Rendering Your First Scene

This topic leads you through a simple example of how to render a scene in 3ds Max using Arnold.

It assumes you have already:

- Installed Arnold for 3ds Max.
- Set up licensing (if you plan to use your 3ds max on a render farm or render from the command line or with Backburner, you will need a license for MAXtoA).

1. Start 3ds Max.

2. The first step is to tell 3ds Max to use Arnold as the current renderer. In the Render Setup dialog (from the top menu bar, Rendering> Render Setup..., or by clicking), set **Arnold** from the **Renderer** drop down menu.
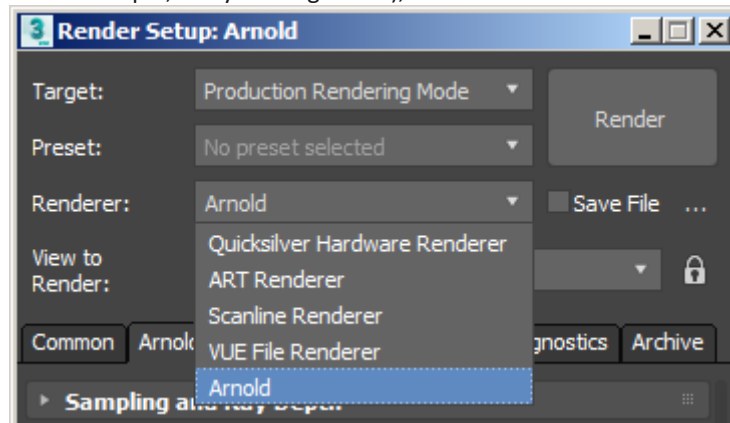

Note how the renderer options are organized in groups (this is discussed further in sub-topics of the Arnold Render Setup page).

- Next, create a plane to act as a floor. *Create> Standard Primitives> Plane*. Click to place the corner of the plane and drag to size the plane.
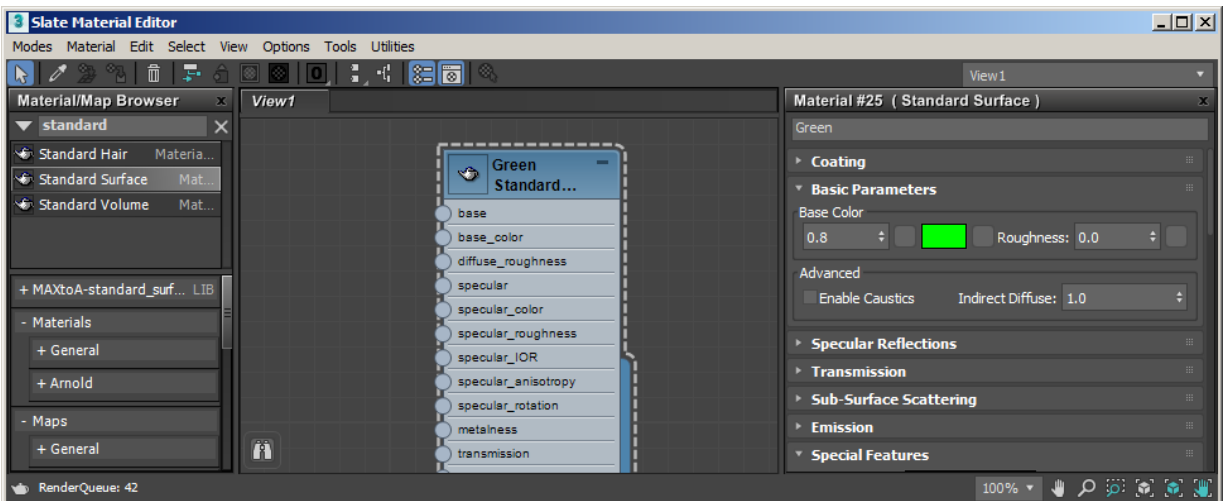
Standard Surface Shader

- By default, the floor plane has no material assigned and renders with a default lambert shader. We will assign a *Standard Surface* shader instead. In the Slate Material Editor window, create a *Standard Surface* material by dragging or double clicking it under the Arnold category in the Material/Map Browser pane on the left. Double click it in the central View window to view its parameters in the Material Parameter Editor. Assign the shader to the plane.
- Change the *Base Color* of the *Standard Surface* shader to blue.
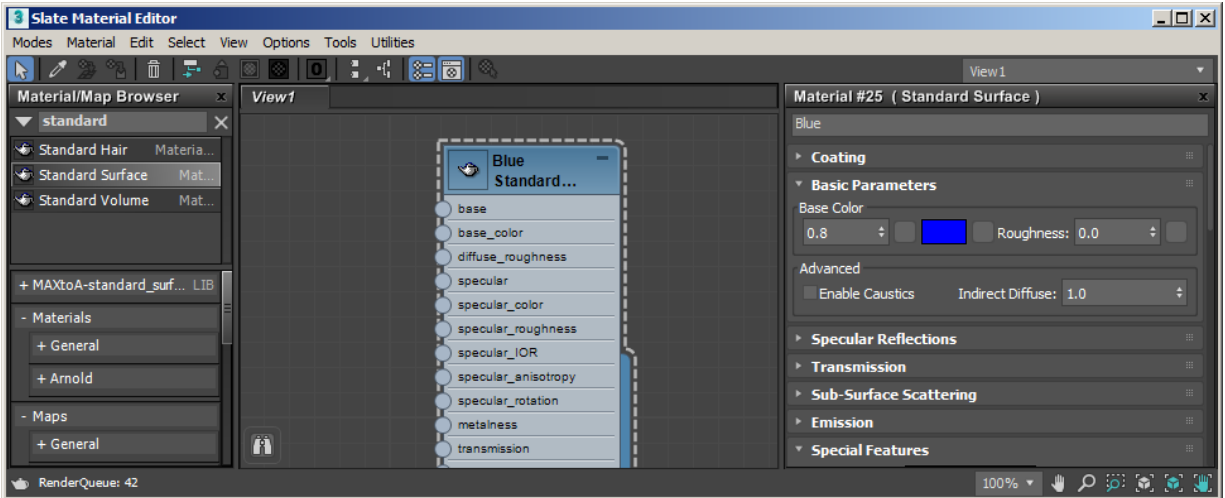
Standard Surface *Base Color* changed to blue

- Next, create a sphere, again by choosing *Create> Standard Primitives> Sphere*, and place it on the floor plane. By default, the sphere will intersect the floor plane in the y-axis (this will be obvious in Default Shaded view. This is fine for now, leave it where it is.

- For this object, assign another *Standard Surface* shader to it using the same process as before. For now, just select a green color for the *Base Color.*
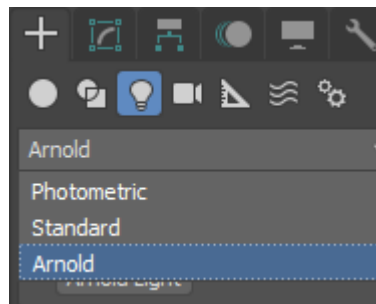

Green Standard Surface shader assigned to sphere

- Next, we'll create another object… let's choose a cylinder this time. Place it in the scene.
- Assign another new *Standard Surface* shader. This time, set the diffuse color to red. You should now have a scene that looks something like this.
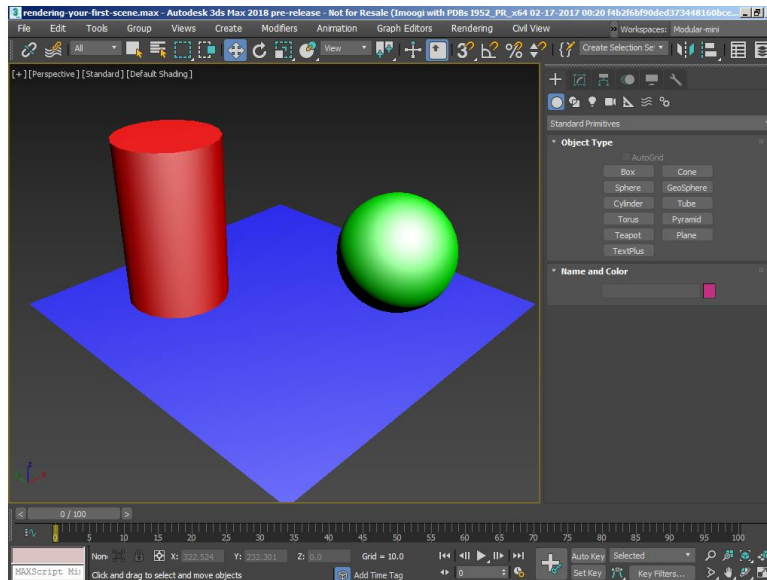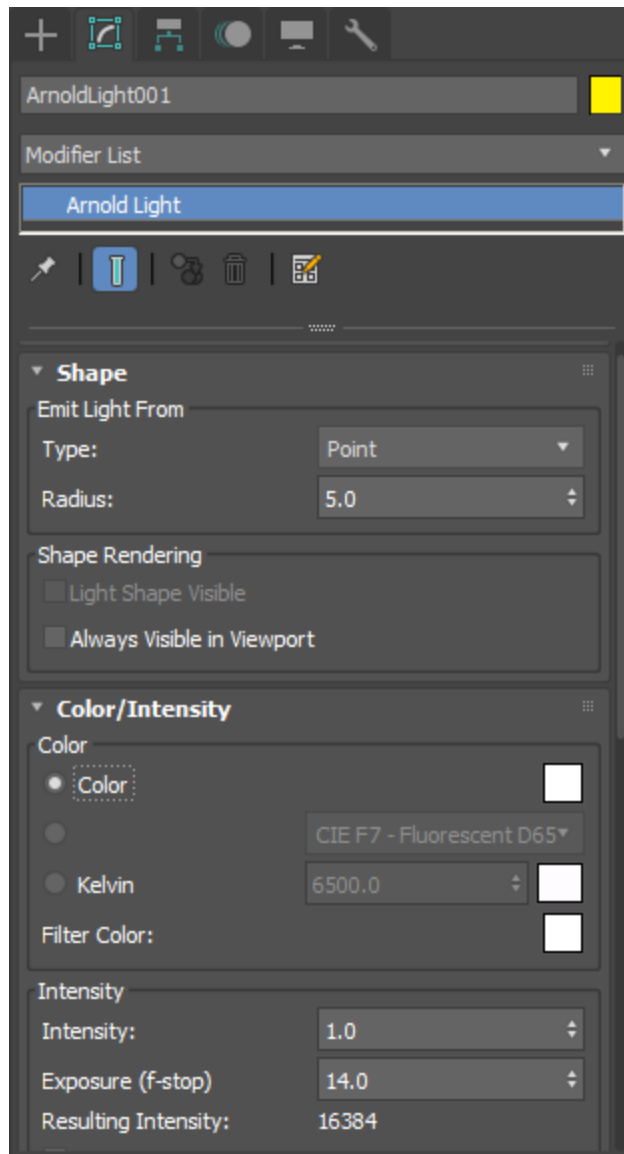
Arnold Light

- We can choose an Arnold light from the Lights tab in the Create Panel.

- By default, a *Quad light* will be created. Change it to a *Point light*. Position it so that it is above and in front of all of the objects in the scene.
- Now we need to increase the Exposure of the light. Select the light, and under the *Modify Panel* you should see **Exposure**. Increases it to around **14**.

Arnold Light Type: Point. Exposure increased to 14.

Rendering

- Now we're ready to do a render. Start an **Active Shade** render by clicking on the [icon] icon. If you do not see this icon, hold down the mouse and on the flyout choose the 'ActiveShade' button.
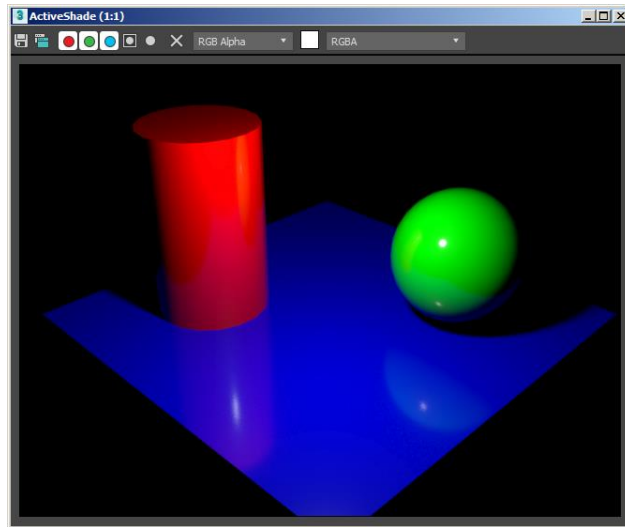
- You may still find that the scene is a little dark for your taste. It's worth mentioning at this point that lights in Arnold use quadratic decay by default (because that is what happens in the real world, and Arnold is designed to work with a physically accurate approach to modeling and lighting). You can also address the 'too dark' issue by altering the intensity of the light. Generally speaking, we recommend you work using the quadratic decay as it is more realistic, so you should choose intensities (and the scale of the model) accordingly, and then use the exposure setting to fine tune.
- If you increase the *Radius* of the light (select the point light and increase the Radius), you get soft shadows. Increase the number of light samples for the *Point light* from **1** to **3** to reduce noise in the shadows.
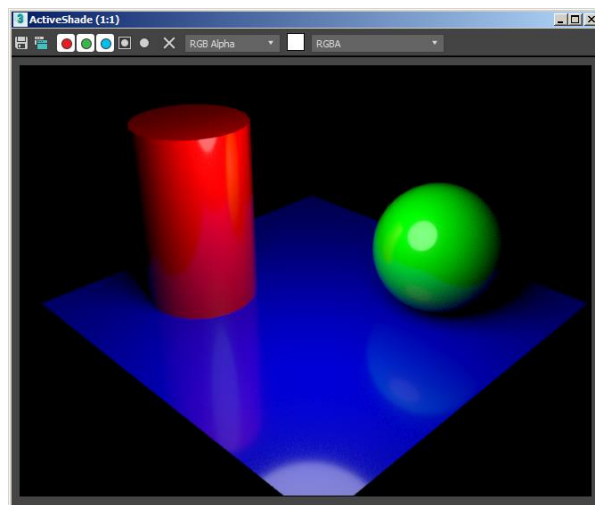
Increasing the Radius of the light creates softer shadows

A quick way to add lighting is by adding a color to the Environment. Press the "8" key to bring up the environment dialog, add a color and a skydome light is placed into the scene (under the hood) with IBL from this background, disabling the default lights).

- Try increasing the *Specular Roughness* of the green *Standard Surface* shader that has been assigned to the sphere.
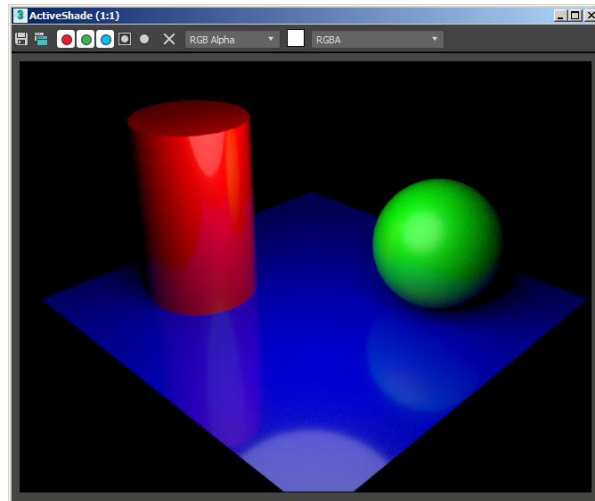
Increasing the Specular Roughness blurs the specular reflection or the sphere

The result of all these changes is available instantly in the Active Shade window, so that you can work interactively, changing materials and lighting without having to re-render to see the effect of your changes. You simply need to wait slightly longer for a better quality render if you have things set up correctly).

That's the end of this short introductory tutorial. Now that you know how to assign and edit Arnold shaders, and alter Arnold settings of lights, it might be useful to play around with various settings for a few minutes before reading on.