

(6) PROTOTYPING, MODELLING &

TESTING

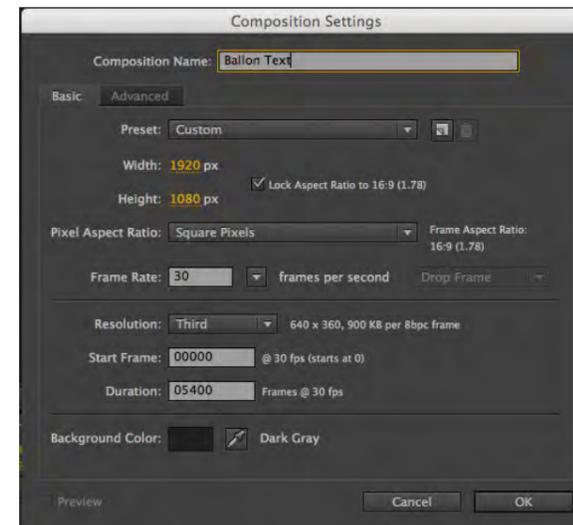
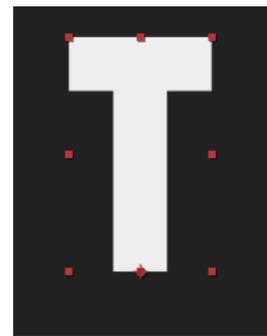
To develop my ideas further, I undertook some experimentation with the major programs that I would use to complete my major work. This research I conducted was to both widen my existing knowledge and gain a new understanding of applications that I have not used before.

I looked at two different areas of my projected video, After Effects animation and Blender modelling and animation.

(6.1) AFTER EFFECTS

BALLOON TEXT

The first text test that I completed was following a tutorial on how to animate text using the puppet pin tools. I began by creating a new composition by clicking Composition > New Composition (CMD + N), then I changed the composition background colour, duration of the composition and the dimensions of the screen to 1920px1080p.



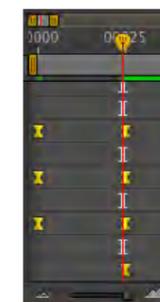
I then used the horizontal type tool (CMD + T) to type the letter T, and adjusted the typeface in the Character panel to look like the screenshot on the left. Then by right clicking on the letter T, I selected 'Make Shapes From Text'. This creates two layers, one text layer and one shape layer of the letter.

I deleted the text layer, as I no longer need it. Next, I dragged the play head to about 25 frames. Then, using the Puppet Pin tool (CMD + P), I inserted four pins into the letter T at all the ends and corners. Once all the pins had been placed, I dragged the play head back to the first frame and using the selection tool (V), I clicked and dragged the pins to the bottom of the letter.



Then, by pressing CMD + A in the timeline, and the pressing U, I could see the two sets of keyframes that I created. I then selected all the keyframes and pressed F9 to apply an easy ease effect on the movement. The keyframes will change in shape.

I then clicked the graph editor tool to further edit the movement of the animation. Then to preview the animation up to speed, I pressed the RAM Preview button in the Preview panel.



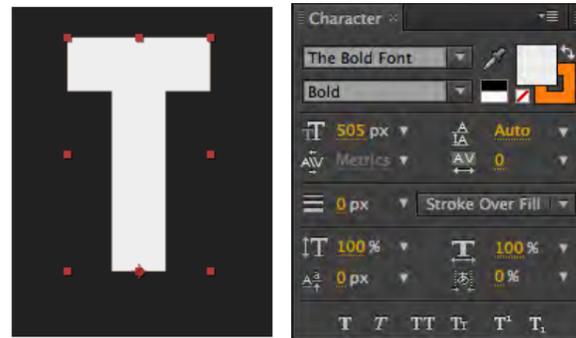
Pressing F9 applies the easy ease effect which can be edited in Graph Editor Mode.



TEXT TRANSITIONS

In this test, I experimented with different transitions that could be used with text and the Animator tool. I began by creating a new composition by clicking Composition > New Composition (CMD + N), then I changed the composition background colour, duration of the composition and the dimensions of the screen to 1920px1080p.

I then used the horizontal type tool (CMD + T) to type the letter T, and adjusted the typeface in the Character panel to look like the screenshot on the right. Afterwards, I dragged the play head to approximately 20 frames into the composition and searched in the EFFECTS AND PRESETS panel for the radial wipe effect. To apply this effect, I clicked and dragged it onto the text layer. Then, in the Effects Controls panel, I created a key frame of the completion of the effect to 100%.



Once this key frame was made, I dragged the play head back and changed the animation completion to 0% and edited the animation further by changing the angle and adding an ease effect. Moving the anchor point of the T using the Anchor Point tool (Y), changed where the wipe would take place. I then repeated this process with different transitions such as the linear wipe.

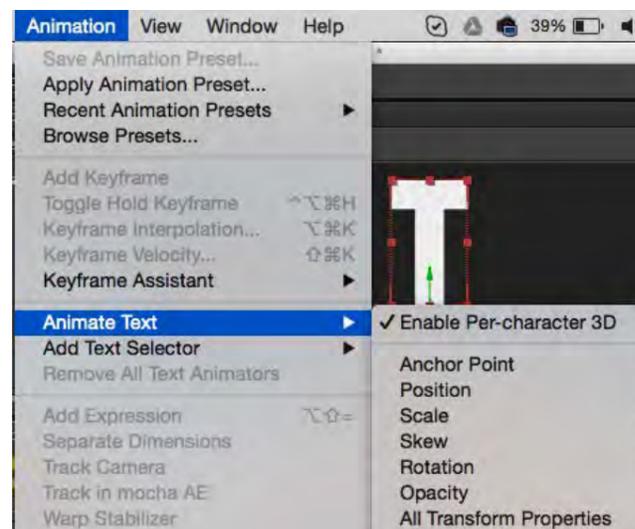
Once I finished experimenting with these effects, I clicked Animation > Animate Text, and applied some effects to see the way different effects worked.

The three main effects that I will use to animate the text in my video will probably be:

Position - The position of the characters. You can specify values for this property in the Timeline panel, or you can modify it by selecting it in the Timeline panel and then dragging the layer in the Composition panel using the Selection tool.

Scale - The scale of the characters. The size of the object can be scaled up or down to both positive and negative values.

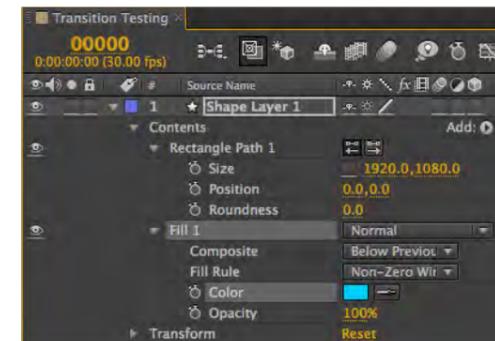
Skew - The slant of the characters. The Skew Axis specifies the axis along which the character is skewed.



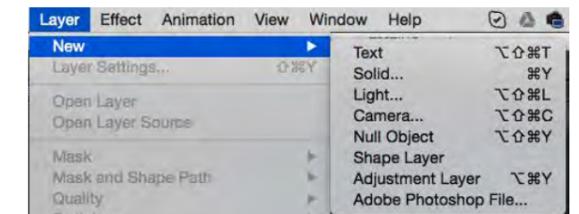
TRANSITIONS

I began creating transitions using tutorials that I found on YouTube and the Adobe Website. I experimented with the transitions in a similar manner.

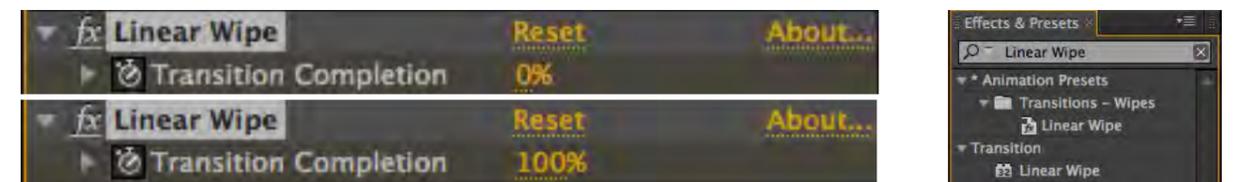
I began by creating a new composition by clicking Composition > New Composition (CMD + N), then I changed the composition background colour, duration of the composition and the dimensions of the screen to 1920px1080p.



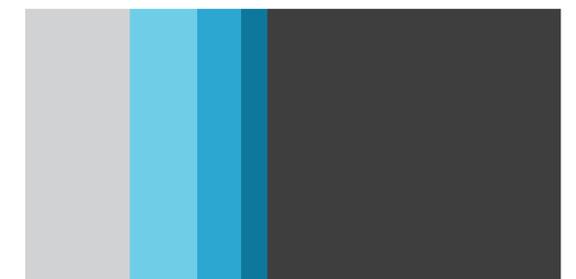
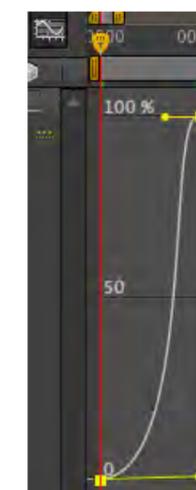
After this I created a new shape layer by clicking Layer > New > Shape Layer. Then in the layer I clicked Add > Rectangle. I then changed the dimensions of the rectangle to fit the entire screen.



To apply this effect I dragged it onto the layer, where I would later edit the keyframes in the Effects Controls panel. I dragged the play head to about 20 frames and then made a transition completion key frame by clicking the timer button. I set this to 100% and then made the angle completion to 0% at the first frame.



Then I applied the easy ease effect to give the animation a smoother effect. I then edited the path further using the Graph Editor tool. To add more interest to this transition, I duplicated the layer four times by pressing CMD + D. Then I staggered the entrance of the layers and changed the colours.

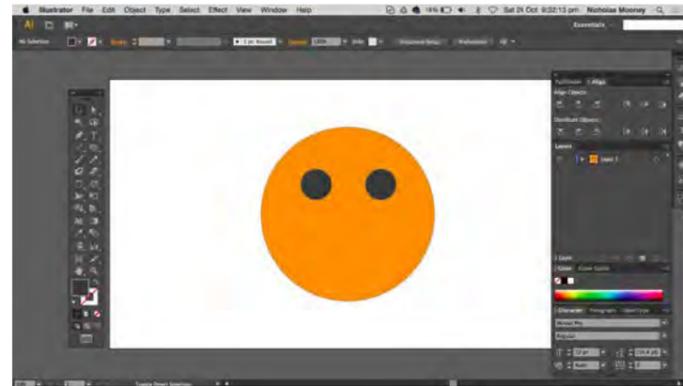


I repeated this experiment using other transitions, both linear and radial. To add a coloured fill I then clicked Add > Fill, and changed it to a light blue colour. Then I searched for the LINEAR WIPE transition in the Effects and Presets panel.

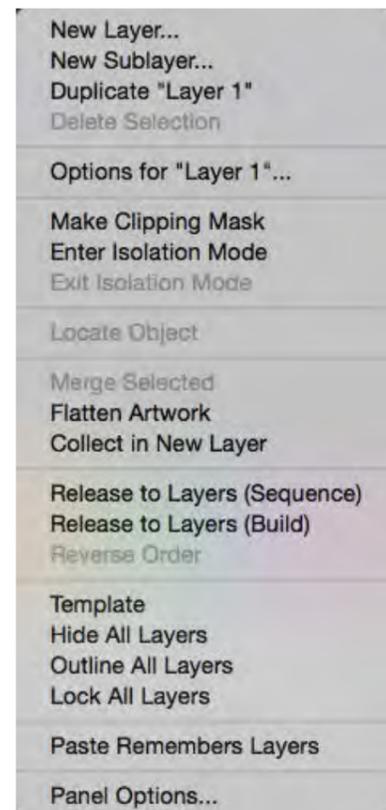
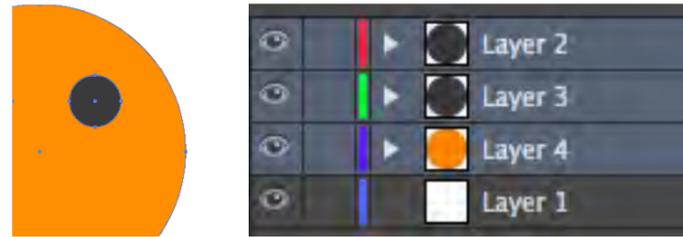
TRANSFERRING PROJECTS FROM ILLUSTRATOR TO AFTER EFFECTS

As I will be creating many vector graphics for my major project in Illustrator, I looked for a few tutorials on how to import layers from Illustrator to After Effects. I began by creating a simple drawing in Illustrator.

Then I selected everything on the stage by clicking CMD + A, and the going to the layers panel and selecting Release to Layers (Sequence). This would place every object onto a different layer. Then I dragged the three new sub-layers above the top layer to make them actual layers. Then I deleted the layer that was blank. To finish the illustrator section of this test, I saved the document as an Illustrator (.ai) File.



Then I began the After Effects section by creating a new composition by clicking Composition > New Composition (CMD + N), then I changed the composition background colour, duration of the composition and the dimensions of the screen to 1920px1080p.



Then I imported the document by clicking File > Import File (CMD + I) under the preferences below. Then I dragged this file into the timeline where it would appear as a composition with layers that I could later animate.



(6.2) BLENDER

MODELLING

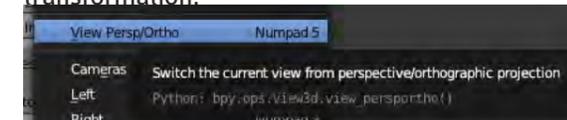
To begin my research of the Blender application I followed a series of online tutorials to learn basic modelling techniques. Because of the ecological theme of my video, I would attempt to sculpt some trees, grass and rocks. The purpose of this prototyping and testing is to gain an insight into how the application works, and whether or not it is too difficult to use given time constraints.

TREE

Blender automatically creates a new startup file whenever opened with a simple cube, camera and light on the stage. I deleted the cube by right clicking on it and then pressing the X key to delete it. By pressing SHIFT + A, I could then add a new mesh in the shape of a cylinder.



Through a panel on the left of the screen called "Add Cylinder", I changed the number of vertices to 6 and then clicked enter to apply the transformation.



For the next phase of the creation of the tree I switched the view from 'perspective' to 'orthographic' projection. This allowed the front view of the cylinder to be completely flat, enabling simpler editing.

By clicking S then Z, I scaled the cylinder along the Z axis until its length was approximately 4 times its width. In Edit Mode, I pressed B and made a selection of the vertices at the top of the cylinder.



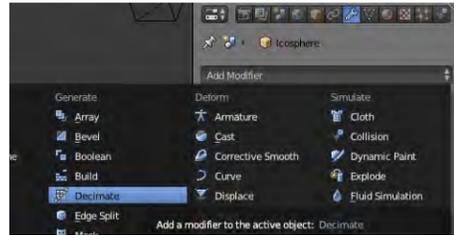
I then pressed the S key and dragged the mouse to bring the object to a point. Once I was satisfied with the shape of what would be the tree trunk, I switched back to perspective view and transferred into Object Mode. Using the blue arrow, I dragged the object up so that the base sat on the stage.



AFTER EFFECTS - I believe that my current knowledge of Adobe After Effects is substantial. However I would like to expand this knowledge to be of industry standard and be confident and proficient in its use. I will attempt to capture my pre-existing skills and the new techniques that I learn in my major project.

BLENDER - As stated earlier, I would like to use this major project as a form of expanding my skill set in learning how to model and animate objects in Blender. Now that I am aware of the basic tools and techniques, I will adjust my final design to both be a challenge to me, but also not be too difficult. This will ensure that I produce a project that is of industry standard.

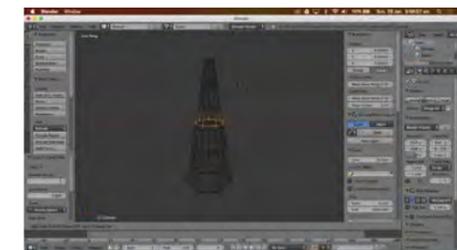
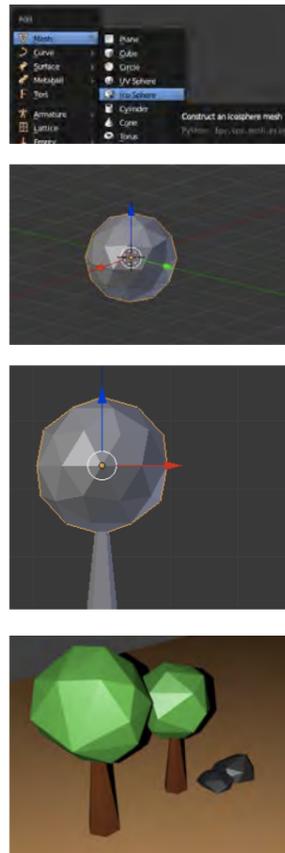
To begin the production of what would be the leaves of the tree, I clicked SHIFT + A and created a new mesh in the shape of an 'Icosphere'. I used the blue arrow to drag the sphere up so that the center would sit at the top of the trunk.



To make the sphere look less structured and more natural, I applied a modifier in the Properties Panel. I clicked Add New Modifier > Decimate. I dragged the ratio down to around 0.6, ticked the triangulate option and then clicked Apply to implement the modifier on the sphere.

To add colour to the tree I created two new materials in the Materials panel. I changed the trunk to a dark brown and leaves to a true green color. By right clicking on the objects, I could then 'Assign' a certain colour.

I repeated this process a number of times, creating an array of different trees as a form of testing Blender and its functions



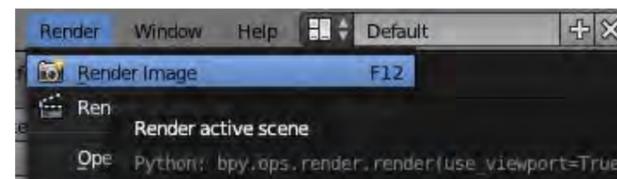
Once I became more confident with creating this basic tree, I attempted to create an extra branch on an existing tree. To do this I right clicked on the trunk of the tree and entered Edit Mode. Then I clicked CONTROL + R and then the 6 key to divide the trunk into 6 sections. Using the face select, I selected a face on the side of the trunk and clicked E to extrude it and R to rotate it to face upwards. Then I selected the leaves in Object Mode and placed a smaller copy on the extra branch.

EVALUATION + RESULTS

Overall, the prototyping, modelling and testing of applications and processes that I have completed has satisfied my aim of discovering what I am capable of producing. I have found that Blender models take a considerable amount of time to produce and also to Render.

I have also found that with some practice, I have potential to be fairly proficient in After Effects.

AS A RESULT OF THIS TESTING, I will certainly integrate 2D and 3D animations in my major project.



To complete the modelling and testing in Blender, I experimented with the camera and lighting to capture my created objects.

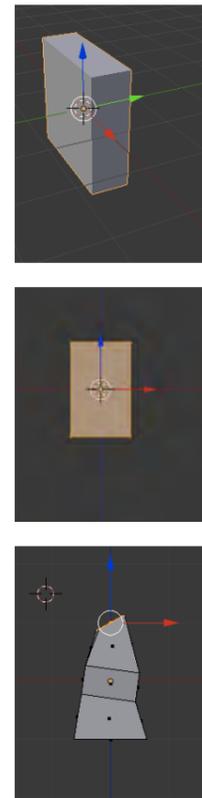
GRASS

Another element that I have included in my testing and modelling section for the Blender application is the creation of grass, similar to the image pictured right.

I created a new file and used the existing cube to sculpt these blades of grass. To model the grass, I did not use a tutorial, but rather used my newfound knowledge to discover whether or not the application would be too difficult to use.

I scaled the cube along the Y-axis and X-axis to make it tall and narrow by clicking S followed by Y, and S followed by X.

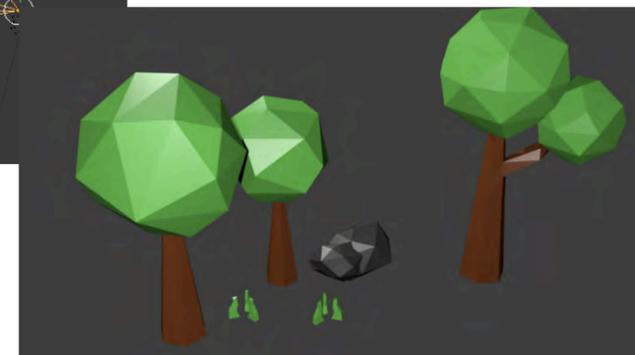
Then I right clicked on the rectangle and entered Edit Mode and switched into Orthographic projection and viewed the object from the front. I subsequently pressed CONTROL + R and the 2 key to divide the object into three sections.



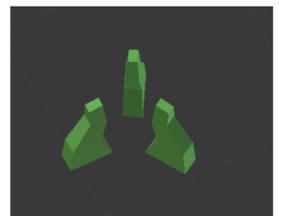
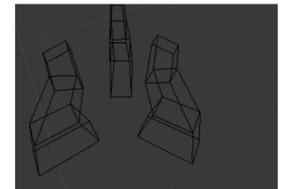
I experimented with scaling, rotation and the three selection options of Face select, Edge select and Vertex select to create the desired shape of grass.

Once I was satisfied, I applied the Leaves material to the object and created two other copies, arranged in a circle similar to the previous screenshot.

The final product of my testing with Blender is pictured below.



PROJECTED DESIGN



FINAL DESIGN

I THEN EXPERIMENTED WITH 3D PRINTING BY EXPORTING AS A .STL FILE

THE PRINTED MODELS ARE DISPLAYED