

A2 Stylised Landscape

By Nicole Sue Lynn Leaw

Concept

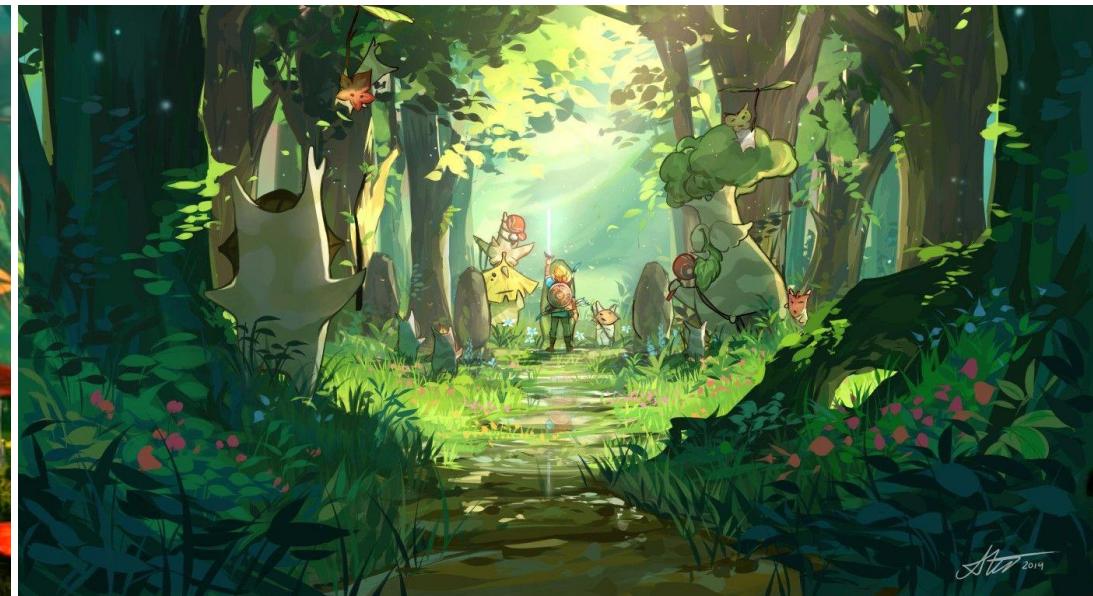
High fantasy fairy/mushroom forest.

- Lush with plants/greenery, many trees + overgrown grass
- Close quarters, a smaller scale environment
- Either bright greens OR muted cool colours
- Items:
 - Mushrooms, fairy rings (small pebbles), trees (triangle type + foliage type)

Inspiration



Fairy forest, [\[source\]](#)



BOTW fanart, [\[source\]](#)



Breath of the Wild, [\[source\]](#)



Fantasy forest, [\[source\]](#)

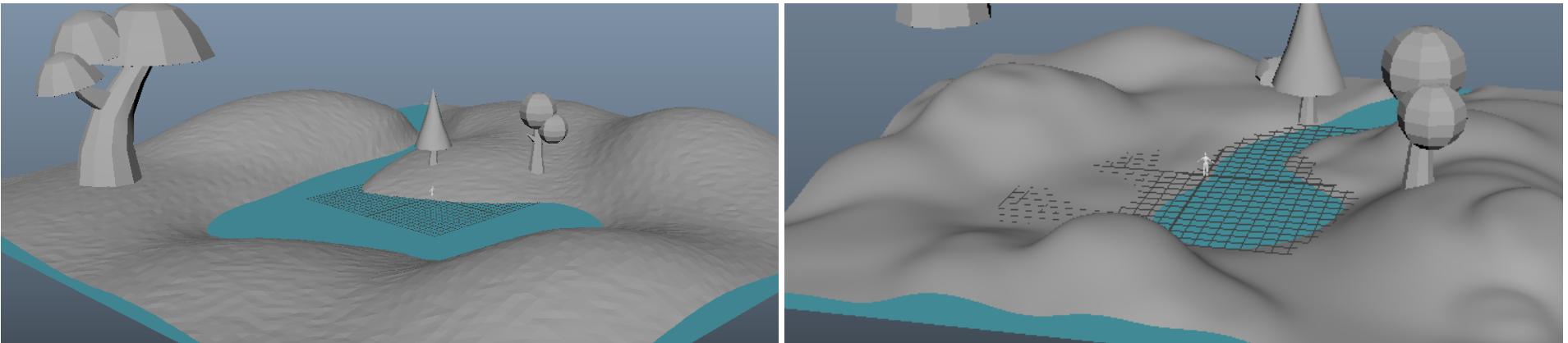


Stylised forest, [\[source\]](#)



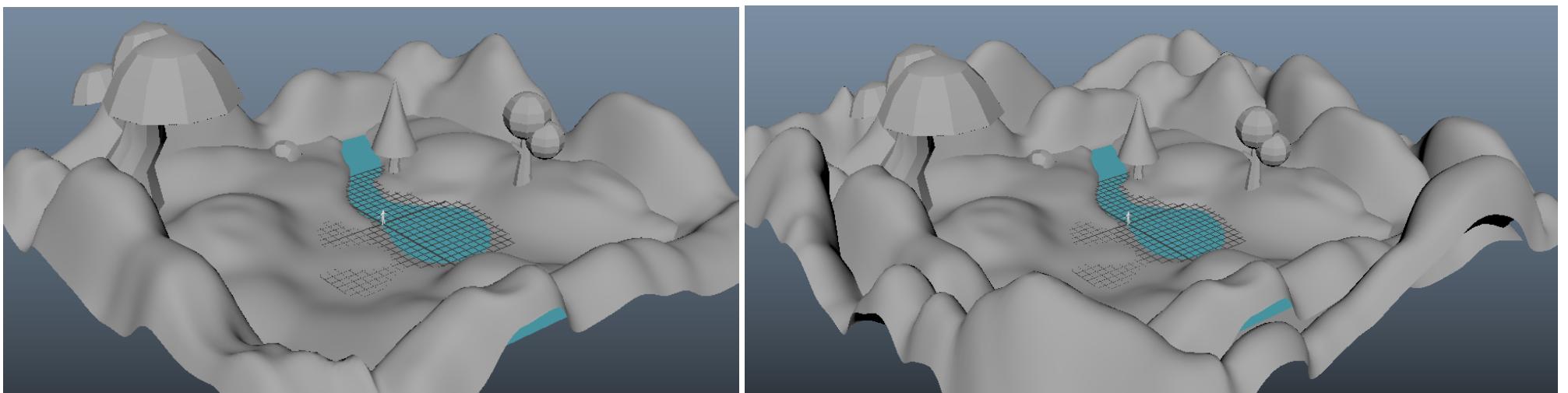
Wind Waker, [\[source\]](#)

Greybox

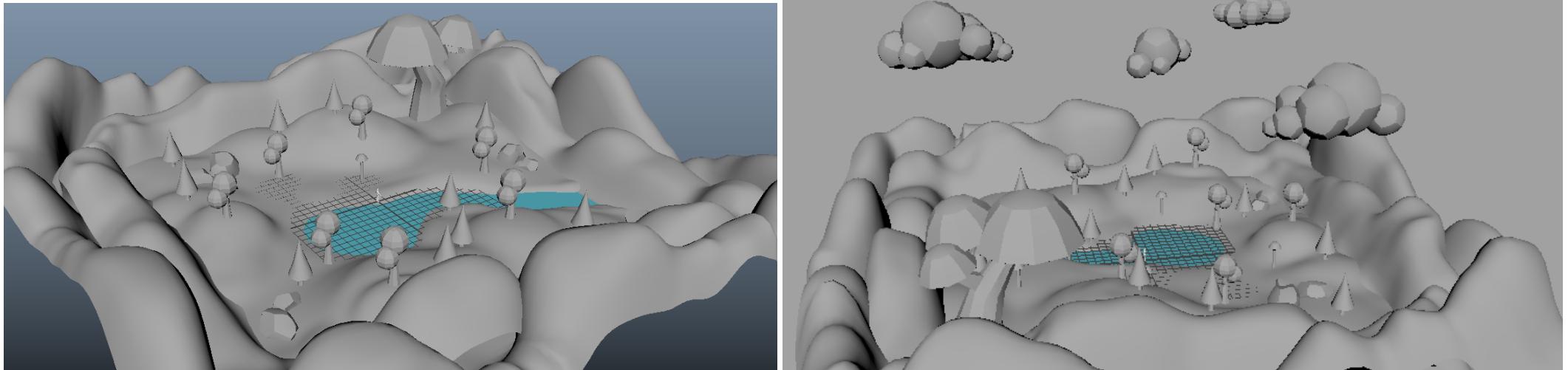


For my first greybox attempt, I sculpted a very small scene surrounding a lake. I used edit mesh > transform > random, to try and add some randomness, but really disliked how 'grainy' it made my ground look, so I remade it.

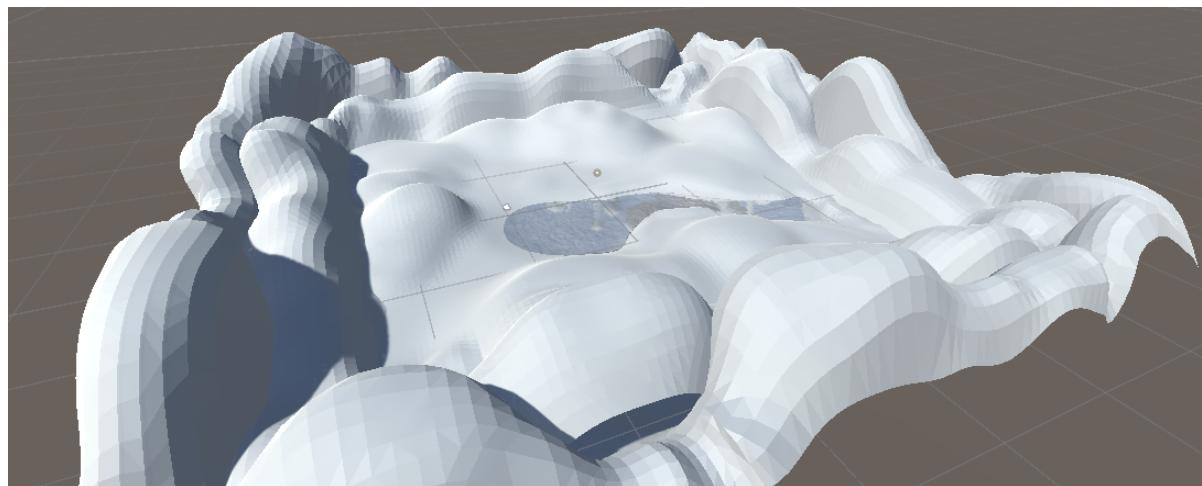
When remaking it, I also sculpted three trees: one rounded, one triangular, and a big umbrella tree as a focal point. Remaking the ground, I added more curves and small hills for variation.



I then added two layers of mountains to encapsulate the scene, trying to keep these varied in size and height.

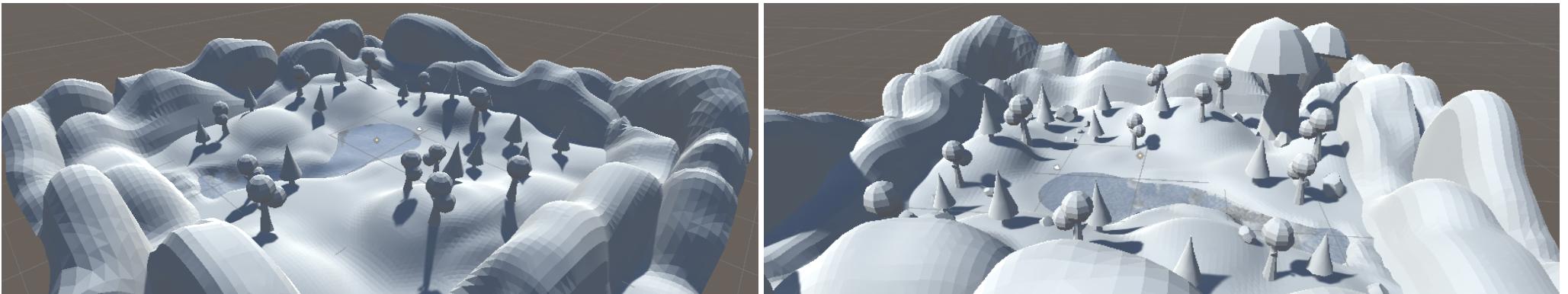


I then resized the trees, and populated the scene with tree duplicates, and added some clouds above my scene.



I then exported all the items as fbx files, and imported them into Unity.

When exporting, I used mesh > triangulate, and mesh display > harden edge to create that low poly look/hardened look. I also added one of the premade water assets as a placeholder.



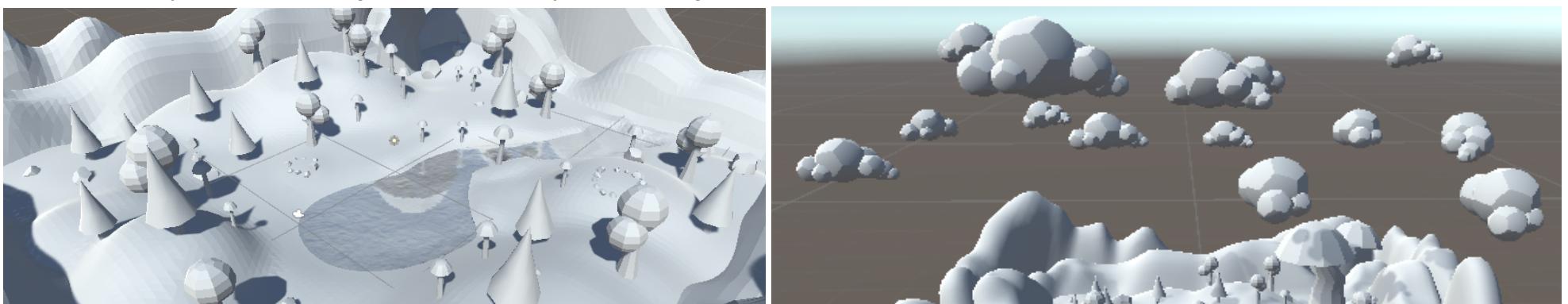
I then set up the prefabs for the triangular and round trees, and scattered them all around my scene.

I tried to mainly put them on hills, but left an empty space for where my big umbrella tree was meant to go. To vary my trees, I had them differ slightly in scale, and be placed at any angle upright.

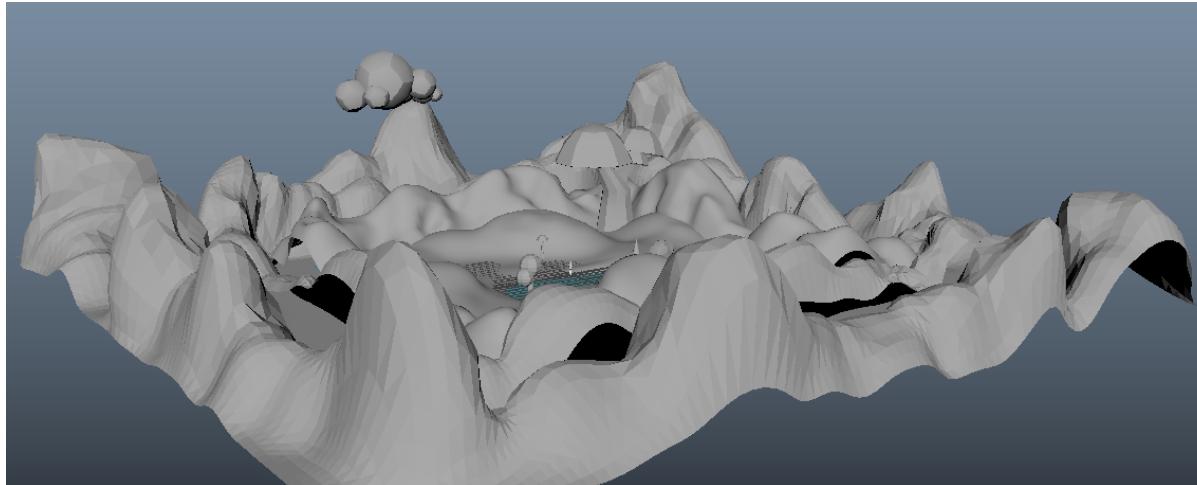
I also set up the rock prefabs, again scattering random rocks around my scene, and imported and placed the big umbrella tree.



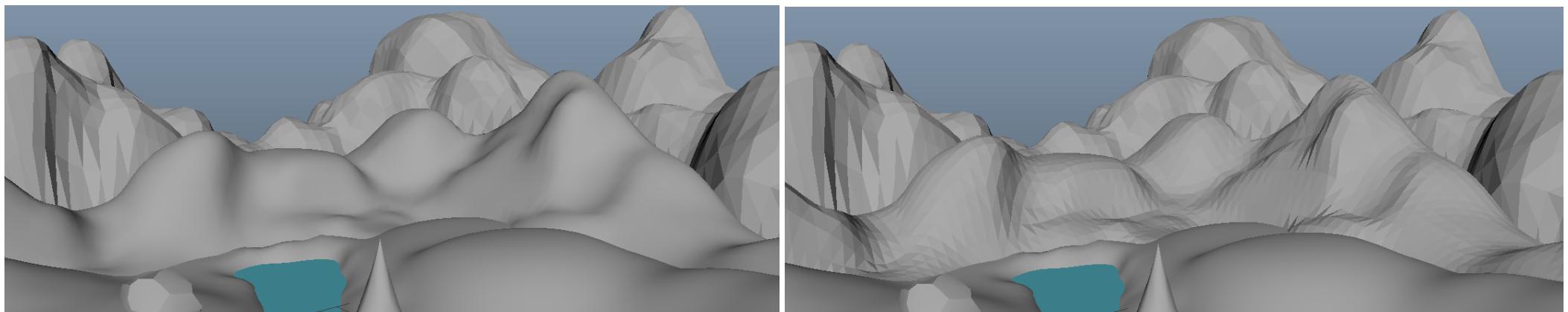
I created fairy circles (small rings of rocks) onto my terrain, using the rock prefabs in a small scale to use them as pebbles.



Then I set up the mushroom and cloud prefabs. I thought I could use the mushrooms to outline a path to the big tree. For the clouds, I tried to keep the size quite varied, and placed them above and slightly outside of my scene's boundaries, so they would continue on in the distance when playing as the FPS Controller.

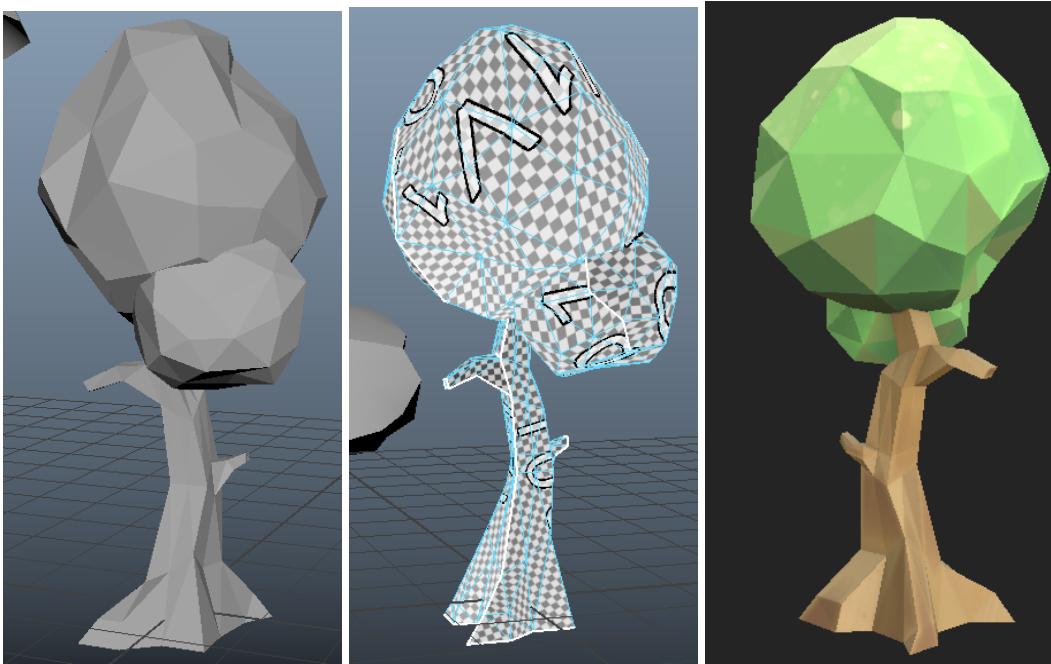


After some feedback, I went back into Maya to create another layer of mountains, to add further depth into my scene. I made these mountains a lot thinner and much taller than the others, as I wanted these to appear distant and less predictable.



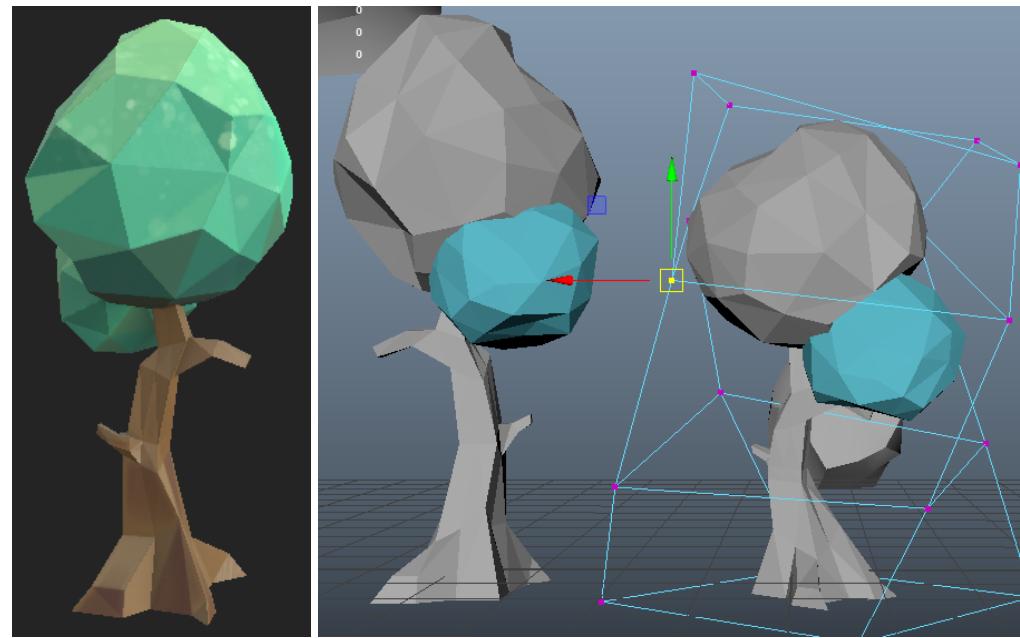
I also went back to my mountain layers, and used the sculpting tools to make these appear less smooth and more jagged. I sculpted ridges and random heights onto my mountains in an attempt to add more depth and deepened shadows.

Maya Remodelling + Substance Texturing + Unity

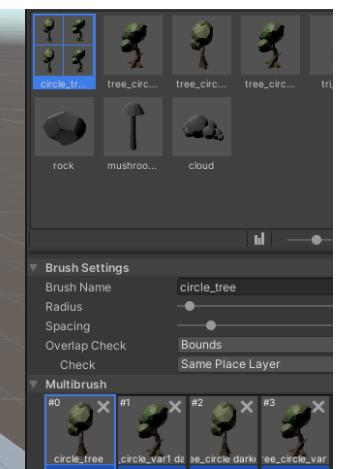
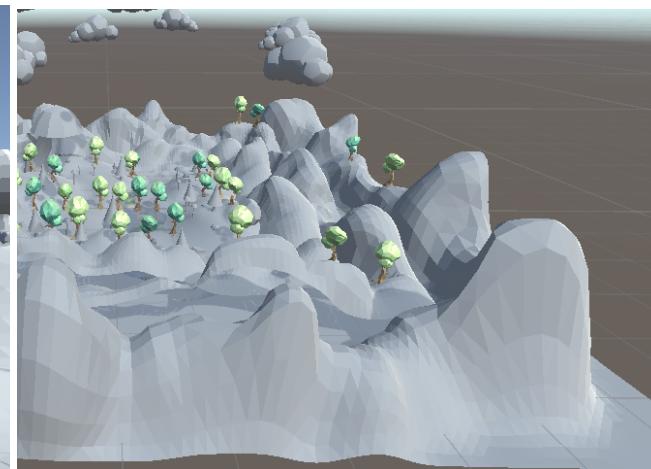


I started by modelling my circular tree, using a platonic solid for the two circle foliations. I used triangulate and mesh display > harden edges, before manually moving all the edges and vertices using soft selection to make the shape more angular and to make interesting shadows. Next I prepared its UV map, then dragged it into substance, using the week 6 tutorial notes to texture it. The steps I followed were:

- Assembling the UV map, then using unfold + layout at the end.
- Applying different materials to different segments (for substance painter)
- Saving it as a fbx file in the Unity folder.
- Opening and baking the mesh maps of the object.
- Making a fill layer
- Using two light generator layers for the top (lighter) and the bottom (darker) gradient.
- Using Polygon Fill to fill triangles on the mesh as shadows, and changing this layer type to Overlay.
- Using a fill layer with only roughness selected > adding a black mask > fill effect > dragging a grunge texture for detail
- Adding a fill layer with a black mask, and using the Dots brush to make sunspots/draw on extra details.

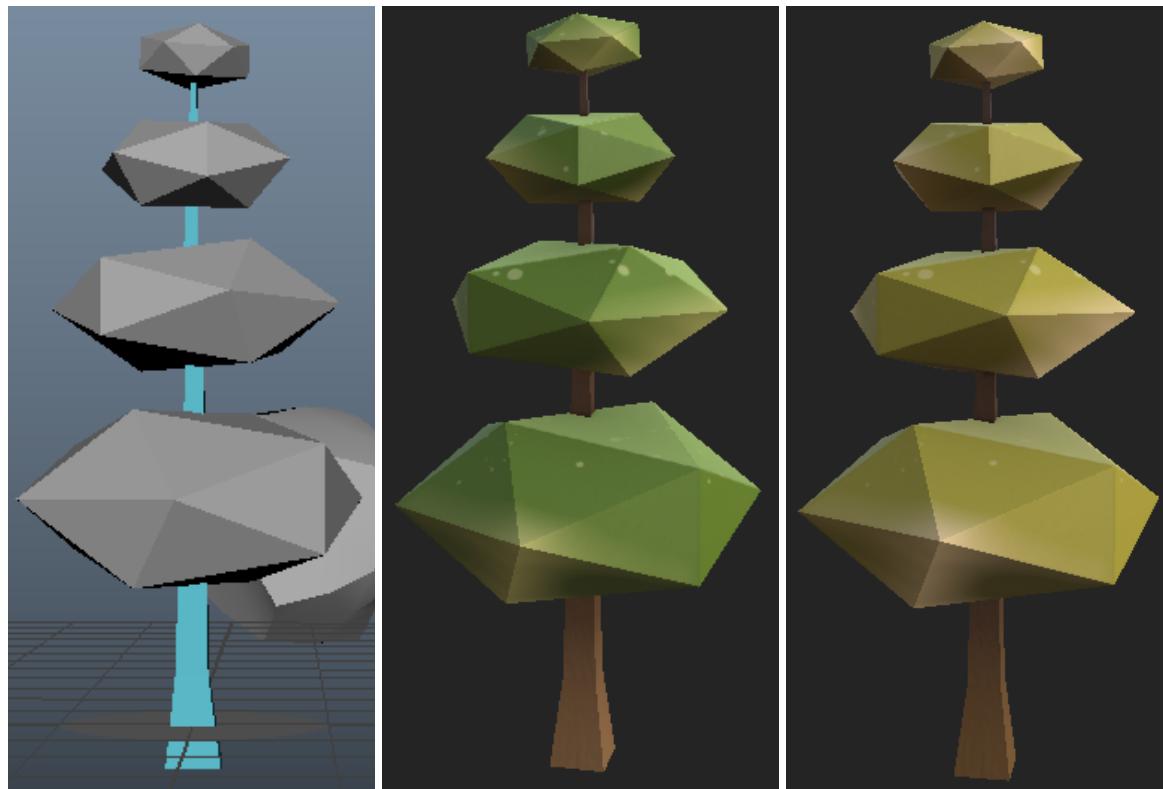


After texturing the tree, I went through each layer to make a colour variation, with a darker, more blue foliage and a darker trunk. I also deformed the original mesh using the lattice deformer in Maya, rotating and moving vertex until I made the variation pictured above.



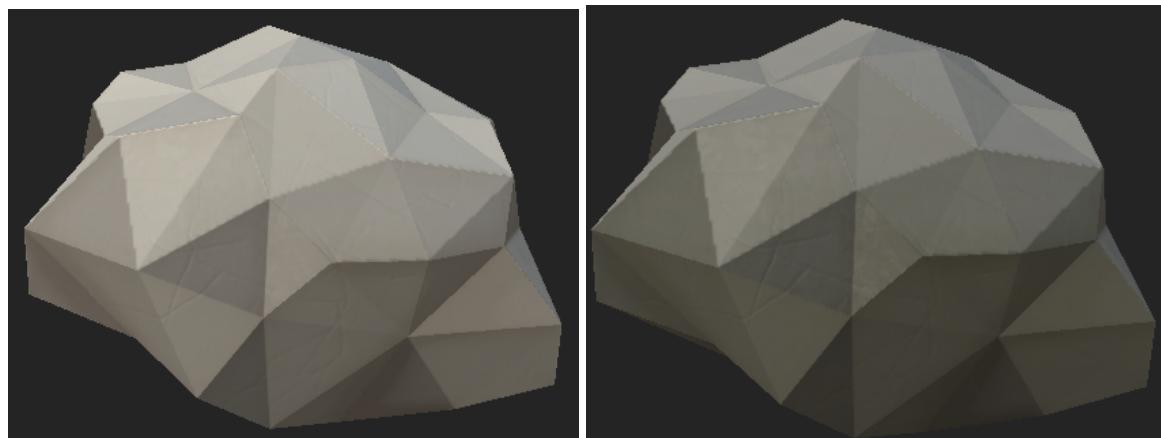
Then I set up the mesh with its materials in Unity, to make 4 variations of my circular tree. I also made the trees into a prefab, using Prefab Painter and the multibrush function, to paint them all over my terrain. I also added some trees on top of my surrounding mountains, as I felt it looked weird if the trees were only found in my base terrain, and I wanted some circular silhouettes on the horizon.

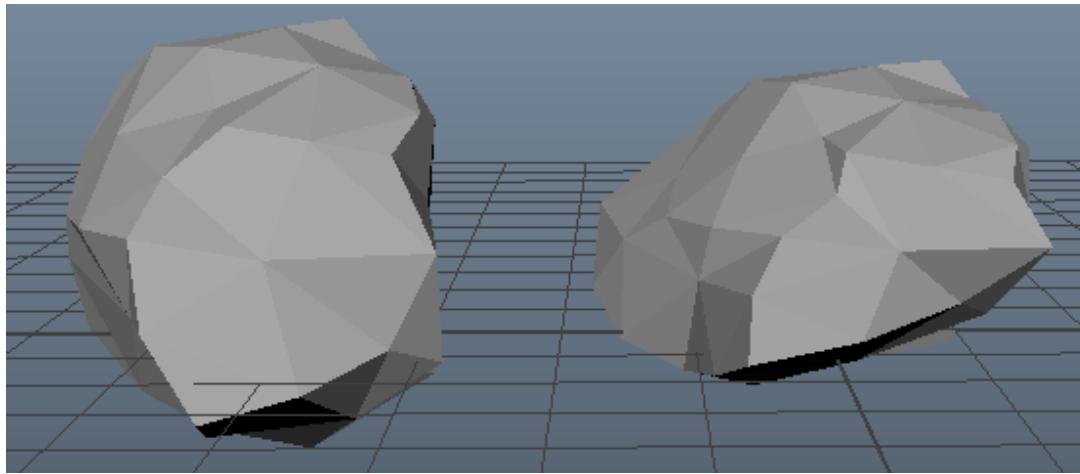
I also went back and added an ambient occlusion generator for the wood of my trees, to add more variation in its colour and shading.





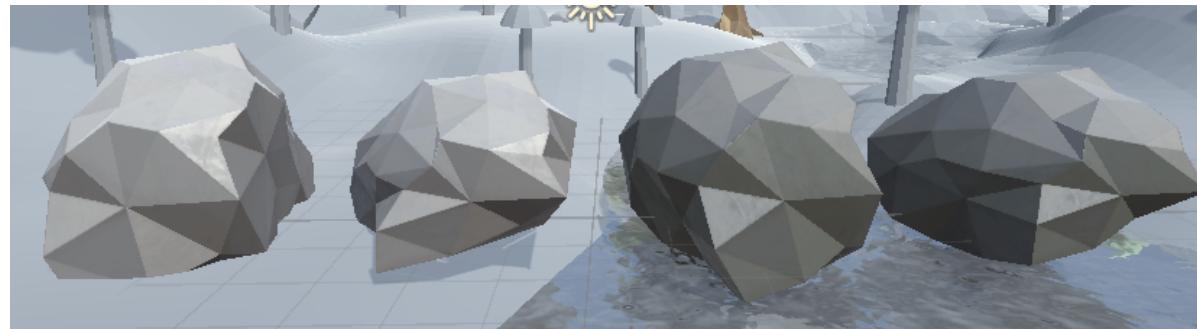
I then did the same process when making my triangular trees, again starting by modelling in Maya, texturing two colour variations in Substance, then making a mesh variation back in Maya. Lastly I made it into a prefab in Unity, again making 4 variations, 2 colours and 2 sizes.





Next I remodelled and textured my rocks. For the rock's mesh, I tried to make a lot of angular edges and pointy vertices for stronger shadows. I also made my colour variations pretty similar as I only wanted it to provide a slight variation when stacked next to each other.

I also created two variants of the rock, again using the lattice deform, making one more flat than the other.

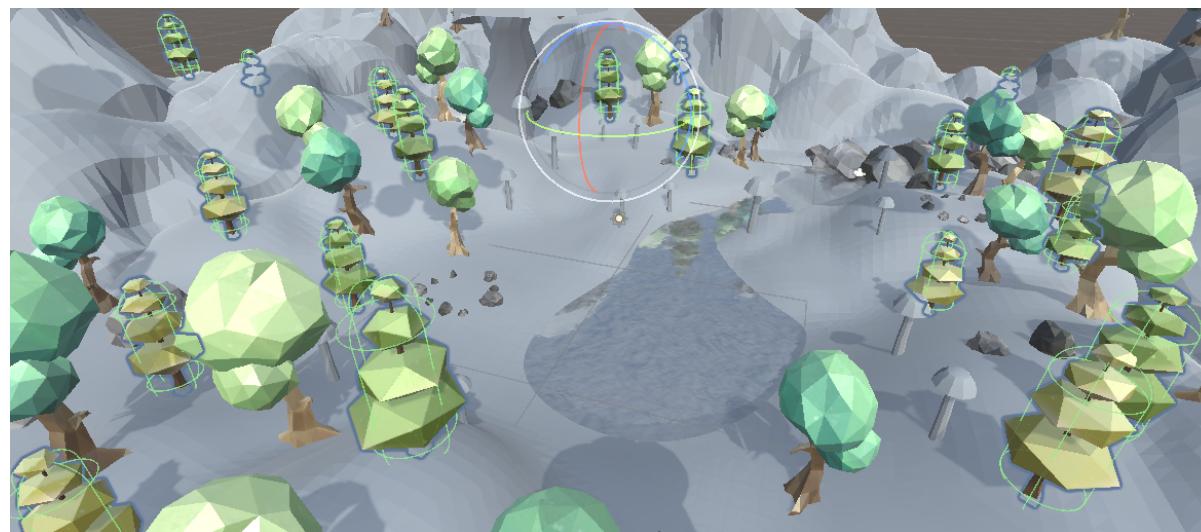


I also used a height layer to add cracks in the rock, and a roughness layer to add texture to it. I also realised at this stage that the 'edge highlights' tutorial wasn't working, as it only applied to the cuts in my UV map, which were usually hidden away at the bottom of my objects.

I also noticed when walking around as my FPS controller, that the cracks I had drawn onto my rocks weren't appearing, and the grooves of the wood of my trees weren't showing up either. I realised then that I hadn't been exporting the normal maps, and went back to re export them for all my objects, and set up my materials again.



After making my rock prefabs, using my 4 variations, I began to populate my scene with large rocks, making a rockslide to cover the abrupt ending of my water stream, and remade my fairy circles using my varied rocks, in a small size.

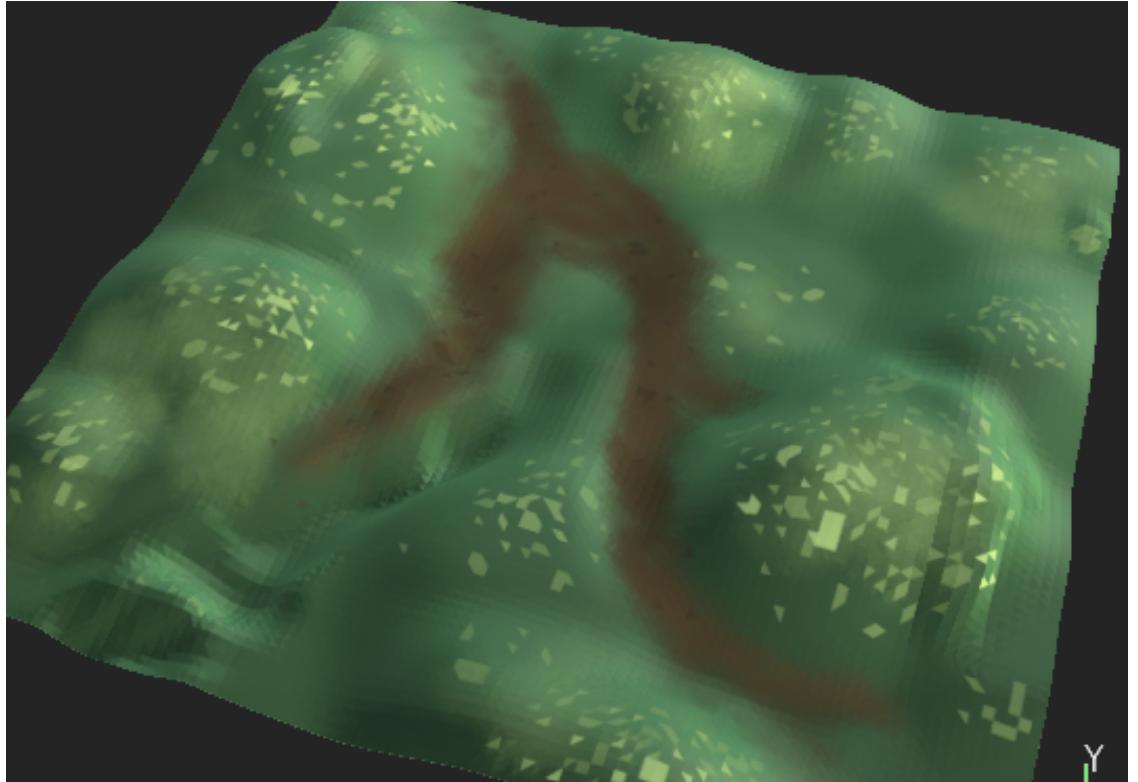
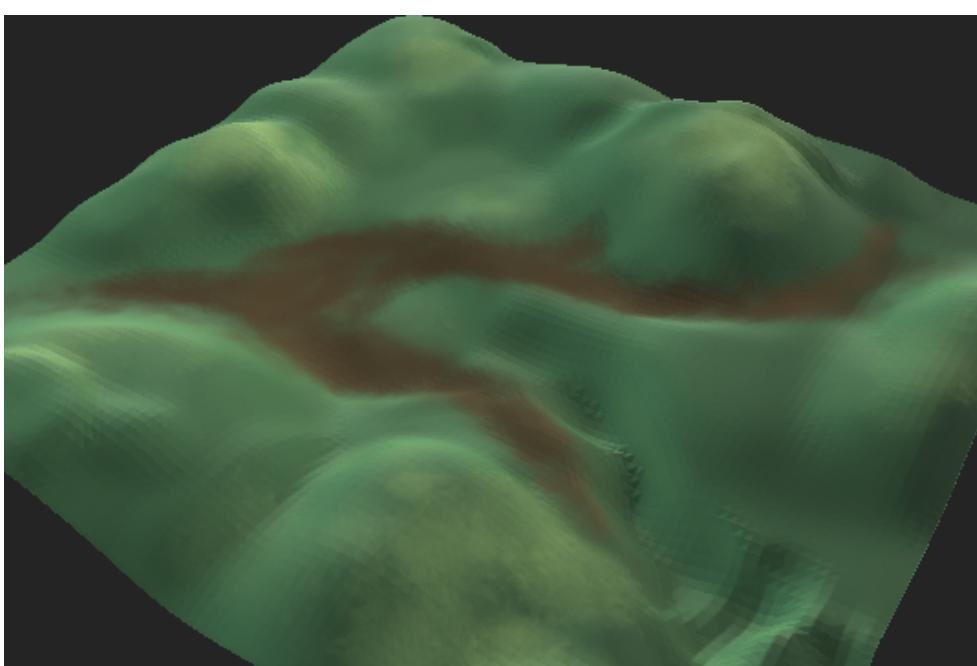


Next I applied capsule colliders on all my trees and rocks, editing each prefab and walking around as the FPS Controller to make sure it couldn't clip through objects. At this stage I also disabled my controller's ability to jump, as I realised it could parkour over my mountains, which made open and deleted faces visible, essentially breaking the immersion of my scene.



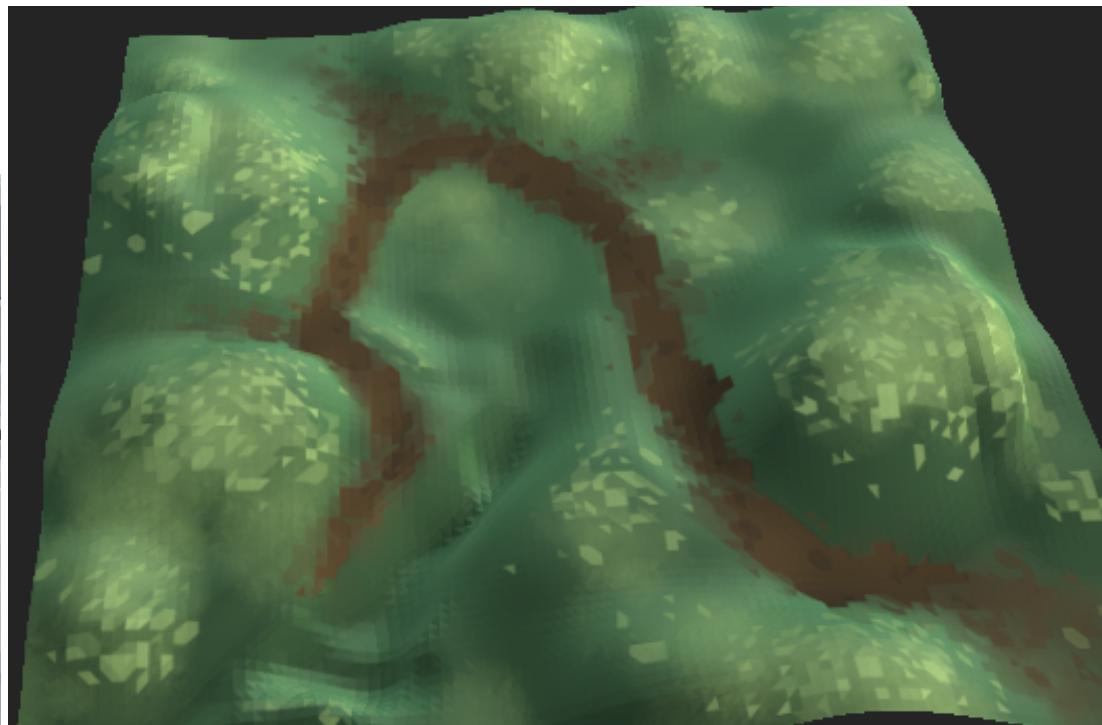
I then made my mushrooms with two colour variations, and only one model. I used a similar technique to the trees, using fill layers, light generators and the polygon fill tool. Lastly I used a height fill layer to make the mushroom's stem more rough and 'stringy'.

I also thought I'd make the inside of my blue mushroom glow, adding an emission channel to Substance Painter, and using a black mask to make the inside and small spots of the cap glow.



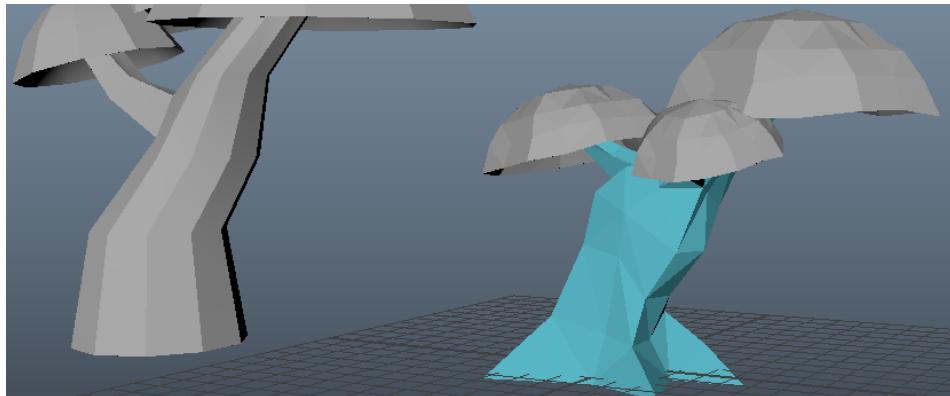
When I began to make my terrain, I started with two light generators on top of a green fill layer, one light yellow for light, and a darker green to simulate shadow. This didn't work very well, so I used a soft chalky brush to paint lighter patches on top of my taller hills using a light yellow. I used this same soft brush to paint a dirt path for the player to follow.

However when I exported this into Unity, I felt it clashed too hard against the polygonal style of my objects, so I went back and used the polygon fill tool on my hills, using 4 yellow fill layers with different levels of opacity to paint light patches onto the hilltops, and darker triangles of brown for my path.



Applying my new texture to my scene, I realised I had incorrectly drawn my dirt path near the lake, and half of it dipped into the water. When remaking my texture to fix my path, I realised that my path still clashed too hard against my objects, so I remade it using a similar method as what I did to the light spots of my hills - using the polygon fill tool in brown, with multiple layers of different opacity levels.

I also changed the height of these brown polygon fill layers, to make it appear lower than the grass layer.

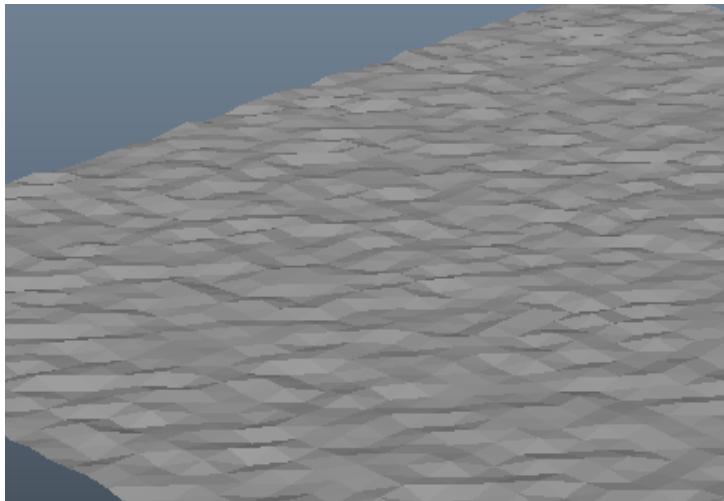


Next I remodelled my big focal tree, adding a third branch to support the ‘umbrella’ foliage. Again after triangulating and using ‘harden edge’, I manually altered all the vertices and edges to make it look more angular, and used the extrude tool to make ‘roots’ and extend the trunk. Using the UV editor, I tried to match the sizes of these triangular faces to my other objects, to keep the face scale consistent, so I added a lot of extra edge loops and did a lot of adjusting to make sure they weren’t too big in comparison.



Using similar techniques as the previous trees, I began to texture my umbrella tree. I also decided to apply a curvature generator to my foliage, to very slightly highlight the edges. After texturing the bark and adding a grunge map to make a rough trunk, I imported it into Unity.

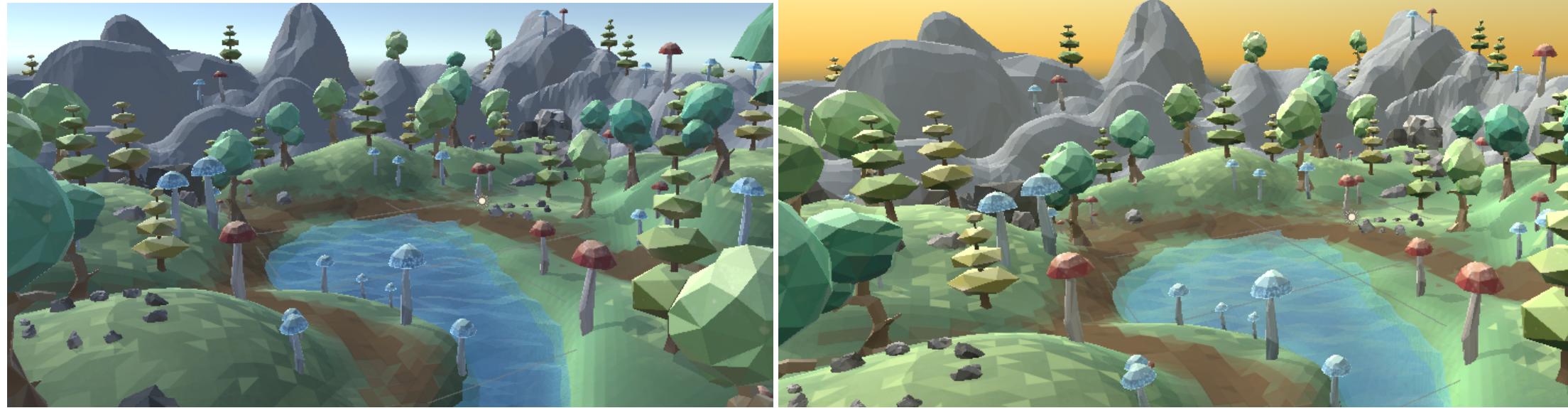
I also tried to use opacities and the alpha brushes to make a more layered style of foliage, but after failing to make it, I settled on a solid, polygonal style instead.



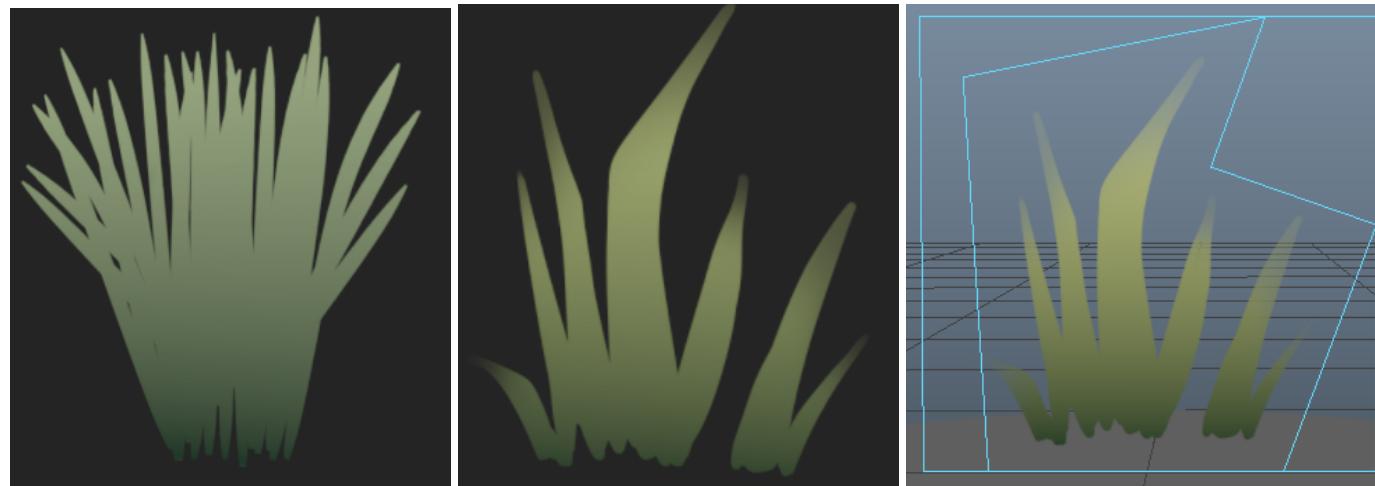
I realised that because of my style, I had to replace the premade water and make it more stylised. Using a flat plane, I used edit mesh > transform to create small 'waves' on the mesh.

I extracted the mesh's materials and set its rendering mode to Fade, and brought down its alpha channel-opacity slider to around 50% in its albedo map. I also increased its smoothness to make it more shiny.

After I was happy with it, I duplicated the water, making another material to make it a darker blue. I moved this darker copy below the first water layer, and rotated it to create variation in the waves.

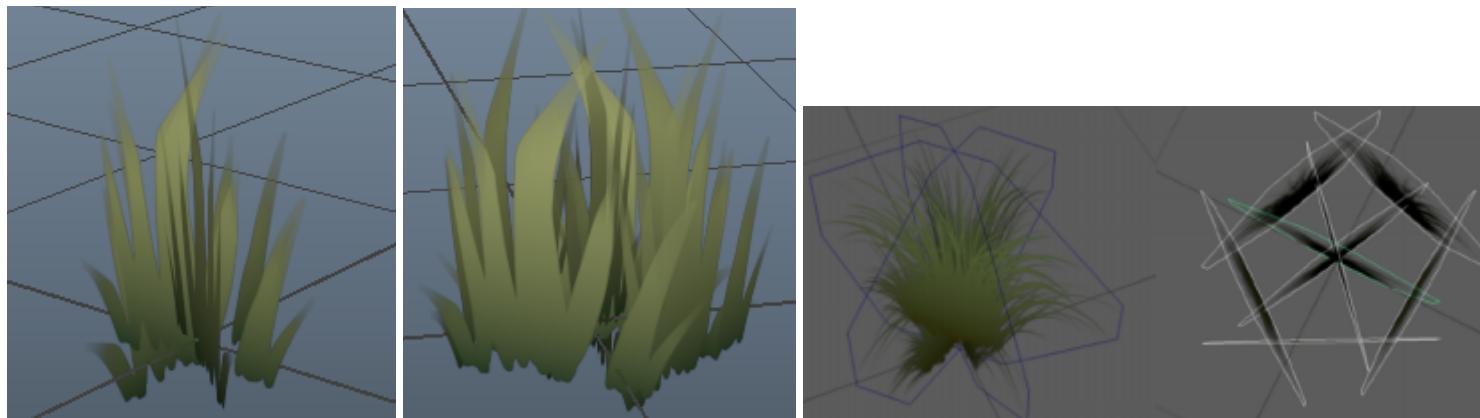


I made a custom skybox material, following the tutorial notes, as I wanted my scene to be brighter and more warm. I changed the sky tint to a dark orange to create a warmer hue, and made the ground colour a dark saturated green. I noticed that the ground colour setting didn't change much, it just tinted the colour of the shadows, so I chose a dark green as I wanted the shadows of all my greenery to look saturated.



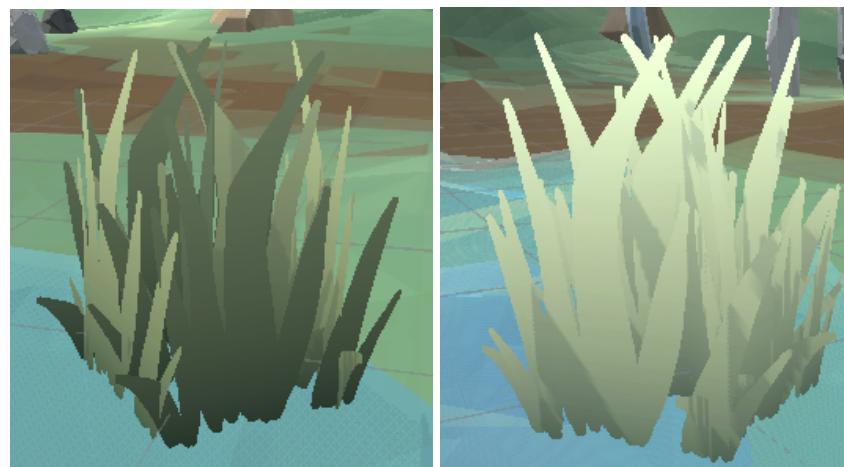
When making my grass, I first used one of the premade provided alpha maps to test the colours, and understand alpha maps better before making my own. I drew my own using Clip Studio Paint, and tried to make it look angular and cartoony. It also has a slight opacity blend towards the tips of the grass to make it more ‘natural’ looking.

I then set up the material in Maya, cutting away at the edges and reversing the plane to make it complete on both sides.



I then arranged my grass clumps in the two positions suggested by the tutorial notes (third image above).

Option 2 looked a lot more thick and less wispy. I also thought it provided an ‘overgrown’ look, which I thought would suit my scene more, with all my greenery and plants.



After importing the grass patch into Unity, I followed the tutorial steps to change the vertex normals in Maya to produce the right image, as this was meant to make the lighting more even.

However I decided that I actually preferred the grass with its default normals, as I like the varied colours it has. I felt that the custom normals made my grass look really flat and washed out the colours. It also made my grass way too pale for my liking, so I reverted back to the default normals.



I went back into Substance to make a more yellow colour variation for my grass, and made it into a prefab. I used Prefab Painter and made my grass into a multibrush to paint grass clumps all over my scene.



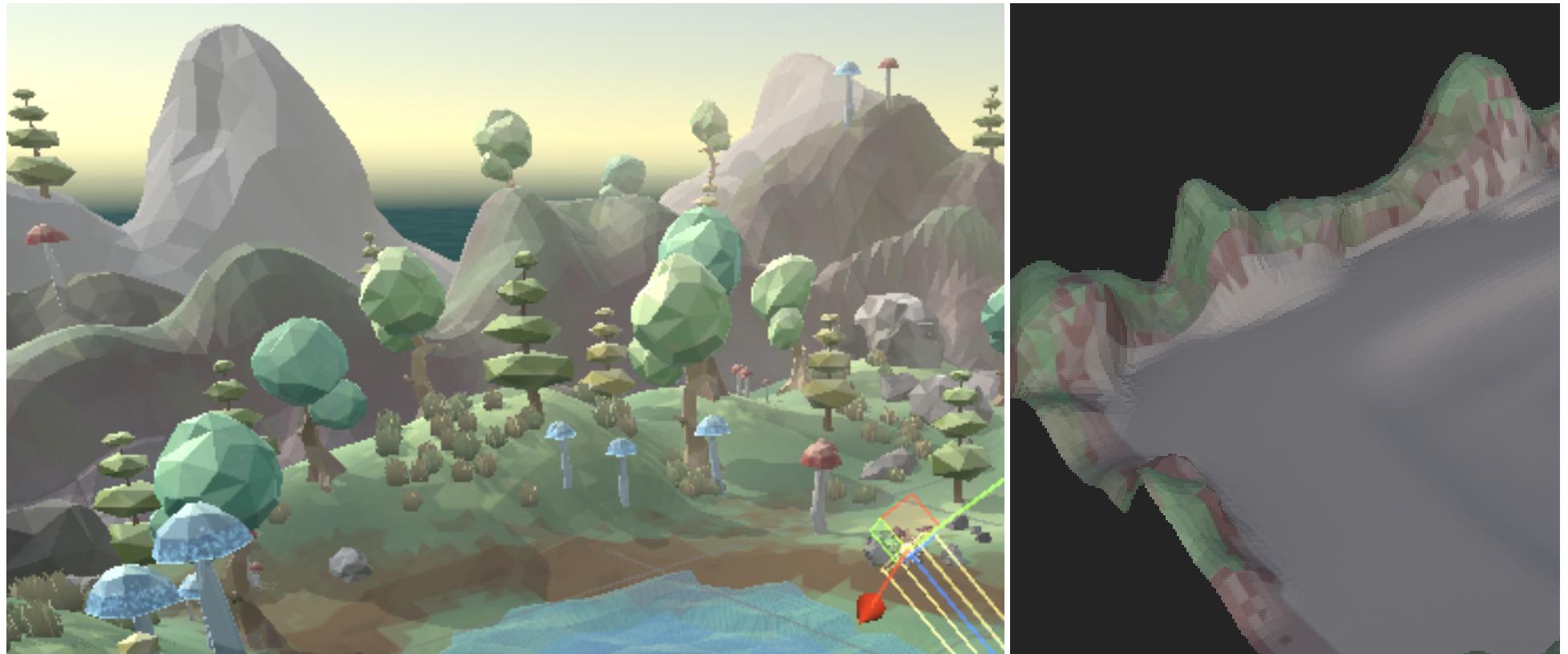
Then I textured the first layer of mountains, first using a soft chalky brush for the dirt, then a polygon fill layer. I did the same for the grass, but I also made another layer to make small triangles of highlights, just to match the style.

I thought I'd use a darker dirt colour in comparison to the brown I used in the dirt path, as I didn't want the player to be too distracted by the background, and so the dirt wasn't too bright.



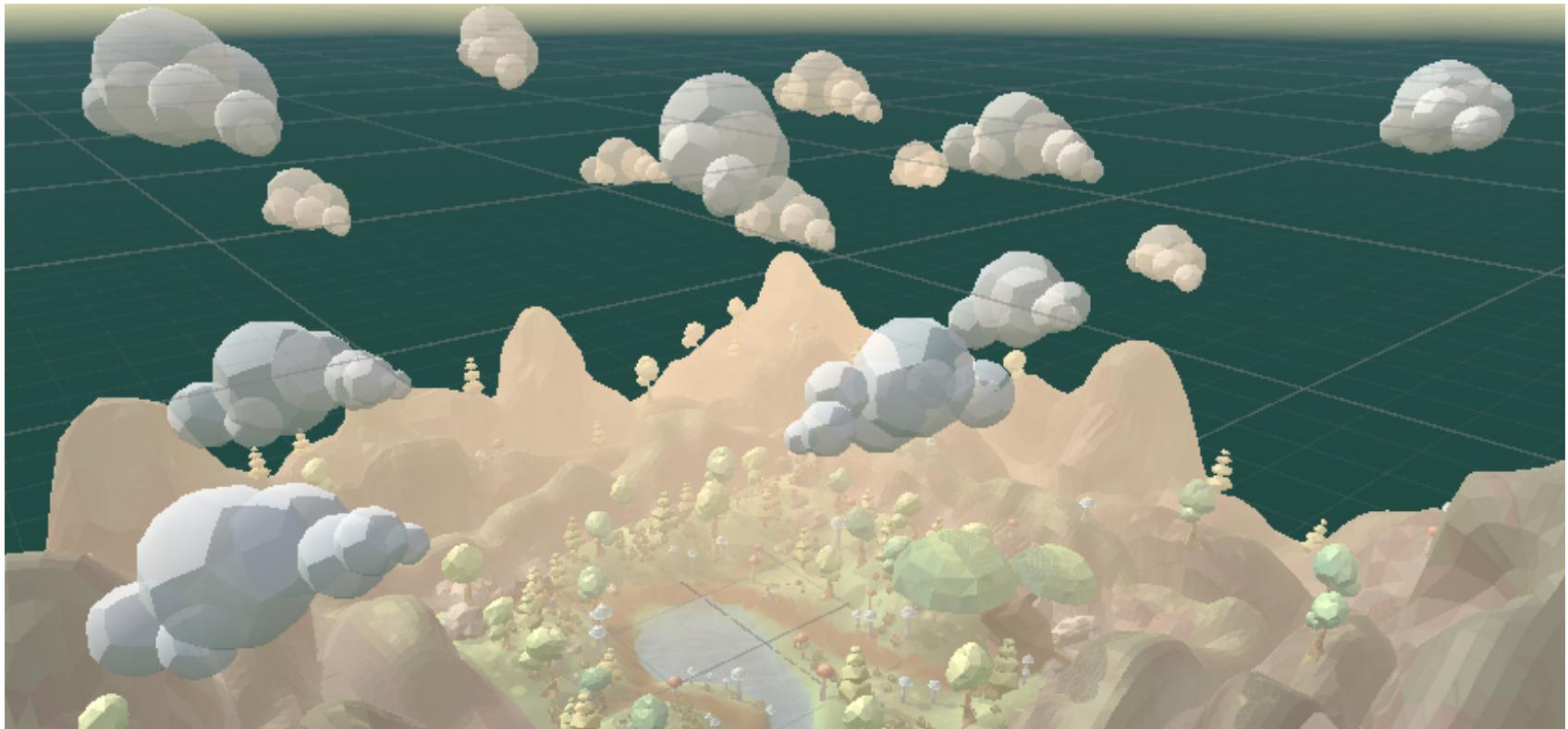
When playing around as the FPS Controller, I realised that I could still scale the mountains and break the scene, despite me disabling the jump, so I wanted to make colliders to prevent the player from leaving a certain boundary.

However when I tried to make a cube collider on an empty GameObject, it pushed the FPS controller outside the box collider I made, and into the mountains. Looking through forums, I really couldn't find a solution or explanation on why this happened, so I ended up just using 4 thin box colliders, and arranged them around my terrain.



After I textured the second layer of mountains in the same method as the first, I added a subtle fog to the environment as I wanted the mountains to phase out in the distance, and enhanced the shadows of the directional light to make them stronger. I made the fog a saturated light orange, again to enhance the warmth of my scene.

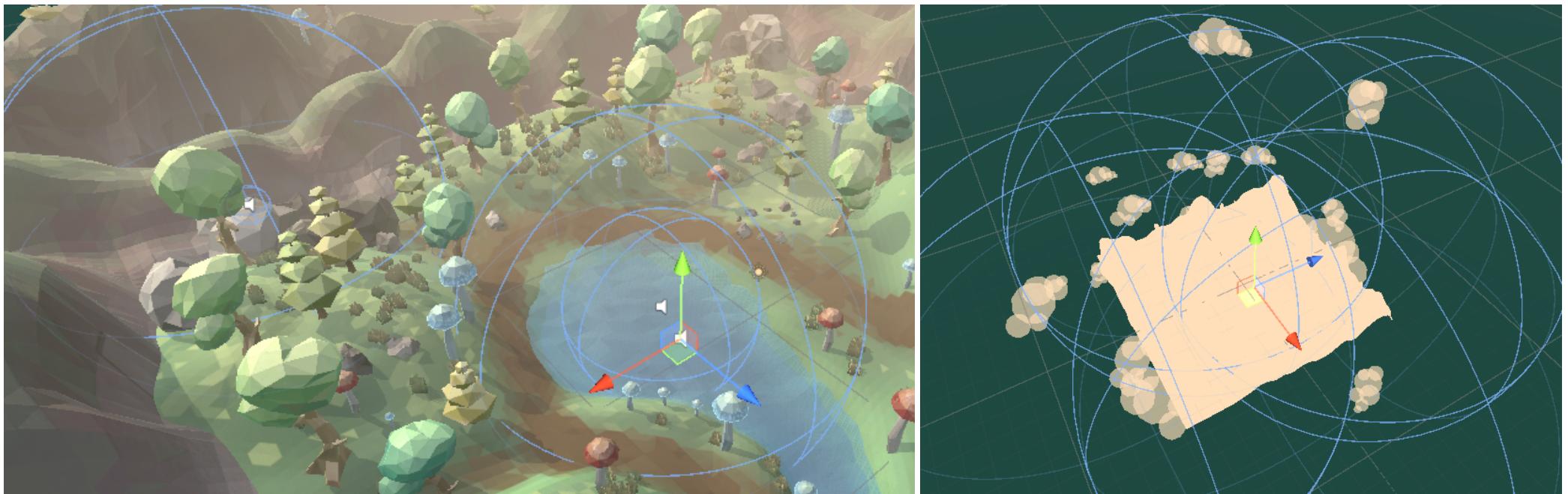
I textured the third mountain layer in the same way, but didn't include the lighter polygon fill layer as I thought these mountains would be too distant to see much detail.



Using the same cloud mesh from the greybox, I extracted its material and followed the same technique as the water, changing its rendering mode to reduce its opacity, and make it semi transparent. I scaled up the clouds as they were too small and far away from the viewer, and added more clouds in the distance. I also changed the colour of the directional light to a more saturated orange.

Ambient + Spatial + Dynamic Sound

For my ambient sound, I decided to use '[Wind, Soft. Crickets.wav](#)' by Leandros.Ntounis. Though the clip is shorter than desired, I like how subtle the ambience is, as the other clips I listened to were a lot more noisy and busy. After making the audio seamless and adding a fade in and fade out effect, I set it up as an ambient GameObject.



Next I began setting up my spatial sounds, starting with '[Night Wildlife_A.wav](#)' by InspectorJ, which contained cricket chirping. I placed this sound in a corner of my scene, in one of my rock quarries.

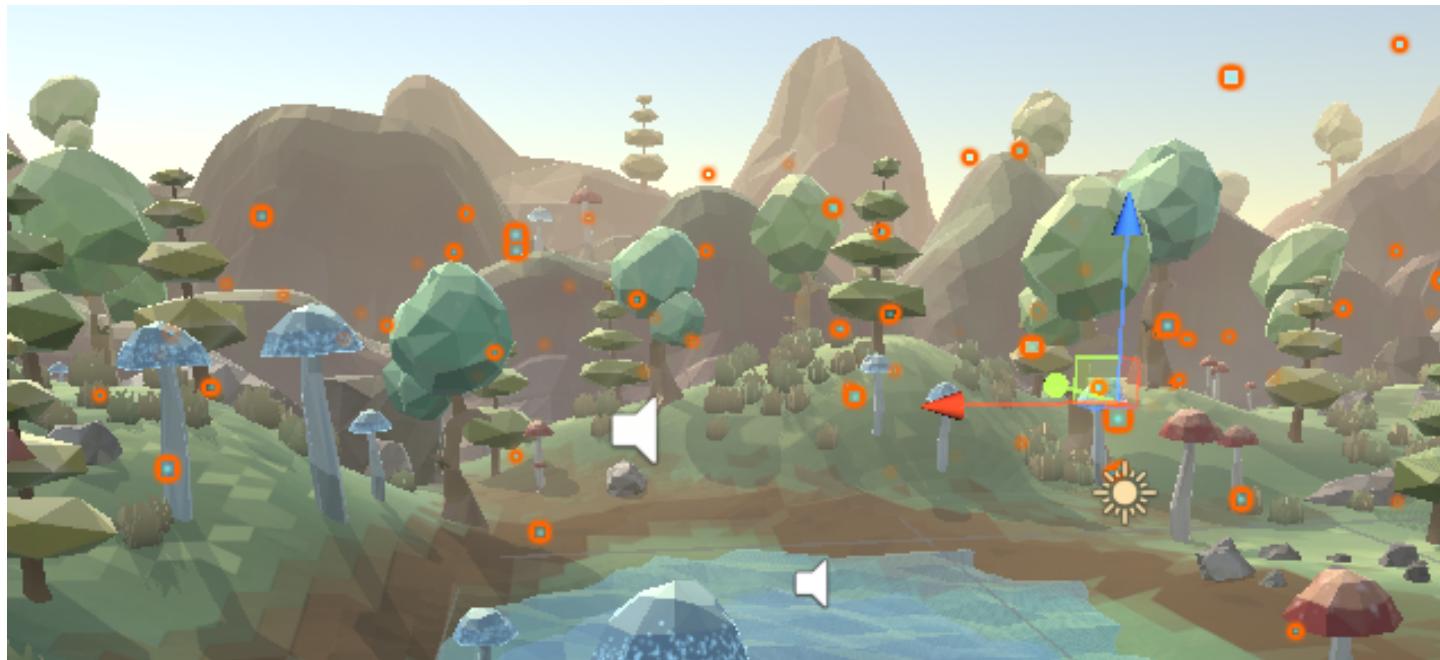
I used '[Woodland Stream March 2016.wav](#)' by plantmonkey as a spatial sound for my river, placing it in the largest body of water.

For my dynamic sound, I cut sounds from '[Birds](#)' by Julien Nicolas, to get 4 samples of varied and diverse sounds. I placed these on each side of my terrain, and imported the FIT3169 package to set up random sounds.

To make it sound like the birds were far off in the distance, I added an Audio Low Pass Filter, with a higher cutoff frequency of 1000, due to the high pitch of the bird chirps.

I also added an Audio Reverb Filter, using the reverb preset Cave. I also tried Drugged and Forest, but I thought Drugged was too echo-ey, and Forest wasn't echo-ey enough. Cave was a good middle ground between the two.

Particles + Post Processing



Using the tutorial notes to make fireflies, I made a particle system and experimented with all the options to create my desired effect: Start lifetime, start speed, color over lifetime, noise, and force over lifetime. I didn't want my particles to look like fireflies, more just like blue sparkles, so I kept the force over lifetime pretty low so they wouldn't fly randomly like bugs.

I decided to make my particles quite small and bright blue, to match the blue emissions of my mushrooms, and enhance the fantasy theme. I also created a new material for these particles, using Additive as my rendering mode as it made my particles more rounded and brighter.



Next I made flying birds with the texture sheet provided, following similar steps as when making the fireflies. This one was more tricky to get right, as I found that the ‘emissions’ module made my birds spawn in weird and unnatural amounts. So I kept tweaking options such as emission, start lifetime, and noise until they spawned in an appropriate amount.

Lastly I ticked prewarm on both of them, and changed ‘color over lifetime’ on my birds to have them fade in and out.



Using the week 4 tutorial notes on finishing a Unity build, I first changed the color space to Linear as suggested. However this made my scene look washed out and faded, so I immediately reverted the changes.



Adding a post processing layer, I turned on Temporal Anti-aliasing, and turned down the motion setting. I also turned on Bloom, but it didn't have much of an effect due to my lack of shiny objects.



Then I used the Post Processing Volume layer to mess with the Color Grading module. I increased the temperature for a warmer hue, and bumped the saturation and contrast sliders to make my colours more bright and less monotone.



I then added a slight chromatic aberration effect, with a very low intensity as I like the aesthetic of the effect. I also experimented with depth of field and ambient occlusion post processing, but these effects were so subtle that I ended up just removing them.



I also tried adding a slight grain effect, as I thought this might tie into my low poly style, making it look like an old game. However when combined with chromatic aberration and bloom, I felt it was a bit too much. So with all my post processing done, my scene is complete!

Final Screenshot

