CREATING MOSS TEXTURE WITH PAINT EFFECTS TOOL

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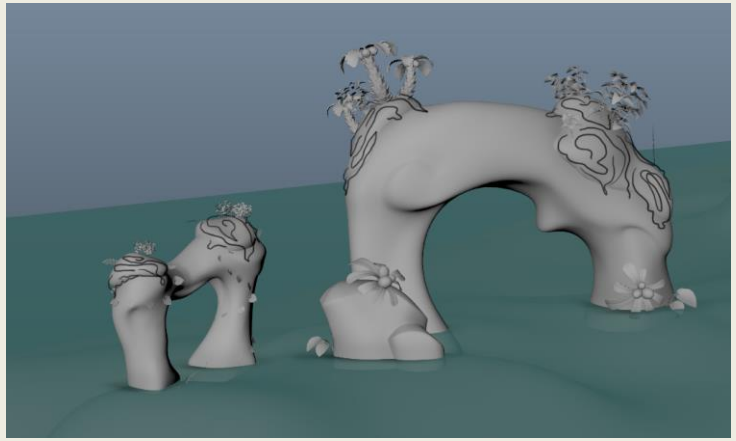
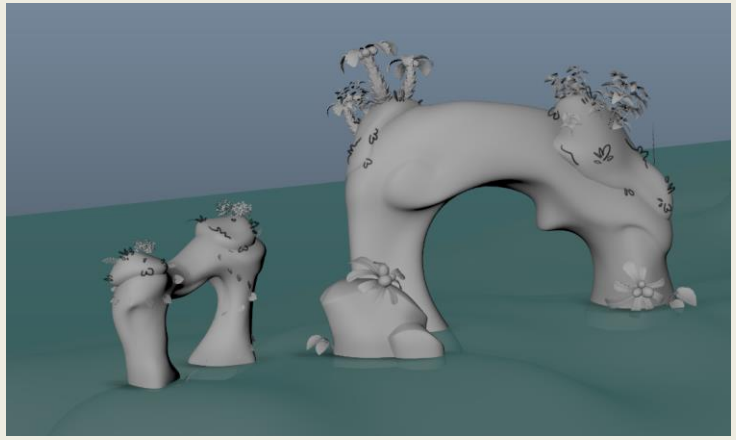
Concept & Design

Originally, the Cuddlefish team was inspired by Gobelin's Nebula. We loved the swirls incorporated in the main character's hair and the rocks in the environment. Our plan was to use this method and style on the moss covering our rock islands.

The swirls would resemble brush strokes and would slightly float off the painted watercolor texture. After drawing concepts and researching, I decided the Paint Effects Tool in Maya would be the best way to achieve this.

Concept & Design





After trying to imitate the style from Nebula, I realized it wasn't matching our flat and painterly art direction.

One problem I noticed was that the swirls made the moss look too crowded and it wasn't appealing. It didn't fit in with Cuddlefish's simplified look. Also, the swirls weren't in any other part of the film and it didn't appear natural.

I decided to start over with my concept designs.

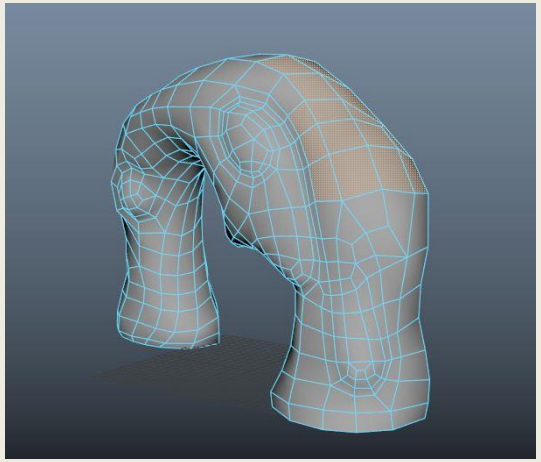
Concept & Design

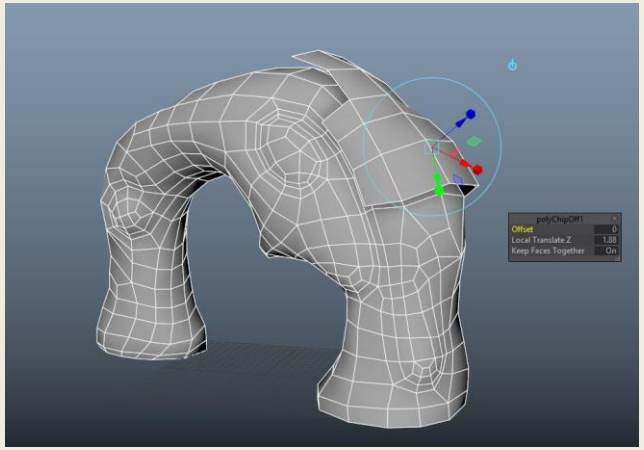
For my next concept design, I looked into Disney's Feast, Gobelin's Fol'Amor, and Nintendo's The Legend of Zelda: The Wind Waker. I also researched watercolor landscape paintings.

These references inspired me to keep the moss simple with floating clumps, leaves, and foliage. Similar to everything else in the environment, the moss will have a watercolor texture.

Modeling the Moss

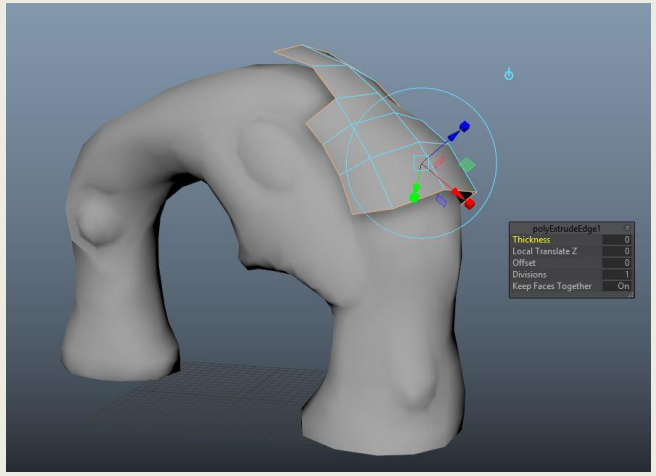
To model the moss, open up the MA file for a rock island. The rock should not be in smooth preview. Select the faces on top of the rock where you want the moss to lay.

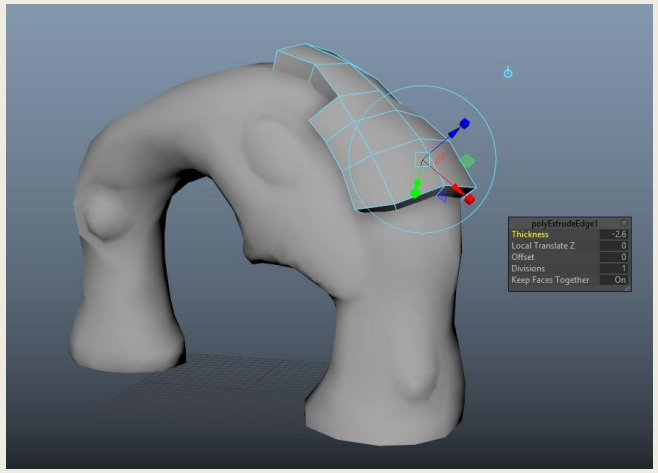




Right click over the selected faces while holding shift and select “Duplicate Face”. The rock and the moss are now two separate pieces of geometry. Use one of the arrows in the Manipulator Tool to slightly raise and expand the duplicated faces.

Modeling the Moss





Double click the outer edge of the moss so the entire border is selected. Go to Modeling > Edit Mesh > Extrude.

In the “polyExtrudeEdge1” menu box, make sure “Thickness” is selected. Hold your middle mouse button and move your mouse to the left until the edges of the moss intersect with the rock. This will differentiate every time depending on the rock, how big the moss is, and how much it is floating off the rock.

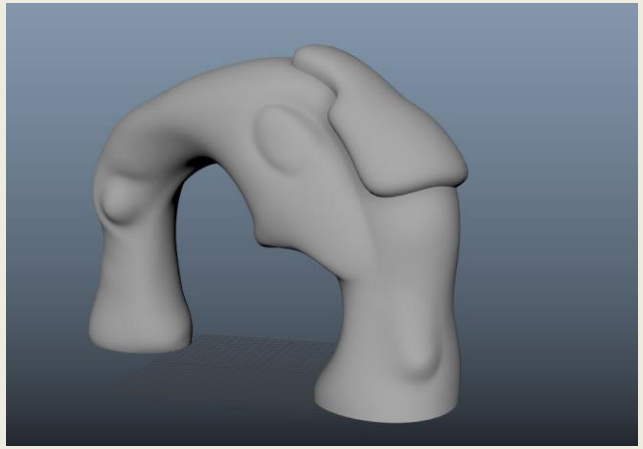
Modeling the Moss

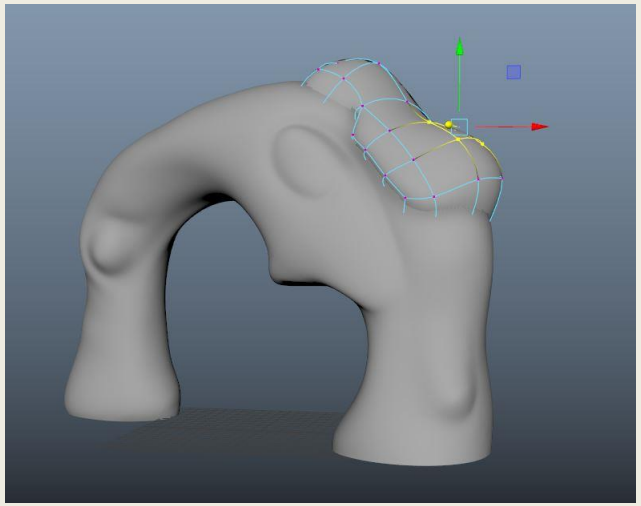
Select both the rock island and the moss. To put in smooth preview, press 3.

Select the vertices of the moss to manipulate the shape the way you want. The style of moss is supposed to be whimsical, simple, and appealing.

By pressing “B” with the Move Tool, you can use soft select to round out the shape. Also, make sure to not lift the edges of the moss as you manipulate it.

Once the moss is completed, you can set dress the rock island and bring in the Paint Effects Tool.



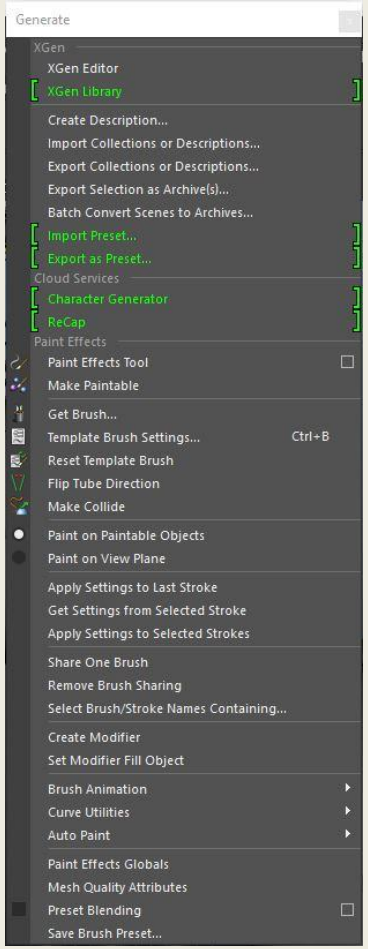


Paint Effects Tool

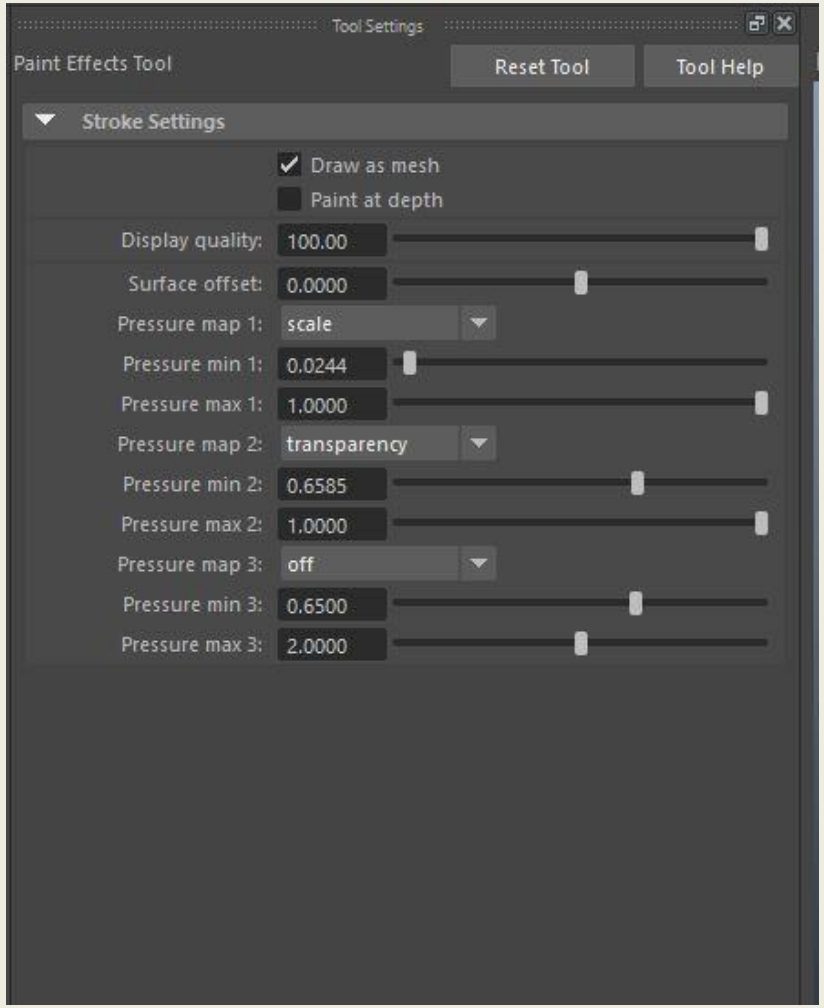
The Paint Effects Tool allows you to create strokes by drawing freely on paintable geometry. There is a large variety of brush strokes you can choose from, whether you want watercolor or pastel.

Cuddlefish's style resembles ink, watercolor, and paint. Because the Paint Effects Tool allows you to paint the shape, it'll resemble drawn ink lines or painted watercolor shapes.

The stroke is easy to manipulate and can easily be converted into polygons, nurbs, and curves.



Paint Effects Tool



The tool settings can be found under the Modeling > Generate > Paint Effects Tool > Option Box.

“Draw as mesh” should always be checked so you can preview the strokes in the scene view and not only in the Paint Effects panel. “Paint at depth” is left unchecked so the lines appears stretched, like watercolor paint strokes do.

The “Surface offset” is always kept between 0 and 1 to give the strokes a floating effect.

Paint Effects Tool Possibilities

- Hair textures
- Layered paint strokes
- Painting leaves, flowers, and foliage instead of modeling them
- Create a 2D illusion in a 3D environment
- Convert to curves instead of polygons
- Painting with pre-made models, such as starfish or burgers

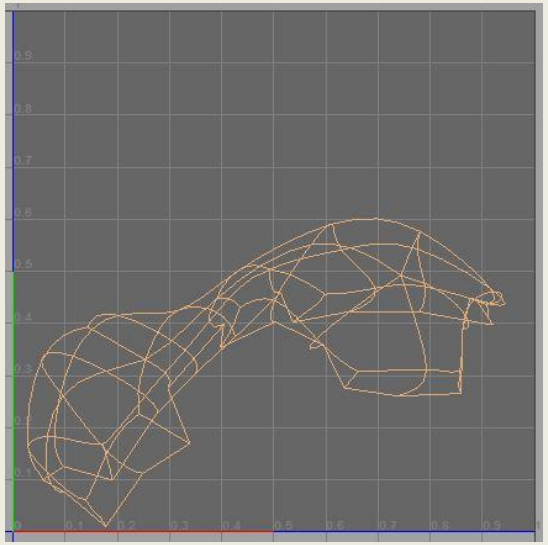
Step 1: Setting Up

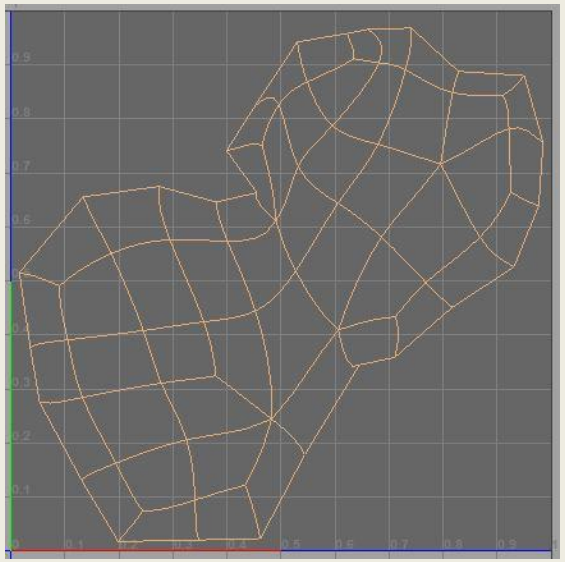
After modeling the moss and set dressing the rock island, hide the foliage and palm trees to make UVing the moss easier.

Select the moss geometry in Object Mode. Open the UV Editor by going to Modeling > UV > UV editor. Go to UV > Camera-Based.

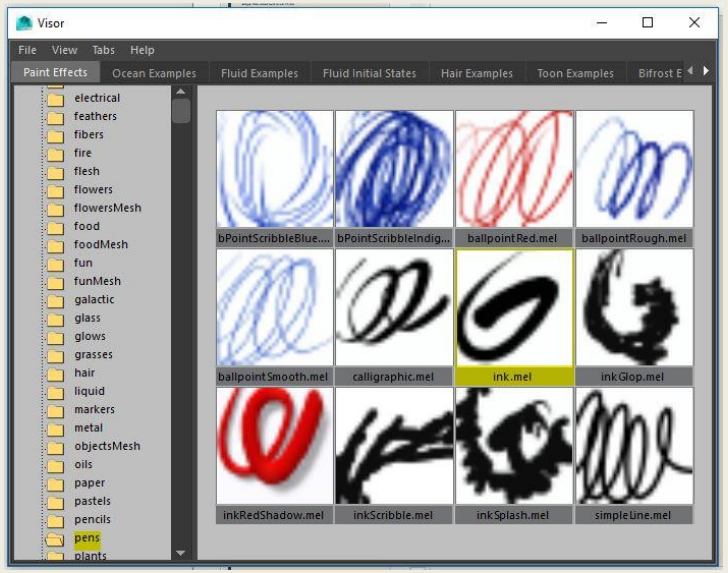
In the UV editor, select the shell. Go to Polygons > Unfold. Slightly shrink the shell so it takes up the entire space, but isn't touching the edges. Save UV snapshot as a Targa and close.

In the viewport, go back to Object Mode and select the moss. Go to Modeling > Generate > Make Paintable.





Step 2: Getting Brush



Now that the geometry is paintable, you can use the Paint Effects Tool. In the tool settings, make sure “Draw as mesh” is checked and “Paint at depth” is unchecked. “Display quality” should be at 100 and “Surface offset” should be between 0 and 1.

Go to Modeling > Generate > Get Brush. The pen I decided on for this moss texture is pens > ink.mel. You can change the size of your brush by holding down “B” and your left mouse button while moving from left to right.

Step 3: Painting Strokes

Delete any practice ink strokes and settle on a brush size. Unhide the foliage and palm trees you set dressed with.

When creating strokes, keep in mind that these are supposed to resemble ink and watercolor lines. They also should look similar to leaves, moss clumps, and grass.

They should vary in size, length, and shape. Because the film is a romantic comedy, try to incorporate hearts when possible.

Step 3: Painting Strokes

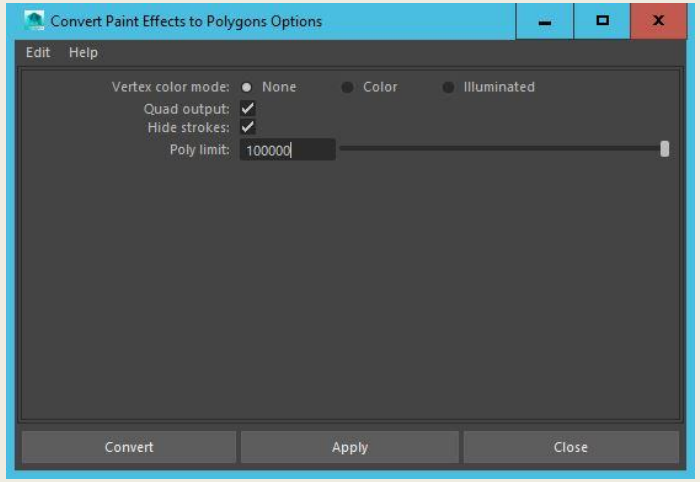
The easiest way to use the Paint Effects Tool and make the strokes look natural is to draw them flat on the moss geometry and then later place the moss clumps once they are cleaned up.

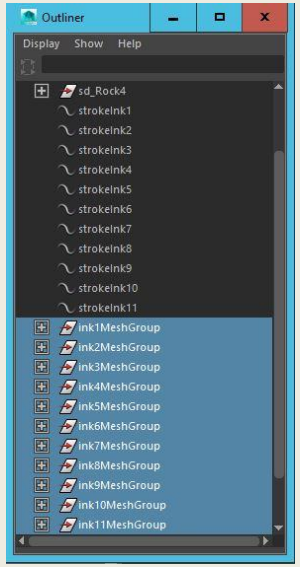
These strokes are easy to manipulate. Once you've drawn some, you can manipulate them with the scale tool to give variety. You can also duplicate these strokes before manipulating them to save yourself time.

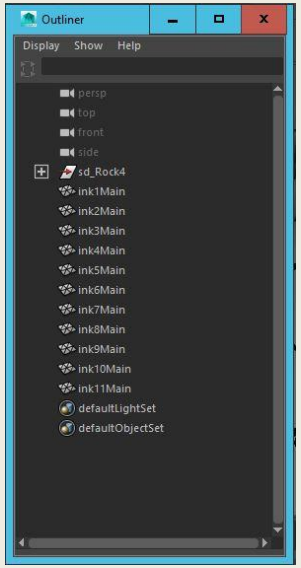
Step 4: Covert to Polygons & Clean Up

Select all of the strokes in the outliner. Go to Modeling > Modify > Covert > Paint Effects to Polygons > Option Box. Check “Quad output” and click “Convert”.

In the outliner, select the inkMesh groups. Go to Modeling > Edit > Ungroup. Reselect inkMains and go to Modeling > Edit > Delete By Type > History. Then select strokeInks and delete.







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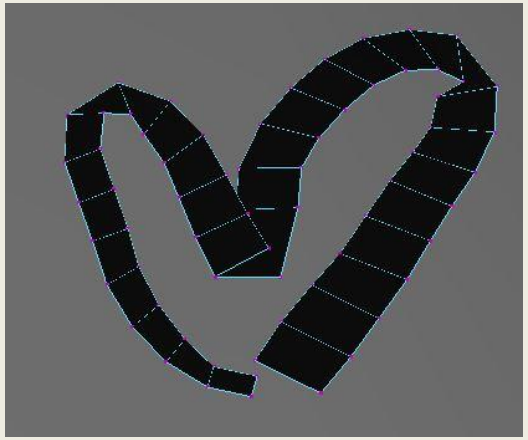
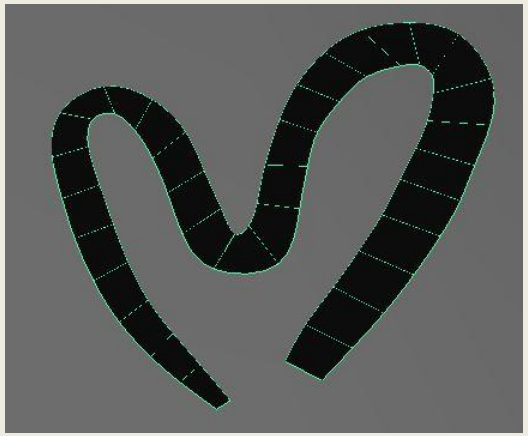




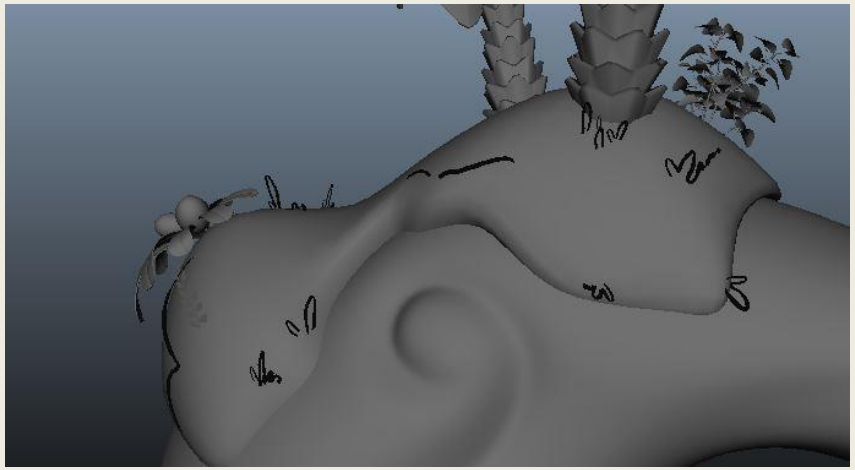
Tips for cleaning up polygons:

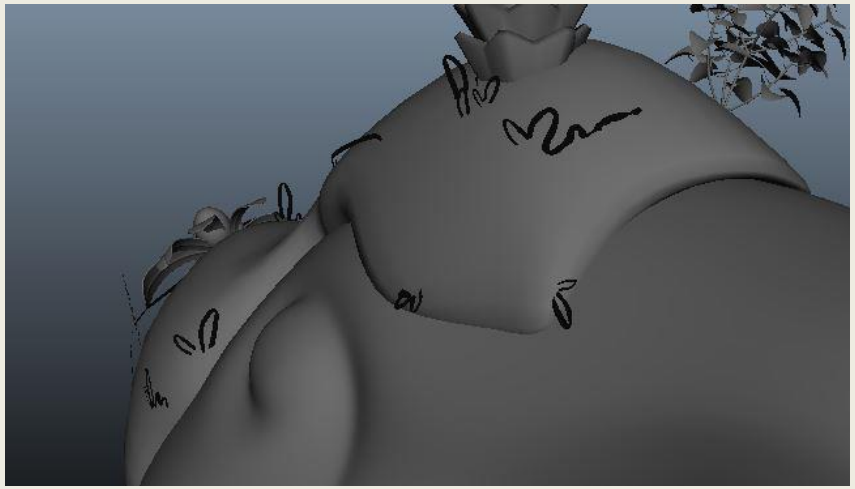
- Clean them up in smooth preview.
- Make sure no vertices or faces are intersecting.
- Keep all faces facing the same direction to keep the “flat look”.
- Double check the faces at the end of the strokes and the faces when the strokes change direction. You may need to untwist the face or delete the face and merge vertices.

Step 5: Place Moss Clumps

Tips for placing moss clumps:

- Unhide set dressing and foliage so you're able to place them around it
- Vary from spreading them out to clumping them together
- Change scale and rotation as you go
- Make sure to place them so they can be viewed from all sides, unless the moss is only viewed from the front





Step 6: Color & Texture Moss

Bring the UV Snapshot of the moss into Photoshop. Pick a color palette varying from light green to dark green. Because we have so much green in our film, we decided to make this green lighter and paler than the other greens.

When painting the texture, use watercolor brushes and splatters to give it that painterly effect. Have the edges of the moss appear dark than the center with small color variation.

As for the moss clumps, you can give them flat lamberts similar to the moss's shade of green. Keep it simple with only three to four different shades, but vary it from light to dark.

Repeat all six steps for each moss. It's easier to work on one at a time and not switch between the two.

Finished Product!