

# 3D Concepts Tutorial

## Part 1 - Workflow

# Workflow stages

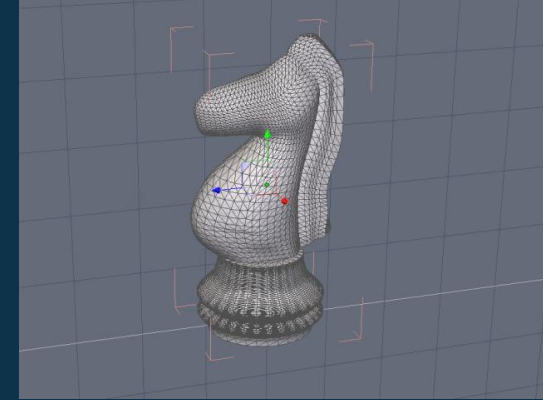
1. Concept
2. Modeling
3. Sculpting
4. UV mapping / shading
5. Texturing
6. Compositing
7. Rendering
8. Post-production

# 1. Concept

The first stage is concept. This is an important yet often forgotten phase. This is where you decide what your scene will be, what elements you will need, and what tools you will be using.

Doing enough brainstorming will allow you to not waste time in the other stages.

## 2. Modeling

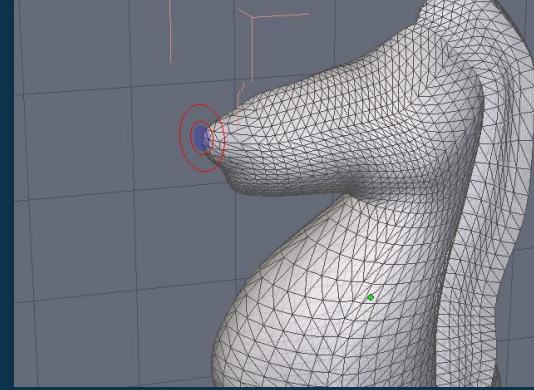


Your 3D scene may or may not need modeling work, depending on what you're working on. You may, for example, buy models or get free ones online to use in your finished work, or you may use a program to create them.

There are a lot of modeling software, all with their strengths and weaknesses, and most have a free trial, so if you don't have a modeling program already, you may want to try several.

Some of the most popular ones include: 3DS MAX, Maya, Softimage, Carrara, Silo, Blender and more.

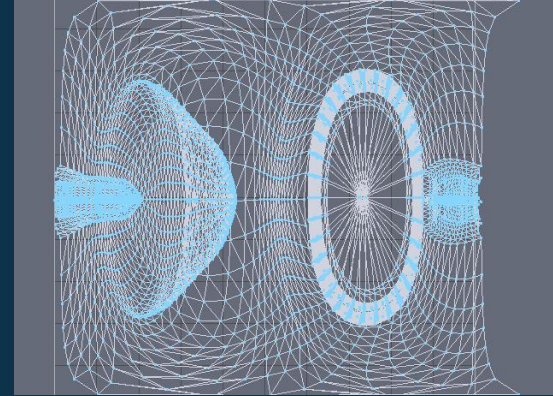
# 3. Sculpting



Sculpting a model refers to the action of using brush tools to sculpt the surface of the object. Just like a sculptor in the real world, you can digitally push, pull or soften the surface of objects. This is an optional step, but becoming ever more popular especially when dealing with organic objects.

Many modeling programs have sculpting tools, and some popular software exist purely for sculpting such as Zbrush and Mudbox.

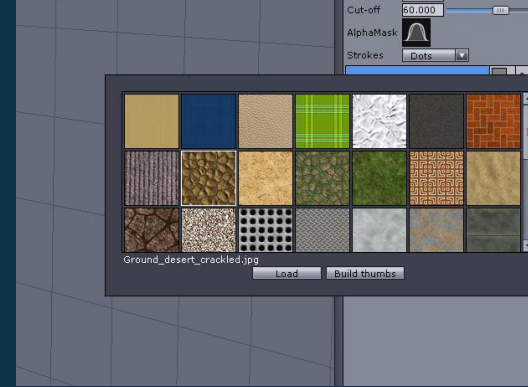
# 4. UV mapping / shading



UV mapping refers to creating a 2D representation of a 3D object. It can be a long and complex process, depending on how complex the object is. It is however necessary to apply textures correctly. It's almost unavoidable for organic objects.

Another way to apply textures is to define areas of the model to assign textures to. This is mostly used for simple, non-organic objects, where you can easily define one area to be made of metal, another plastic, and so on. This is called shading domains or multi-shading textures.

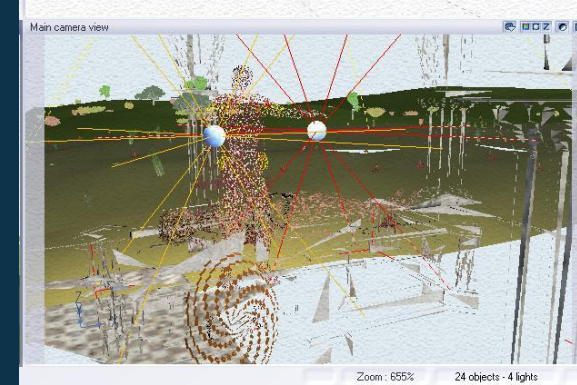
# 5. Texturing



Once a model is done, it needs to be textured. Texturing is one of the most important steps, because it determines if the object will look real or not. Even if you get your models elsewhere, they may come untextured.

Texturing includes applying a color, a texture map, a bump or displacement map, specular information, transparency, and more. Depending on the tools you use, you may have more or less options as far as texturing goes.

# 6. Compositing



Compositing is the stage where you get all your completed models, and put them together, arrange them in a nice looking way, add an environment such as a sky, ocean, ground, and position the lights and camera. It's what many people consider the most fun part.

It's possible to do the compositing in the same software that the modeling and texturing was done, depending on its capacities. There are also software programs designed to make environments, such as Bryce and Vue, that make great compositing tools.



# 7. Rendering



Rendering is when you take your finished scene and render out the finished image.

# 8. Post-production

Post-production refers to editing your finished picture or movie in a 2D application such as Photoshop or After Effects. If you find some small mistakes in your render, or if you want to add things that you couldn't do in 3D such as special effects, you can do post-production work.

This is obviously an optional step, and many people prefer to keep finished renders as is, but it can be very useful to improve the overall colors, hue, saturation, or reduce noise.