# Custom Lambert-Phong Shader Tutorial
## using Unity ShaderGraph

Step 1: Texture Color

- Get the saturated dot product between the light direction and the normal vector to get the brightness of the current pixel.
- Multiply the result by the pixel color (rgba) received from a Sample2D node that samples a texture property.
- Wait to add up the results of this and the next two steps.

Step 2: Specular Lighting

- Reflect the light direction upon the normal vector.
- Get the dot product between the reflection and the main camera direction to get the specular light.
- Multiply the result by the color property and a float property to add color to the light and change its intensity.
- Step between the dot product and a float property to scale the size of the specular light area upon the material surface.
- Wait to add up the results of this, the next, and the previous step.

Step 3: Shadow Color

- Get the saturated dot product between the light direction and the normal vector to get the brightness of the current pixel.
- Invert the result so that this faces away from the light source.
- Then multiply it by a color property to change its color.

Step 4: Apply Colors

- Add together the results of steps 1 through 3.
- Attach the result to the Base Color property of the fragment shader node.
- Press: Save Asset.

Step 5: Add to a Material

- Create a new material.
- In the inspector, click the shader dropdown menu and type in and select the name you gave the shadergraph shader.
- Expand the material settings and change the shader properties for this material as desired.