where you can import assets that can be used across platforms. Whenever you work with text you will want to use the Character panel to adjust and manipulate your text. The Paragraph panel is also used for the manipulation of text. You can make positional adjustments to your text with the paragraph panel. The tracker panel is useful for when you have handheld or shaky footage that you would like to add elements on top of. Moving on, brushes are useful for many things including but not limited to: painting colors on top of your footage, rotoscoping, and clone stamping. Of course, these

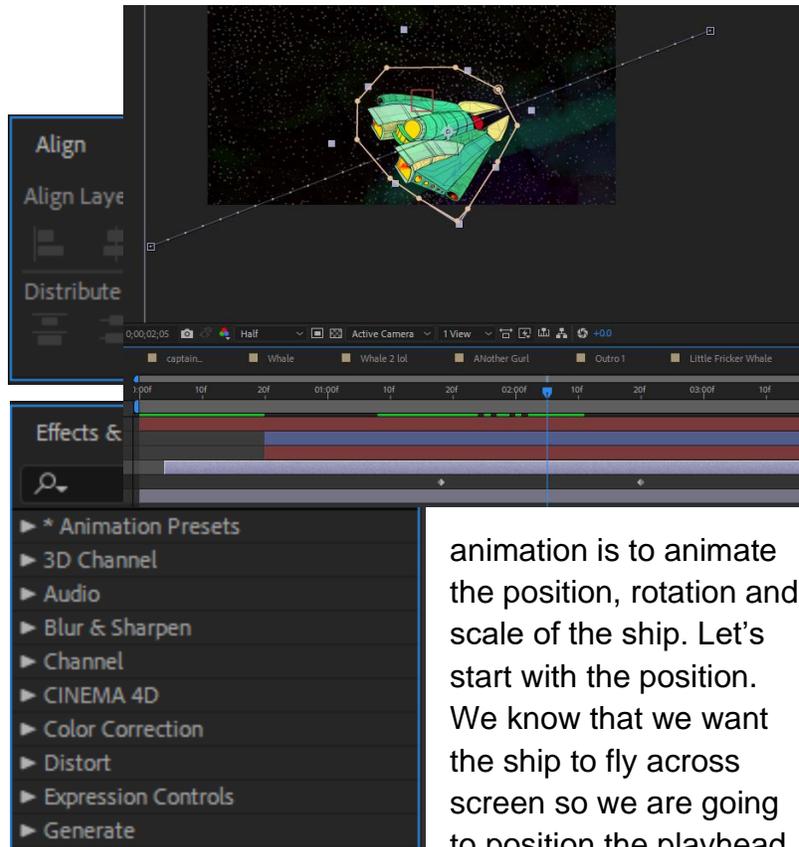
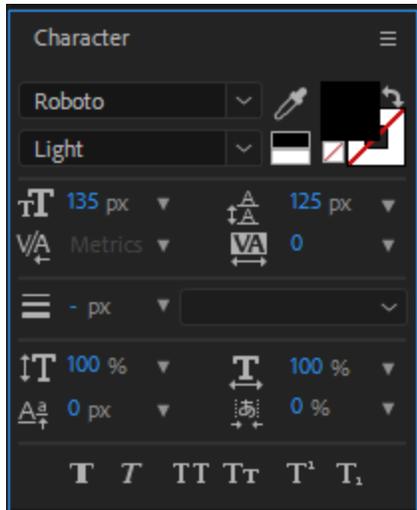
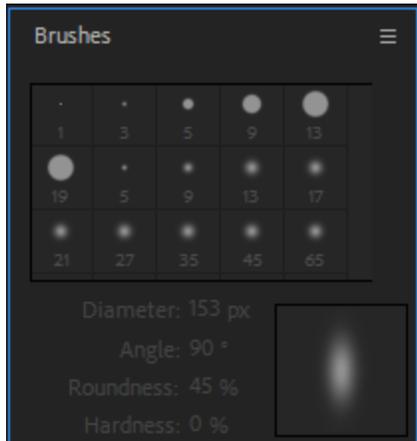


brushes can be accessed from the Brushes panel. The Paint panel corresponds with the brushes panel fairly closely. The paint panel allows you to adjust the color and many other parameters

based on the tool that you are using. Lastly, the smoother tool is useful for smoothing keyframe animations.

Animating Position:

The first step in creating this



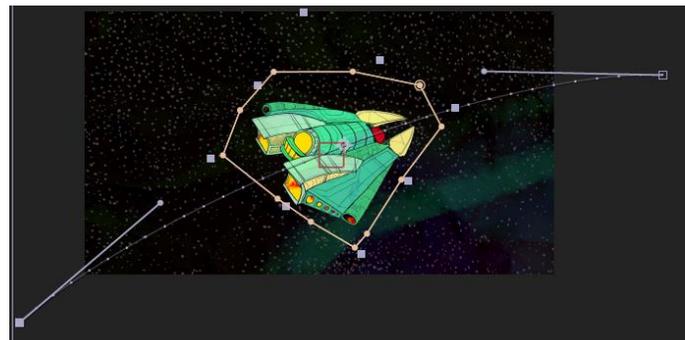
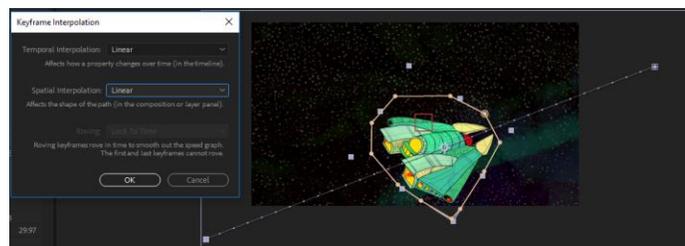
animation is to animate the position, rotation and scale of the ship. Let's start with the position. We know that we want the ship to fly across screen so we are going to position the playhead where it is needed, click

the stopwatch icon and then drag the ship off screen to the left. This is where the ship's animation will begin. Next, move the playhead on down the timeline one second and then click the diamond button to lay down another keyframe. We then drag the ship to the right

until it was off screen on the other side. What we now have is an animation that takes place in a straight line. This however, is not quite what we are looking for in this animation. What we need is for the line to be curved to simulate the ship curving through space. To do this, right click on the keyframe in the video viewer (you may have to zoom out) and then select the option "Keyframe Interpolation" from the menu. This will open up keyframe assistant where you can change the interpolation of the keyframes. Temporal interpolation refers to how the keyframes interact with regards to timing. Spatial interpolation refers to how the keyframes interact in the space that they are given. To change to curvature of the line we are working with we will need to change the spatial interpolation. Click the drop down on spatial interpolation and click

the option bezier. Repeat this process for the second position keyframe. You should see handles appear on both keyframe lines. Use these handles to manipulate the path that the ship will travel on. We have now animated the position and laid the foundation for our animation.

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Animating Rotation:

We are going to tackle rotating animation in much the same way as we did position. First, scrub back to the point where we began our position animation. You can do this by clicking the arrow to the left of the position keyframe diamond. This bring you back to the previous keyframe of that parameter. Next, press the “R” button on your keyboard to take you to the rotation parameter. Click the stopwatch icon to make the rotation keyframe-able. Rotate the ship a small amount counterclockwise, and then move the playhead to where your last position keyframe is at. Rotate the ship a small portion

clockwise. If you play the animation back you will see that the ship's rotation now moves in correspondence with the arcing motion that the ship is traveling in.

Animating Scale:

The last thing that we need to do is to animate the scale in accordance with the motion that we have already created. If the ship were actually making that motion then it is fair to assume that from our perspective it would get bigger as it moves along its path. To do this we are going to animate the scale to increase ever so slightly while it moves along its path. First, navigate back to where the beginning keyframe for position is



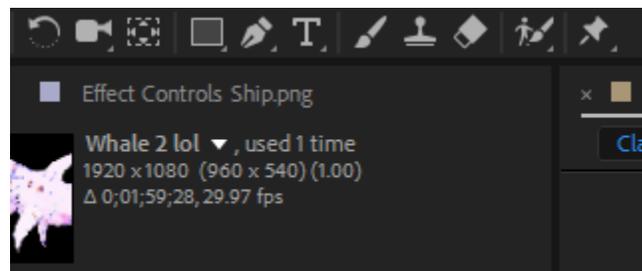
located. Press the stopwatch on the scale parameter and then scrub to where the second keyframe for the ship is. Animate the scale up by clicking and dragging the scale number to the right. You will see the ship increase in size. We do not need much scale increase, however. Just slightly pushing it upward will give us the desired effect. If we play back our animation we now have a nice animation where our ship curves



upward as it flies along the screen. What we now have left to do is to create a wipe that will reveal the text for the video.

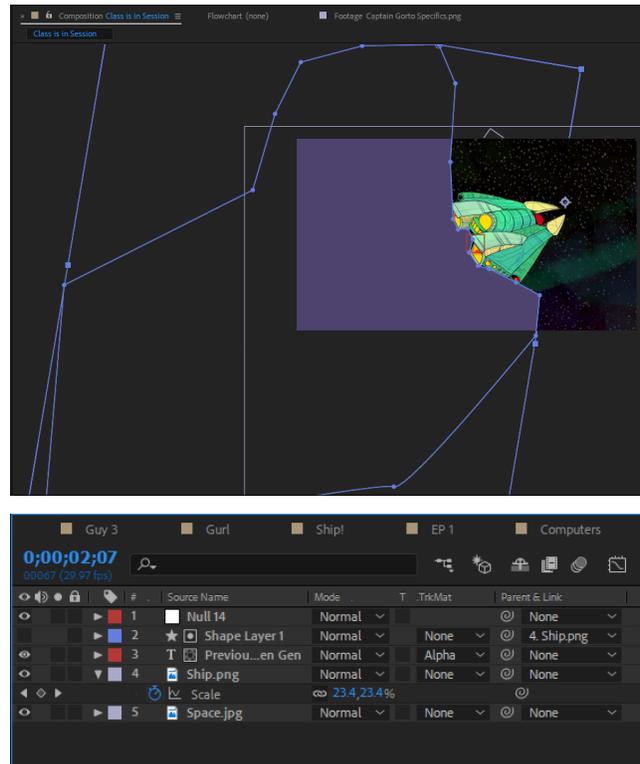
Creating text:

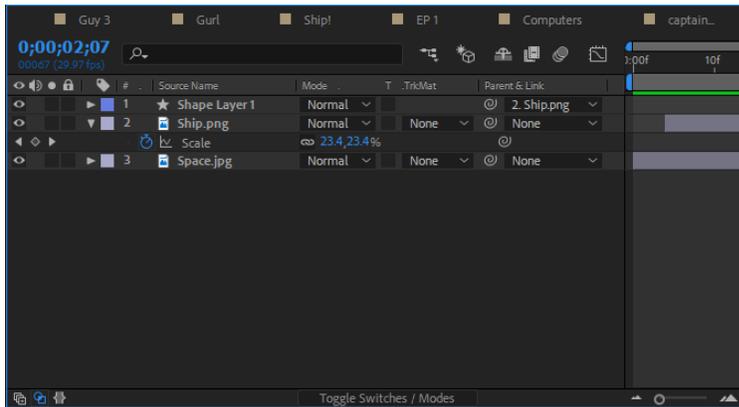
To create text in our After Effects project we first need to make sure that we are not selected on any layer. Once we have ensured that we are deselected we can then proceed to enter in text. Click on the "T" icon on the top bar to select your text tool, and then click anywhere in your compositional preview panel. A blinking cursor will appear allowing you to type whatever you would like.



Creating a Mask:

Creating masks in After Effects is both simple and extremely powerful. There are several ways to create masks, but the way that we will be using is one of the most flexible ways to achieve the desired effect. We are wanting the ship to reveal the text. To do this, we are going to need to create a mask that follows the trajectory of the ship so that as the ship flies by the text is revealed. To do this, select the pen tool from the top taskbar. Make sure you are not selected on any layers, and then begin drawing a shape that somewhat matches the shape of the ship. Make the shape large on the back end; whatever amount of text that the shape is covering will be shown. Once we have completed our shape, we now need to move the shape layer directly above the text layer in the compositional layer viewer. We do this because the text layer is going to take whatever is directly above it and make it a mask. At the bottom of the layer viewer, locate the button that says "Toggle Switches/Modes" and click it. You should see some new options appear for each individual layer. One of these options should be labeled as a track matte. Click the track matte drop down for the text layer and select "Alpha Matte 'Shape Layer 1'". You should see the shape that we created disappear. This is because the text layer is taking that shape layer and viewing it as an alpha layer and will, therefore, react to that layer. If you drag the alpha layer around you will notice that the text disappears when the alpha layer is removed from being on top of the text. We can leverage this in order to create the wipe in effect that we are looking for. However, we are going to have to track the alpha matte to the ship in order to ultimately achieve the effect that we want.





Parenting to Layers:

Tracking the Alpha Matte to the ship is not nearly as difficult as it may initially seem. Since the ship is already animating in the way that we desire. All that is needed is for the alpha matte to be parented to the ship in order for it to mimic the motion of the ship exactly. To do this, mouseover and click the drop down on the

“Parent and Link” on the alpha matte layer. You will get a few different options available to you. Click on the “Ship.png” to activate it as the parent layer. If we scrub through the project we will see that the alpha matte is now attached to the ship layer and will now reveal the text layer. The last thing that we need to do, however, is to pan everything down ala Star Wars. We can do this without much effort using what are called Null Objects.

Null Objects:

Null objects are, simply put, invisible layers that can be used to easily animate different layers at the exact same time in the exact same way. They are exclusively used for being a parent layer to other layers that need to have a common animation applied. We are going to use a null object to do a tilt down movement similar to how Star Wars always follows up their opening title crawl with a pan down into the stars. We are going to mimic this using a null object. Navigate to the top task bar to Layer > New > Null Object. You should see a layer appear that is invisible. There will be a transform box around it, but it will be invisible otherwise. Make sure the Null Object is located at the top of the layer panel and then highlight all of the layers besides the null object. With all of those layers selected, click the parent drop down and then select “Null 14” to parent all of those layers to the null. The layers are now parented. We can see the effect of this if we try to move the null around or rotate it. All of the layers move exactly as the null moves. Once again, this can be useful for moving all of the layers at once. Now that we have all of these layers parented to our null, we can go about doing an animated tilt down into space. Place the playhead in a position where it is sitting a few seconds after the title appears. We will want the title to appear fully and for the audience have time to read it. After we have let the title sit for that amount of time, we want to lay down a position keyframe on the null object where we would like our animation to begin. Scrub down on the timeline and lay down another keyframe. Next, drag the Y positional value

of the Null up so that the Null, and everything else along with it, is pushed out of the top of the frame. We now have our full animation from beginning to end fully laid out.

Conclusion:

After Effects is a very expansive program, and I have not even really begun to scratch the surface of what is possible with a program such as this. Watching tutorials and simply playing around in the program are the best way to garner a better understanding of how After Effects functions and what can be accomplished in it.

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