



SM2231 :: 3D Animation 1 :: Basic

Introduction

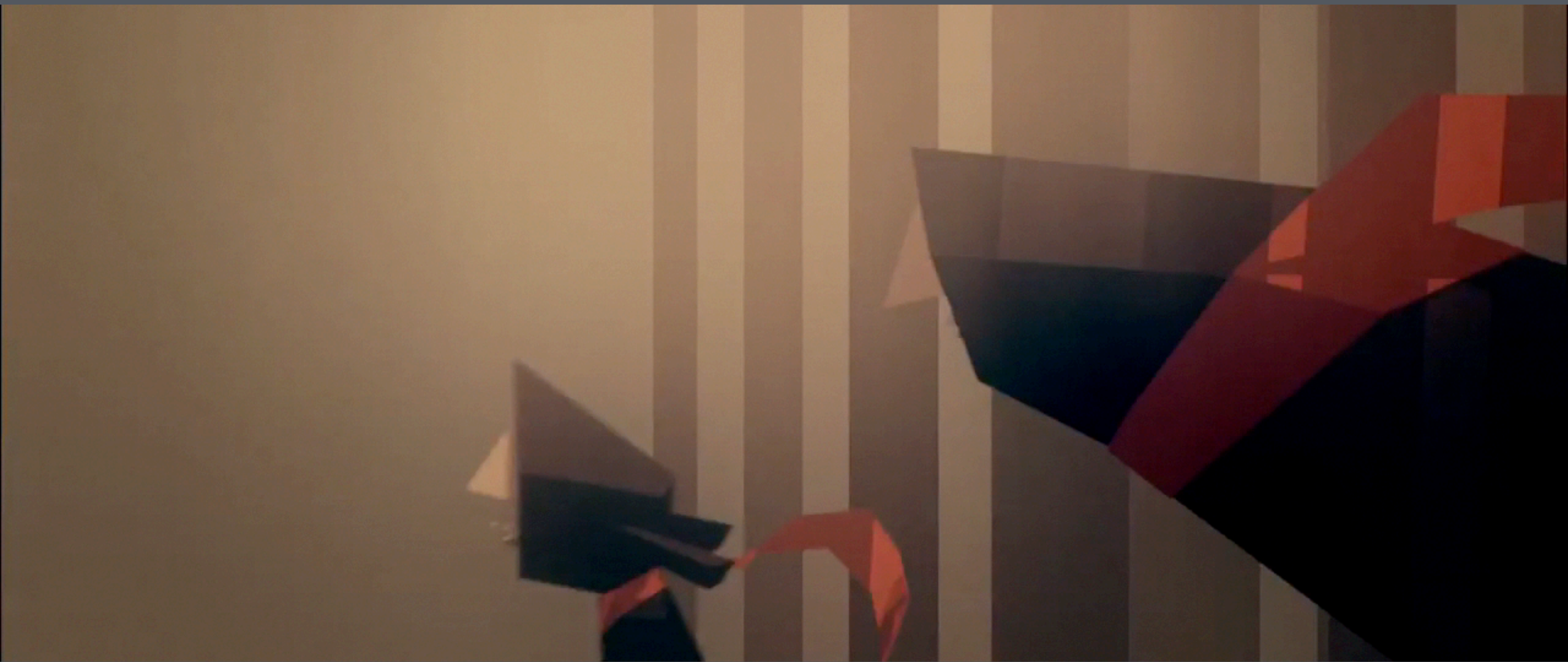








KOPFMA
ANTANANARIVO
TULEAR
FORT DAUPHIN





Tools

General Purpose 3D Animation Software



Feature animated films, VFX



Games, VFX



TV Commercials, VFX,



Open Source, Independent films

Special Purpose 3D Software

 AUTODESK  **MUDBOX** Digital Sculpting

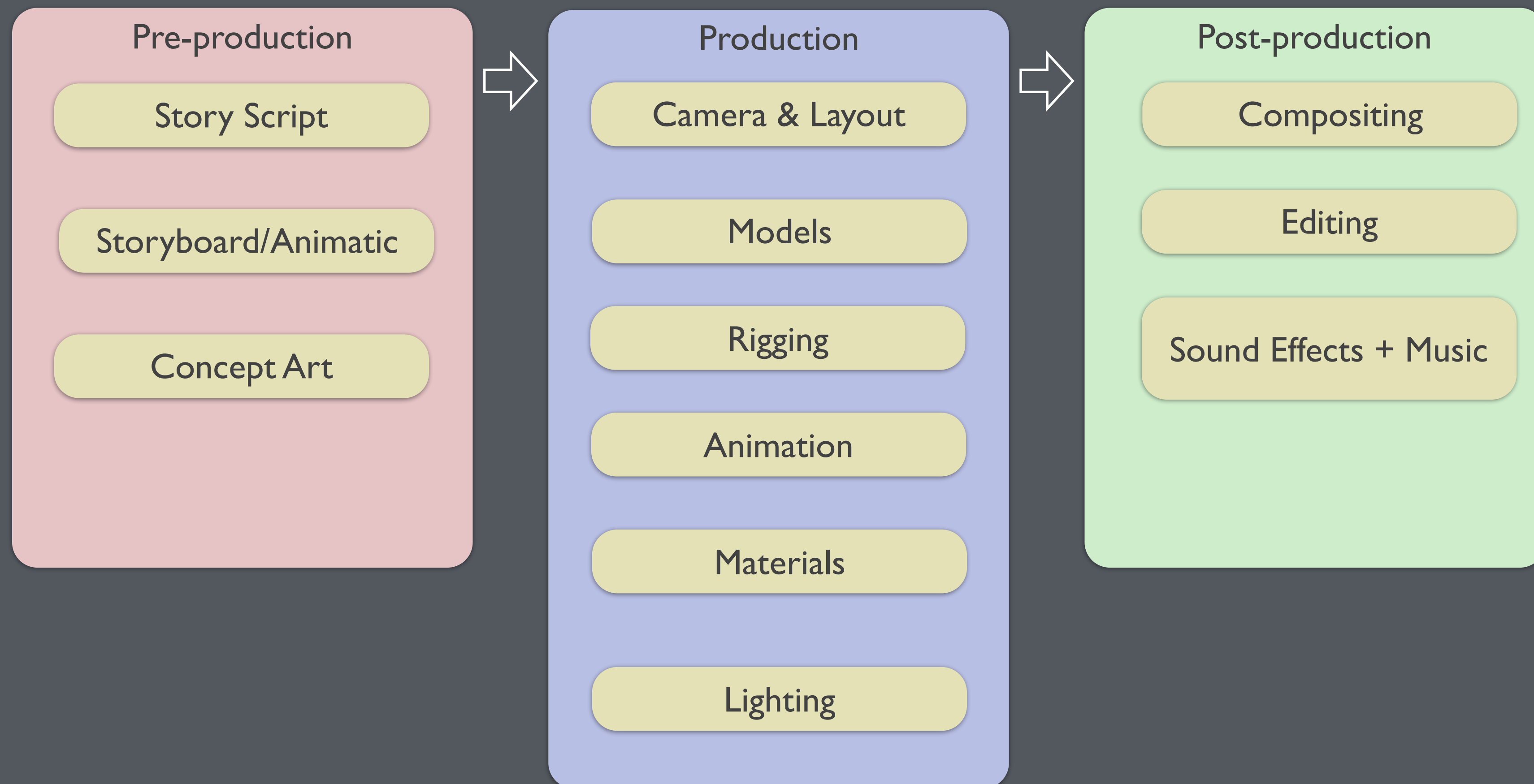
Pixologic  **ZBRUSH 4R8** Digital Sculpting

 SideFX  **Houdini** Procedural Effects
3D ANIMATION TOOLS

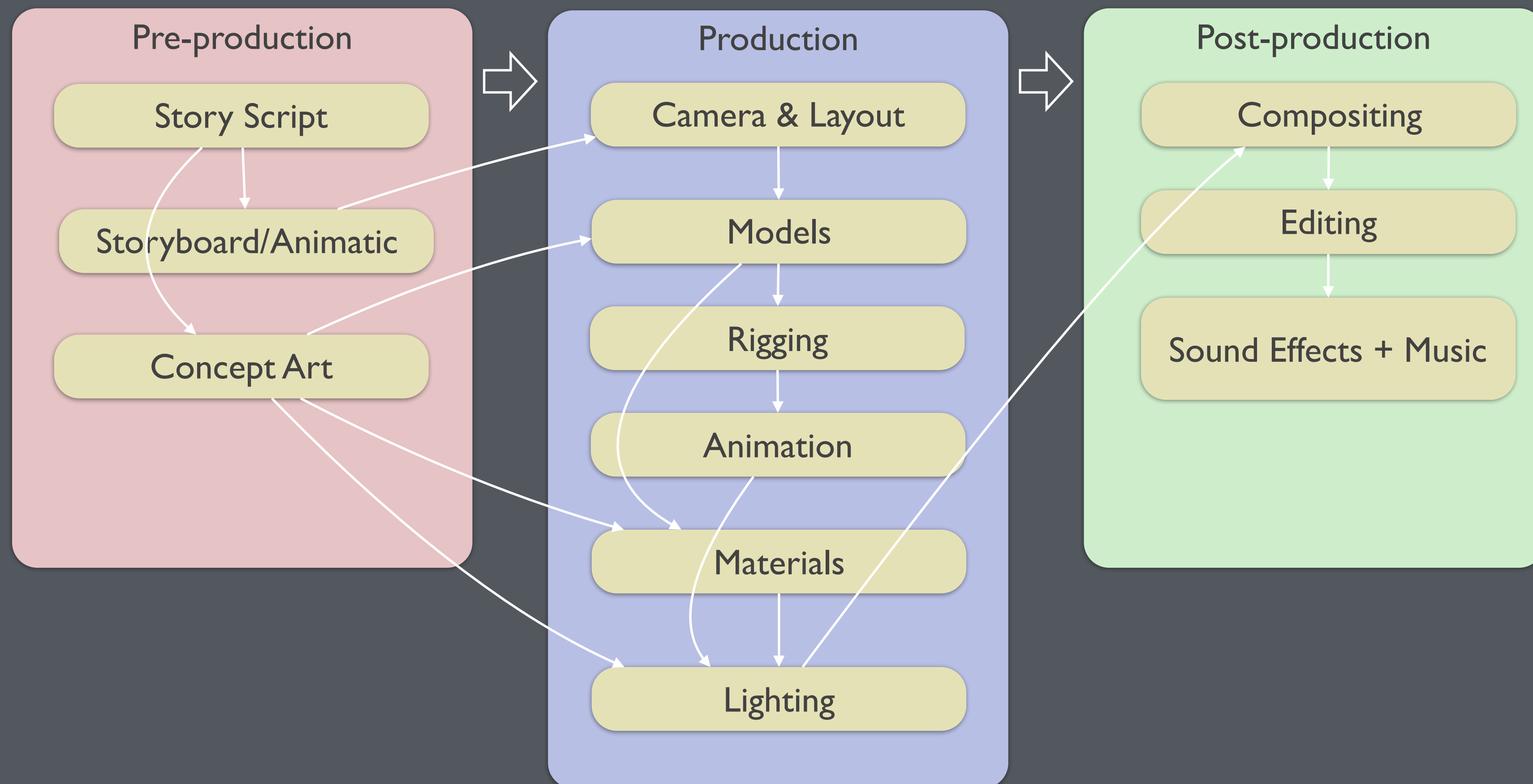
Animation Production Workflow



A Typical CG Animation Production Workflow



A Typical CG Animation Production Workflow



From storyboards to finish

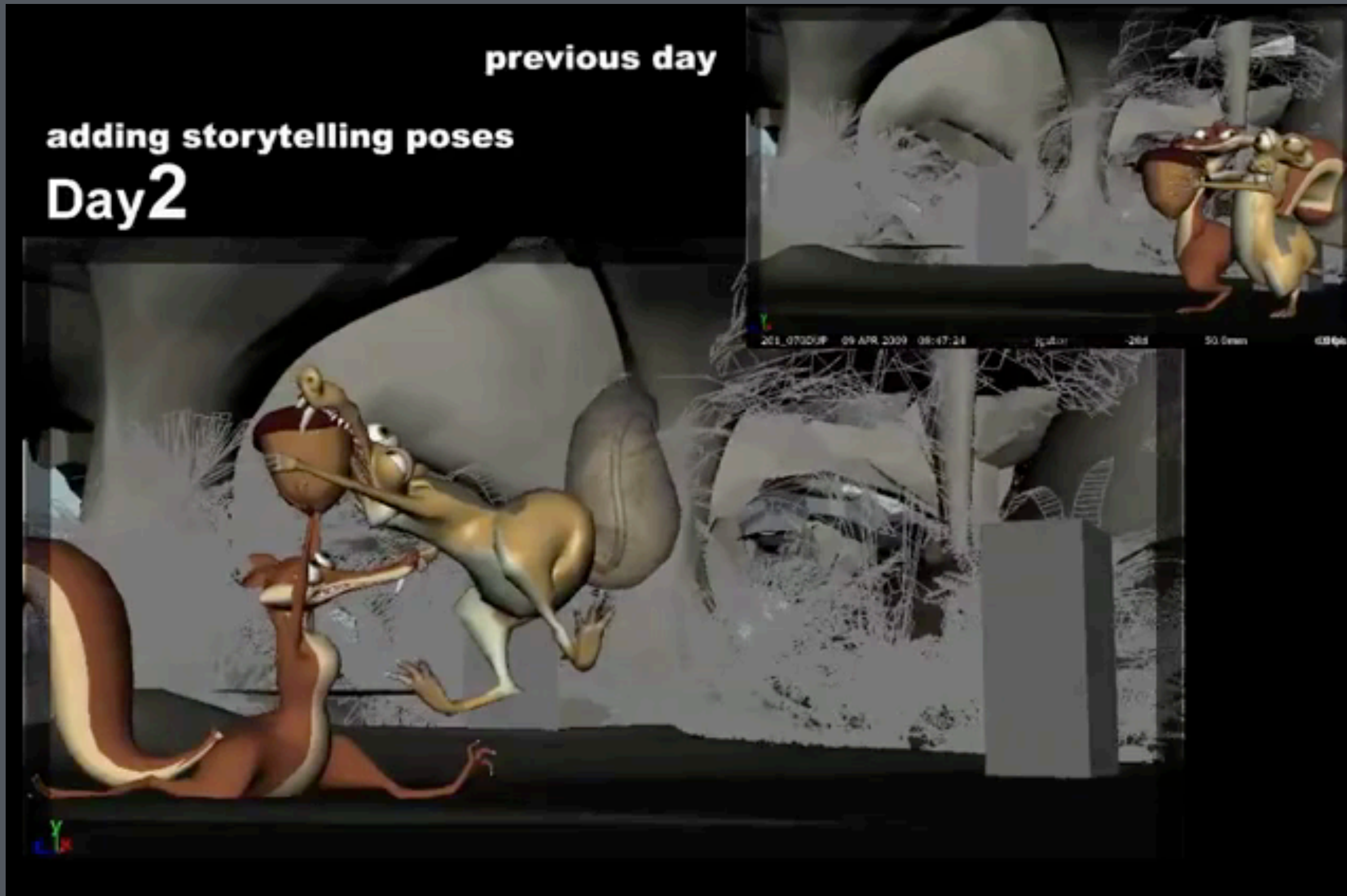




previous day

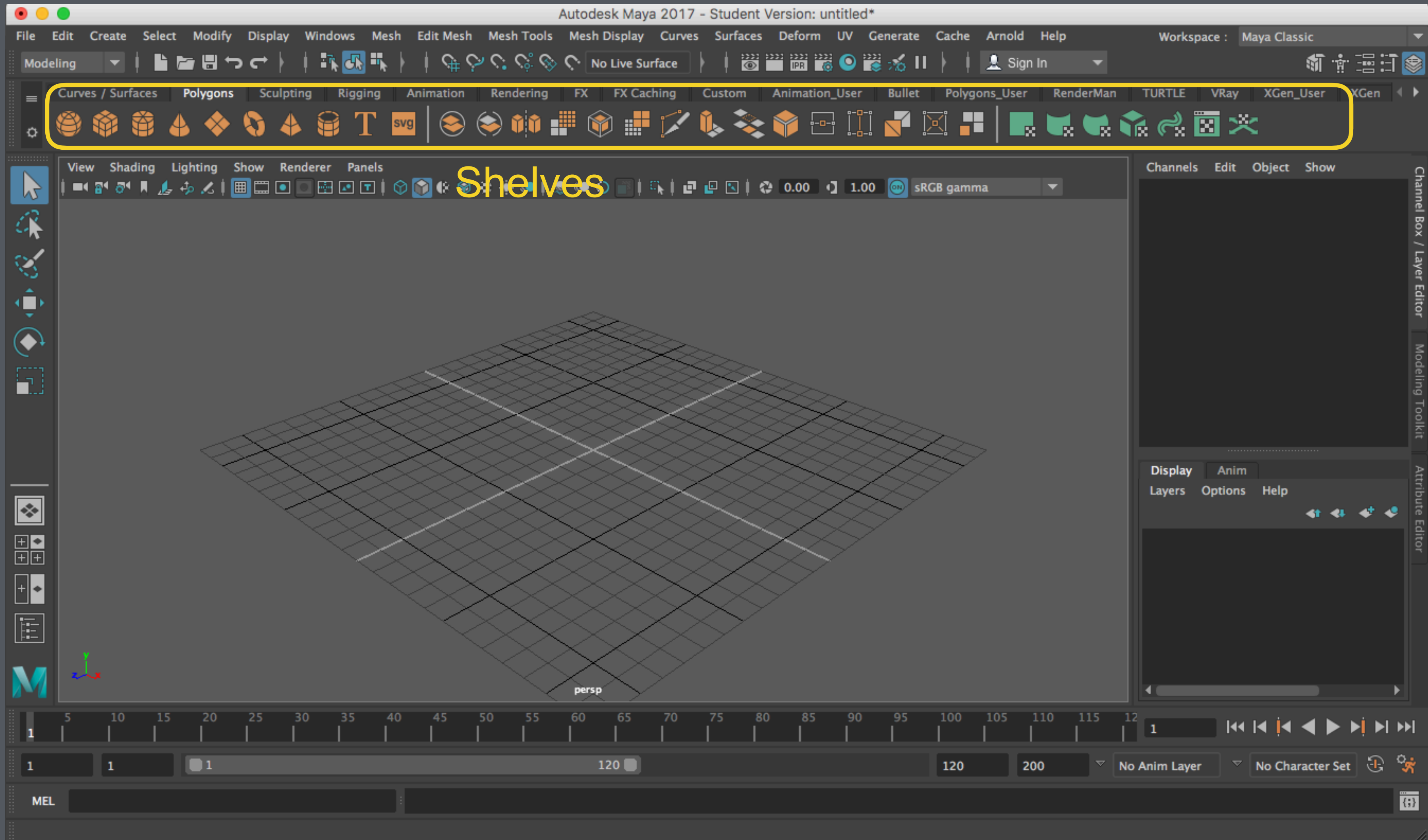
adding storytelling poses

Day 2

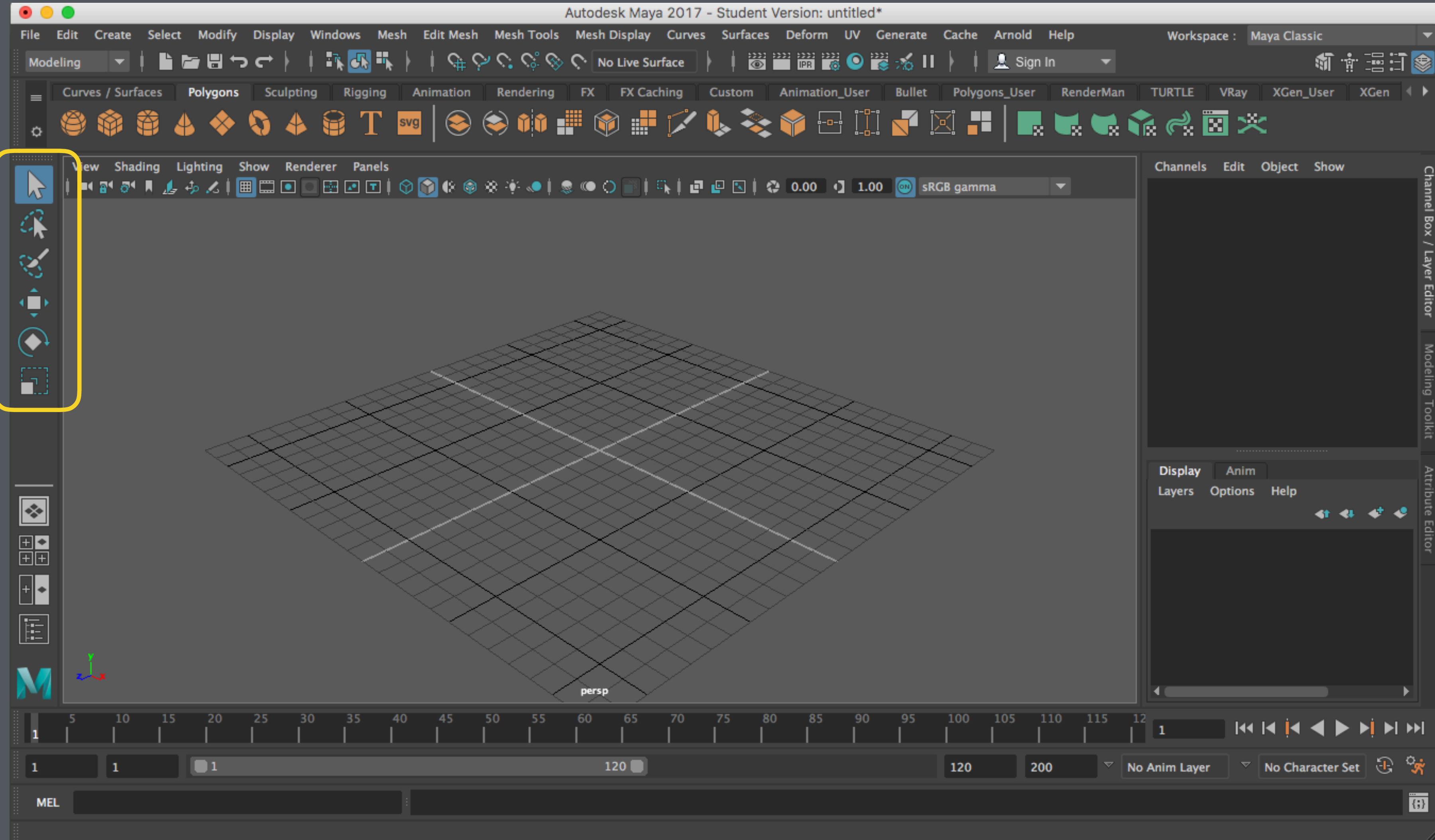


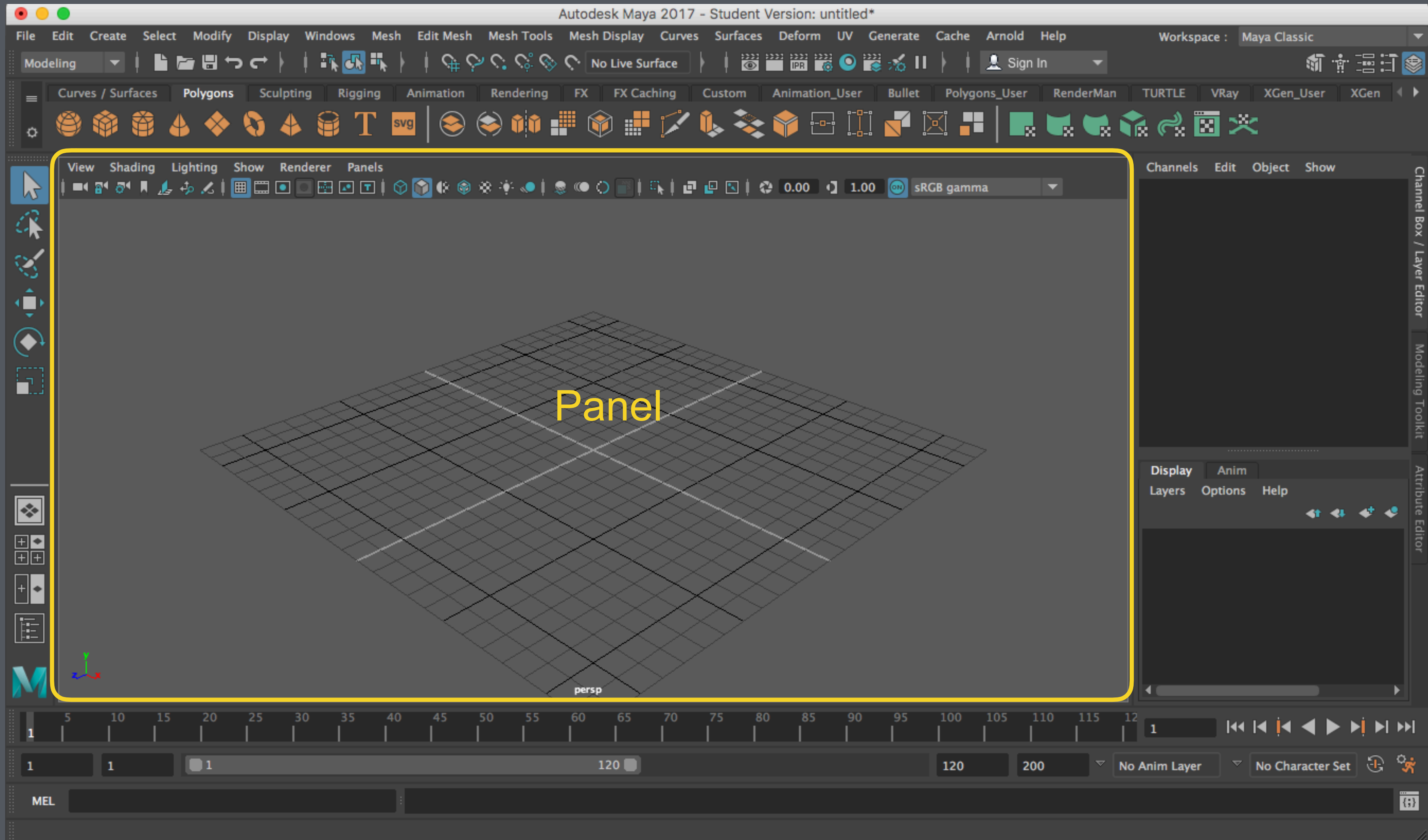
Maya ...

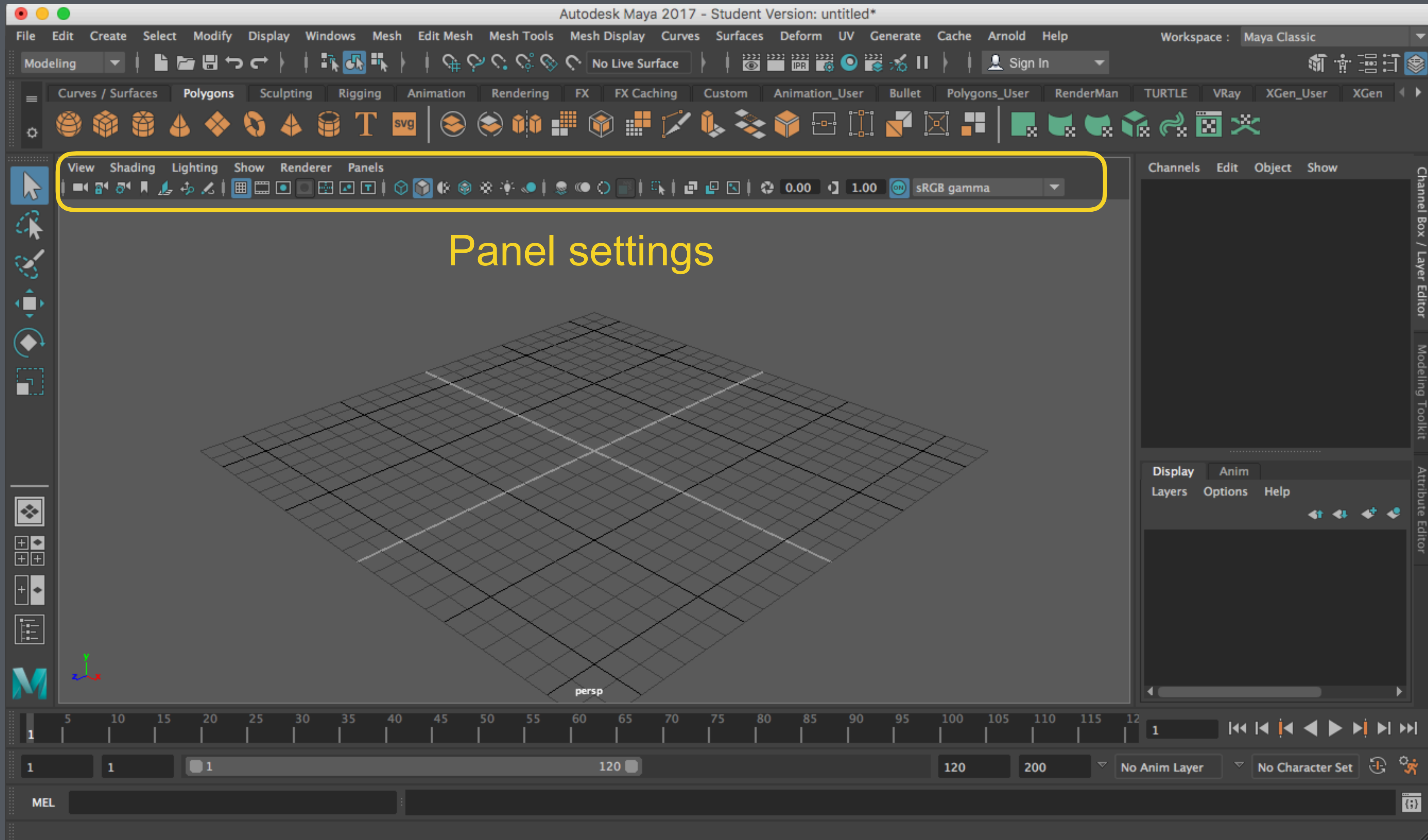
Interface

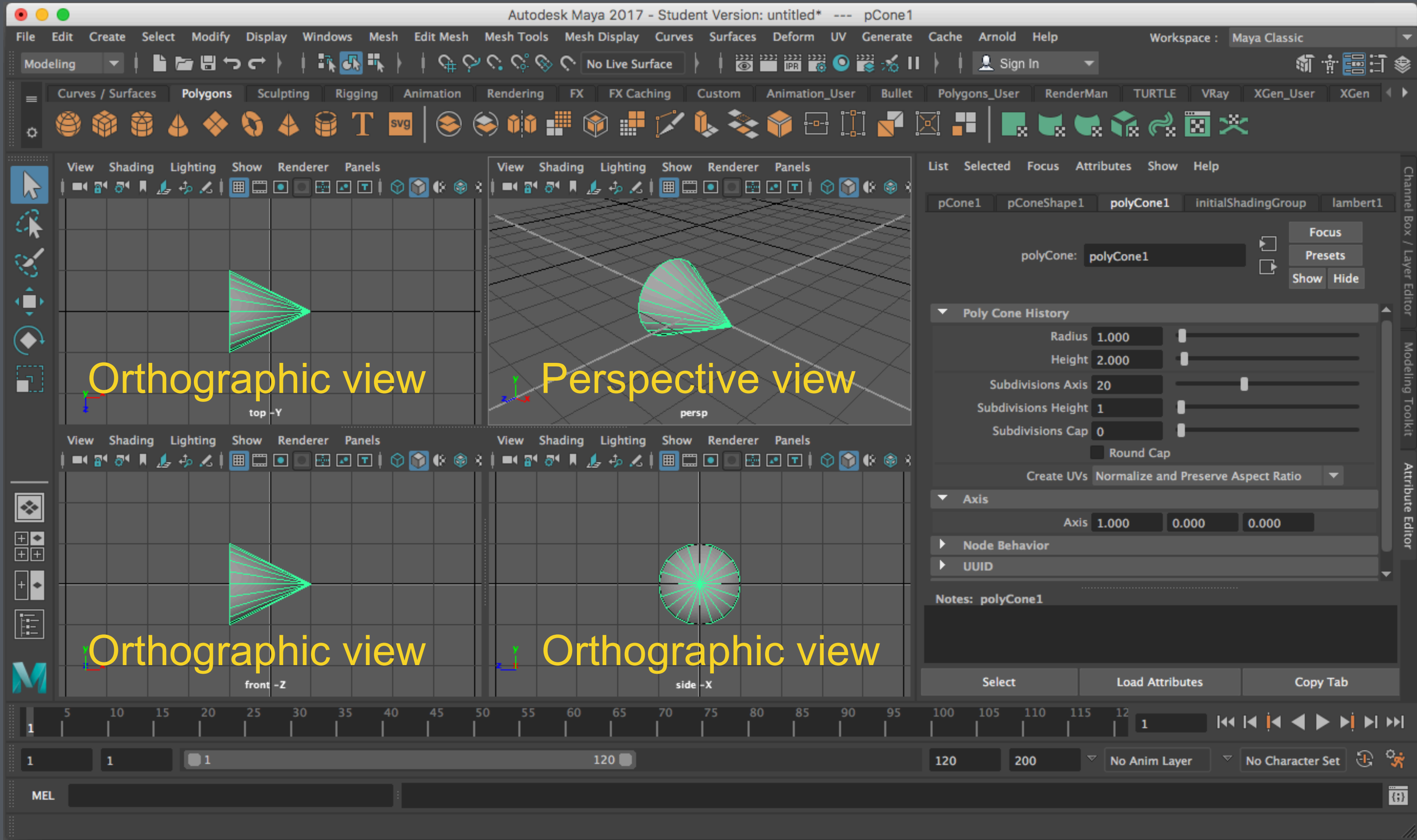


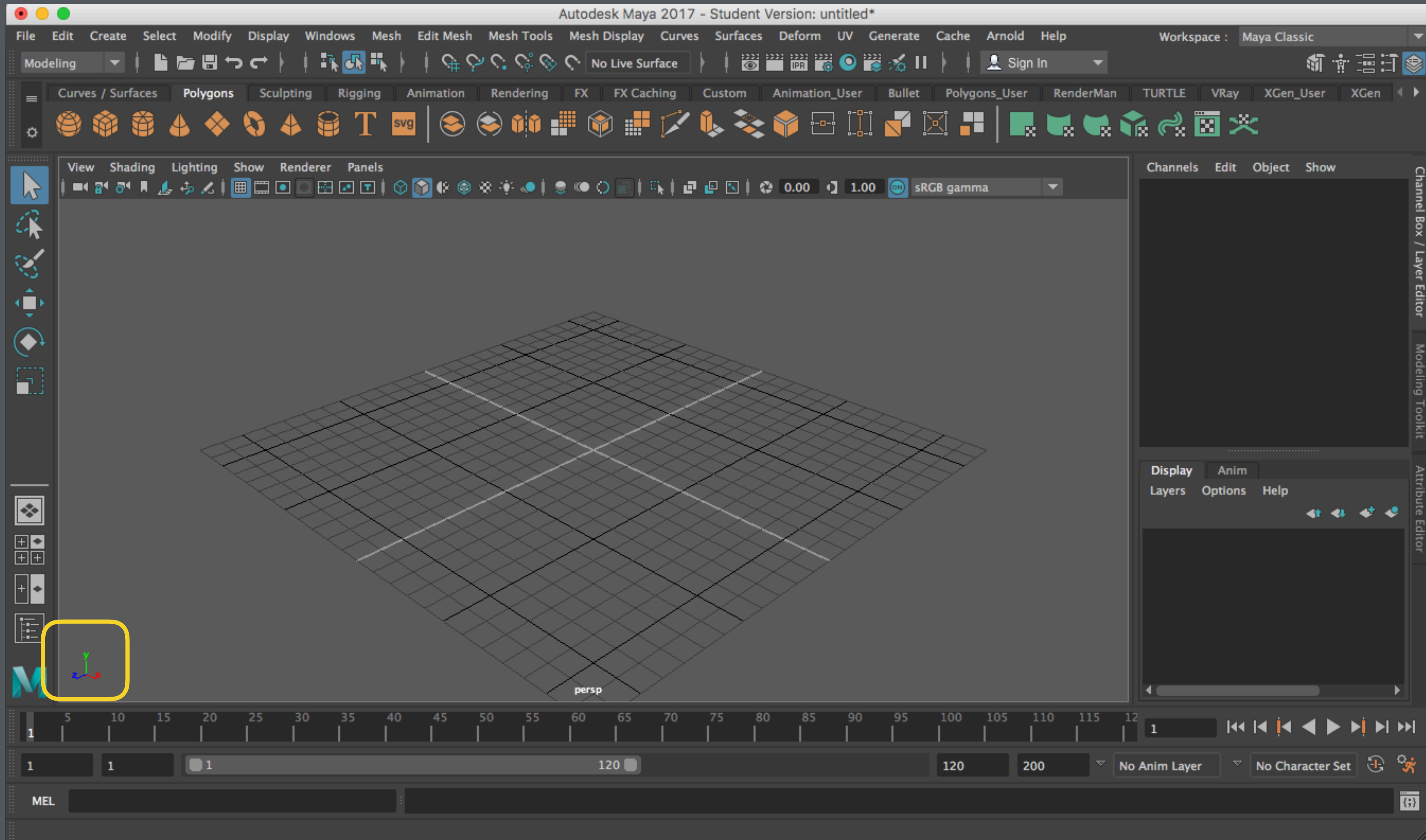
Select
Move
Rotate
Scale



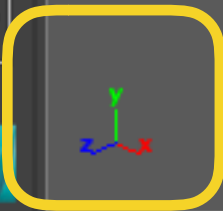


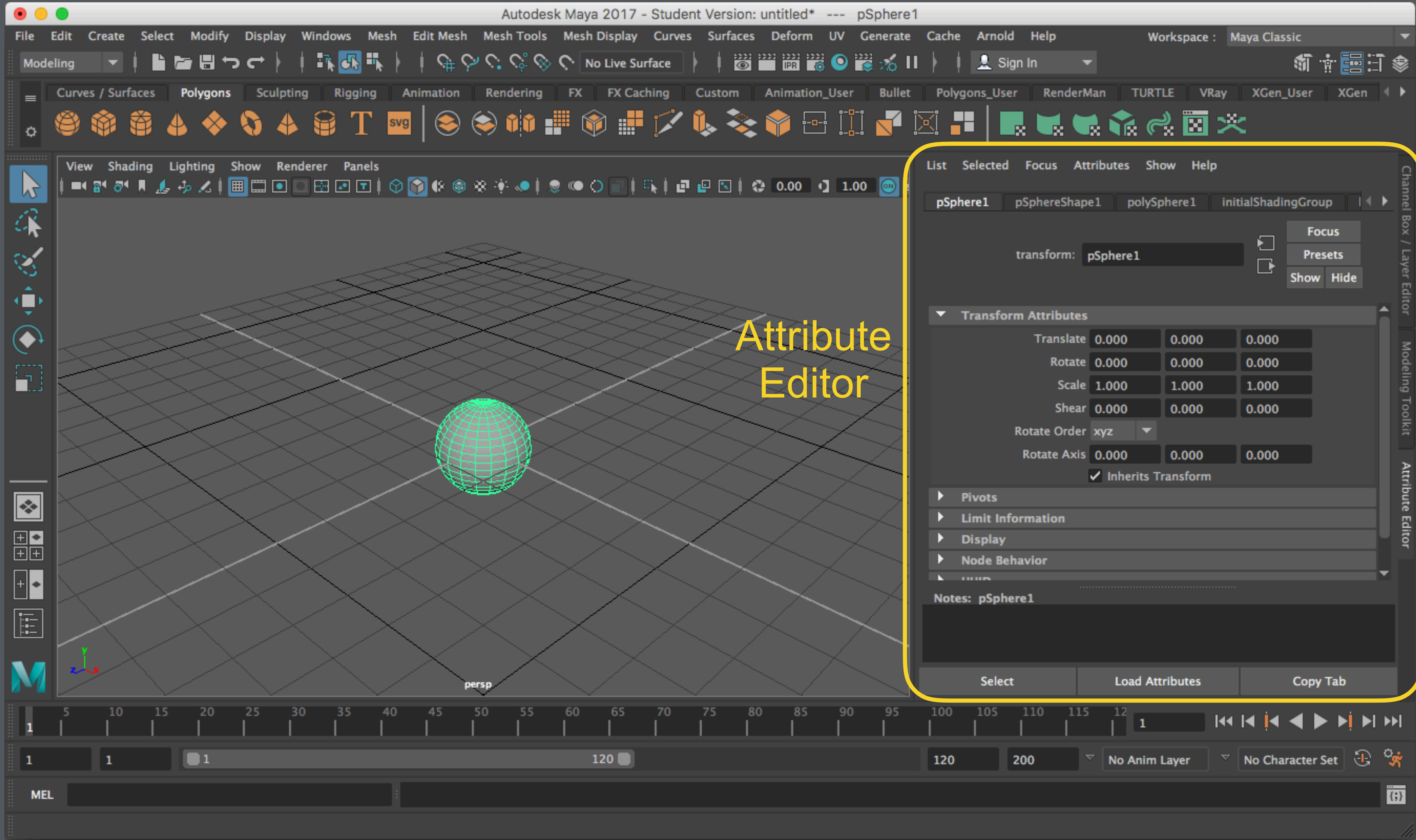




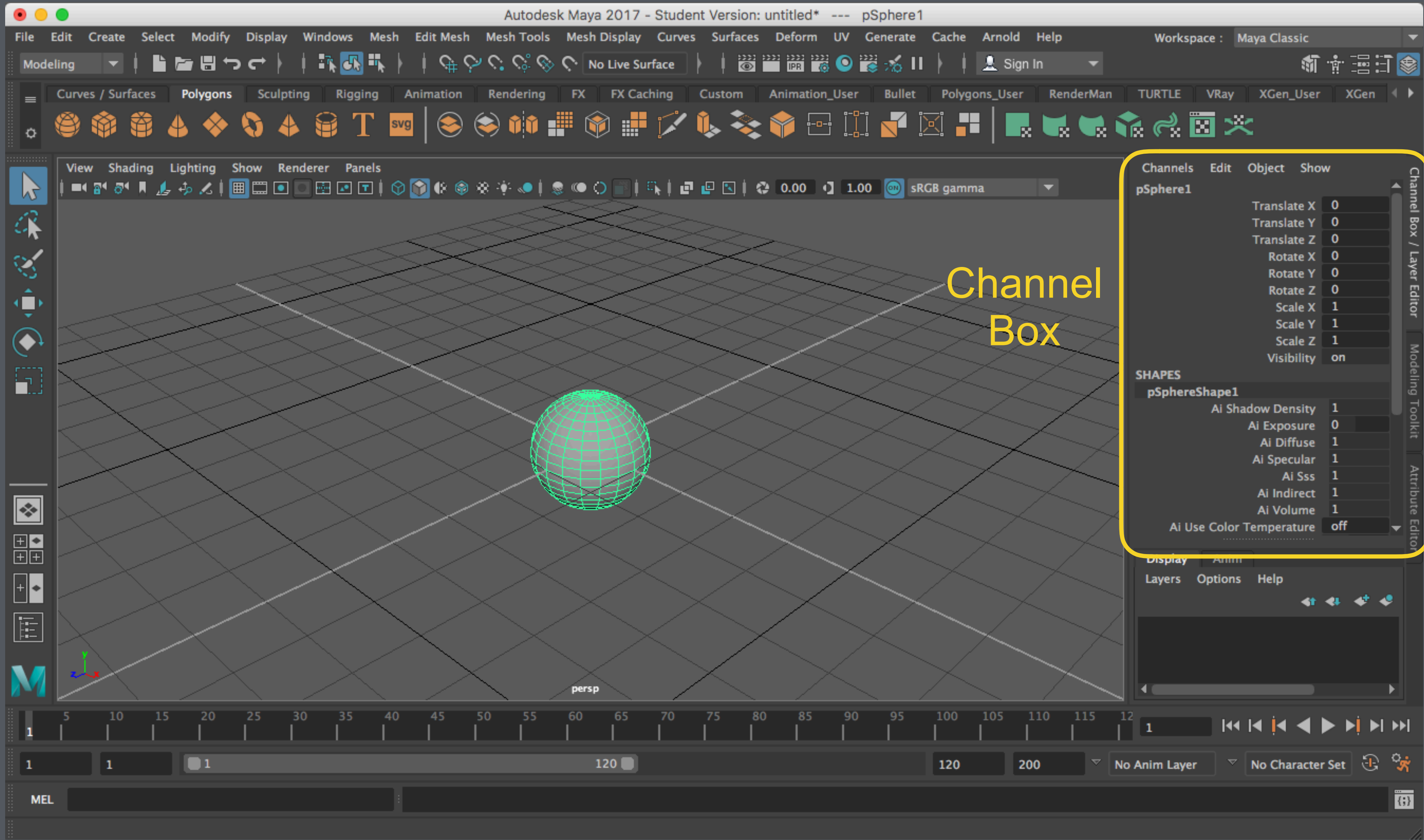


World Axes



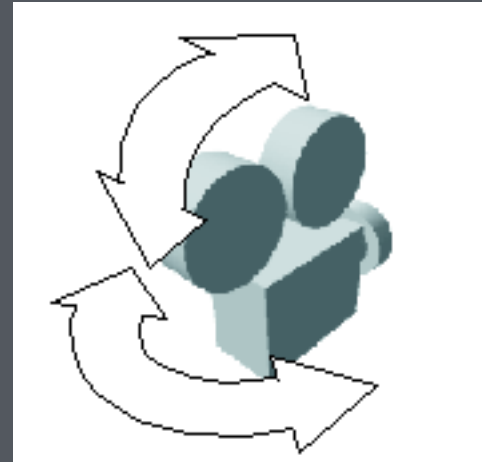


Attribute Editor



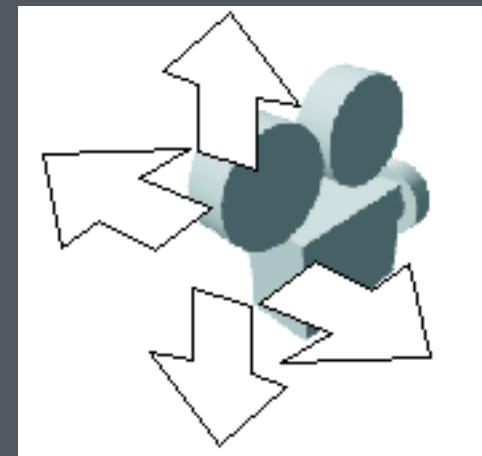
To move the camera in a perspective view panel

Tumble



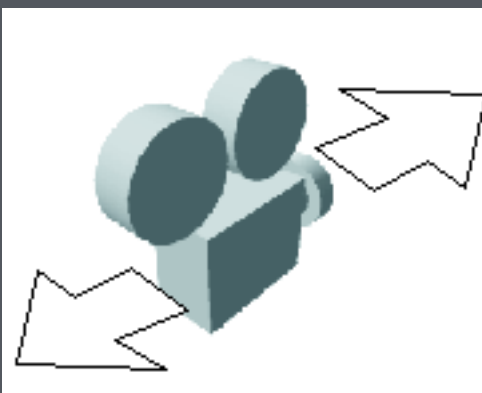
Alt + Left Drag

Track



Alt + Mid Drag

Dolly



Alt + Right Drag

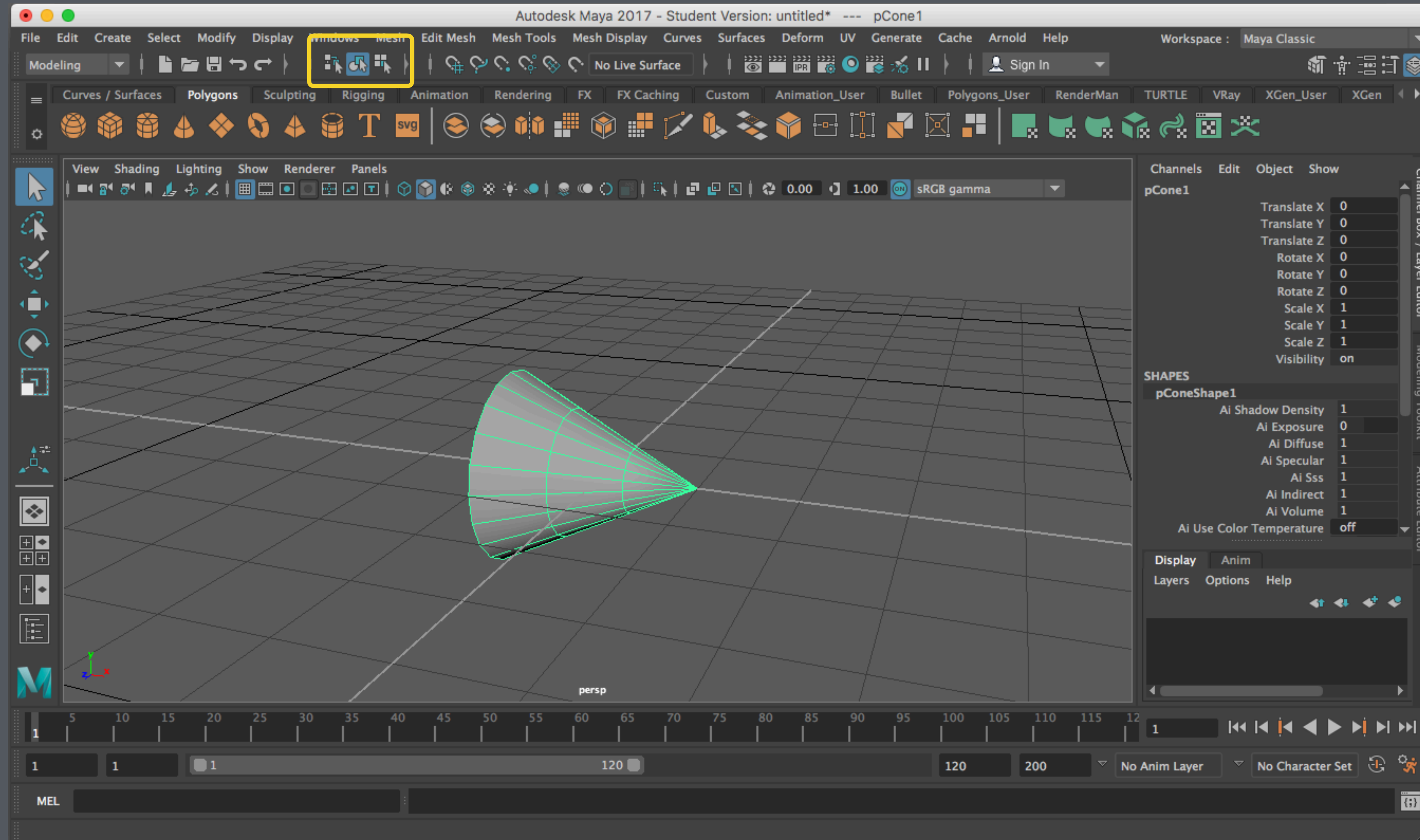
Menus

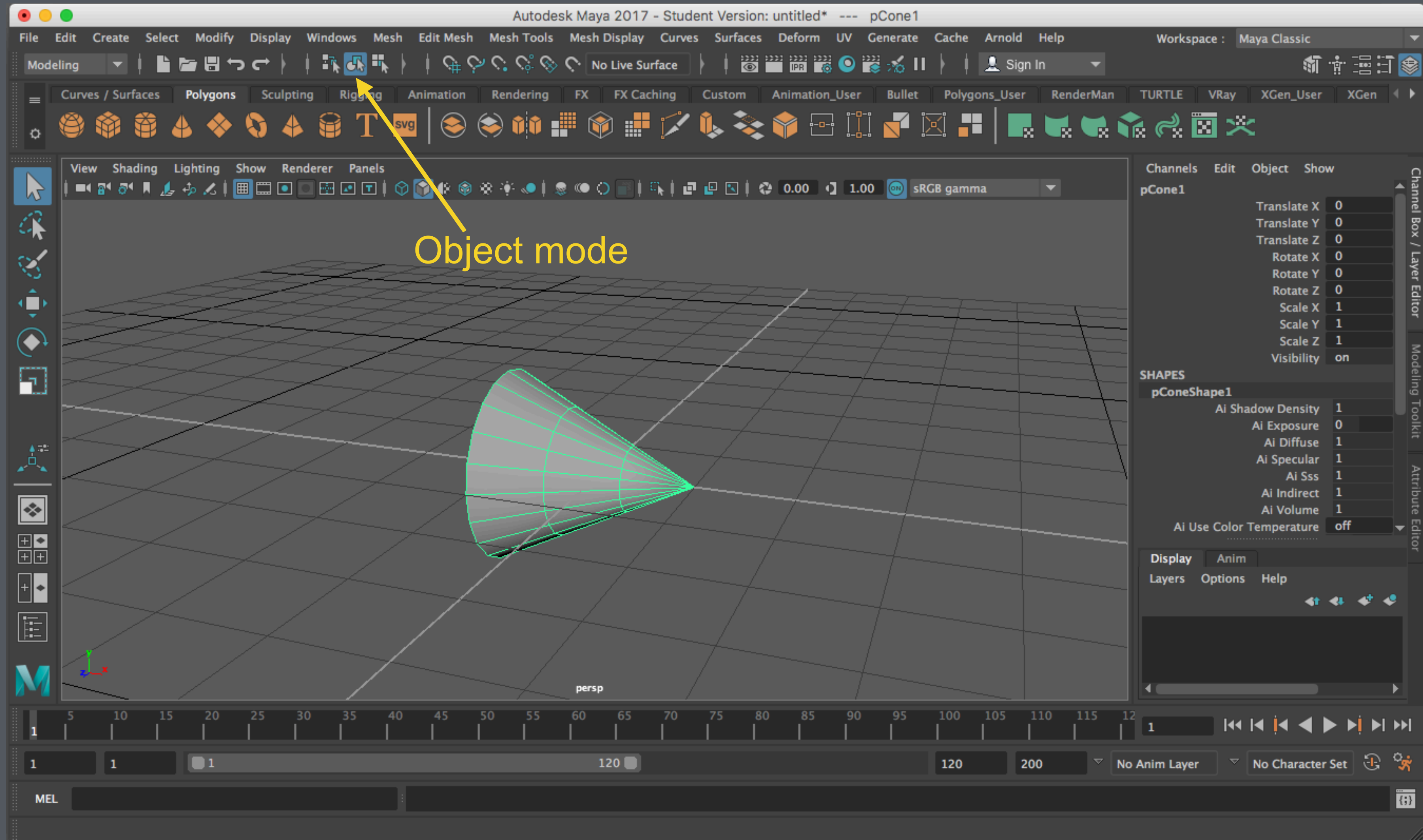
Menus

- Context sensitive. Depends on ...
 - Where you click
 - What is being selected
 - ...
- Depends on Keys+Buttons combinations

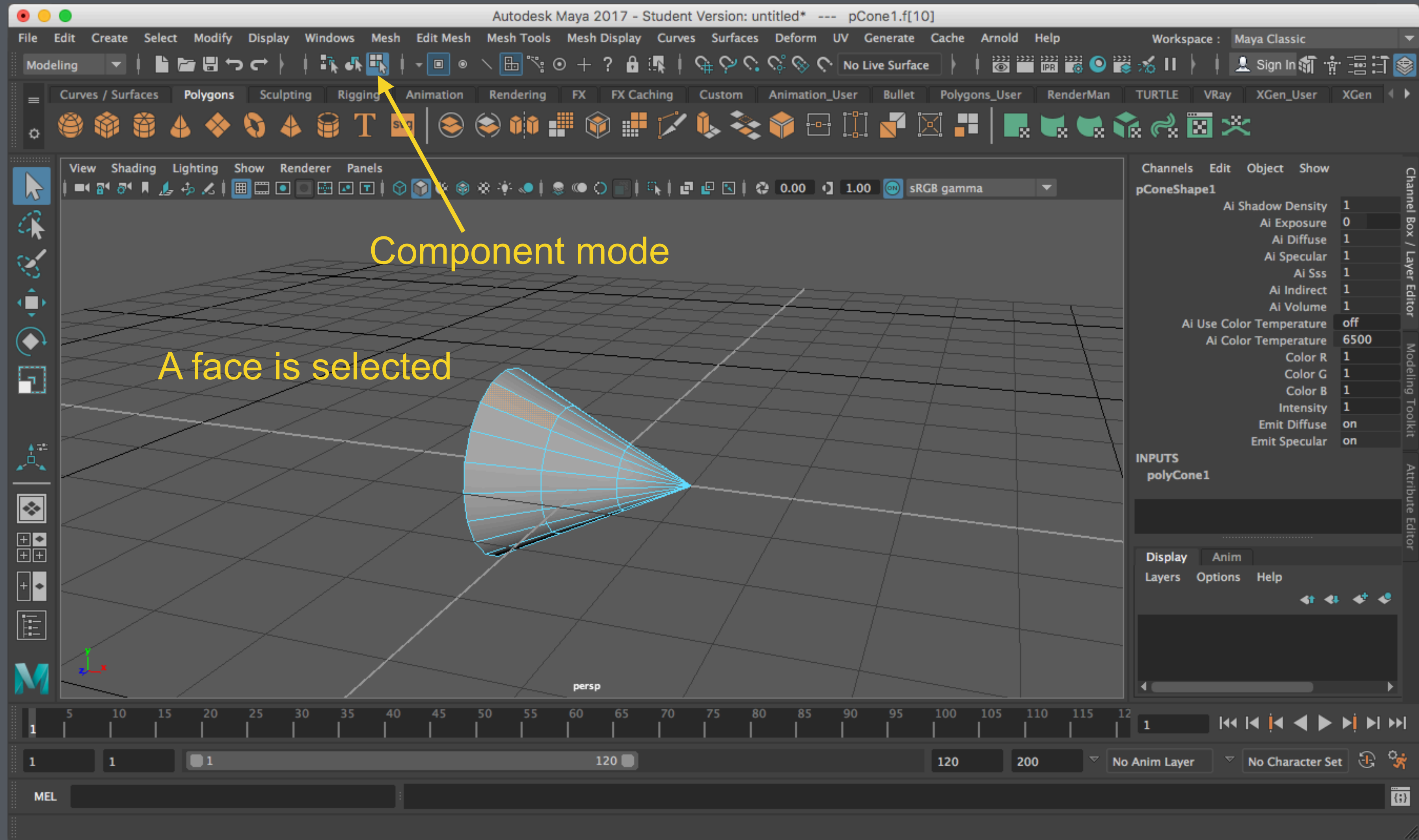
Selection

Selection Modes

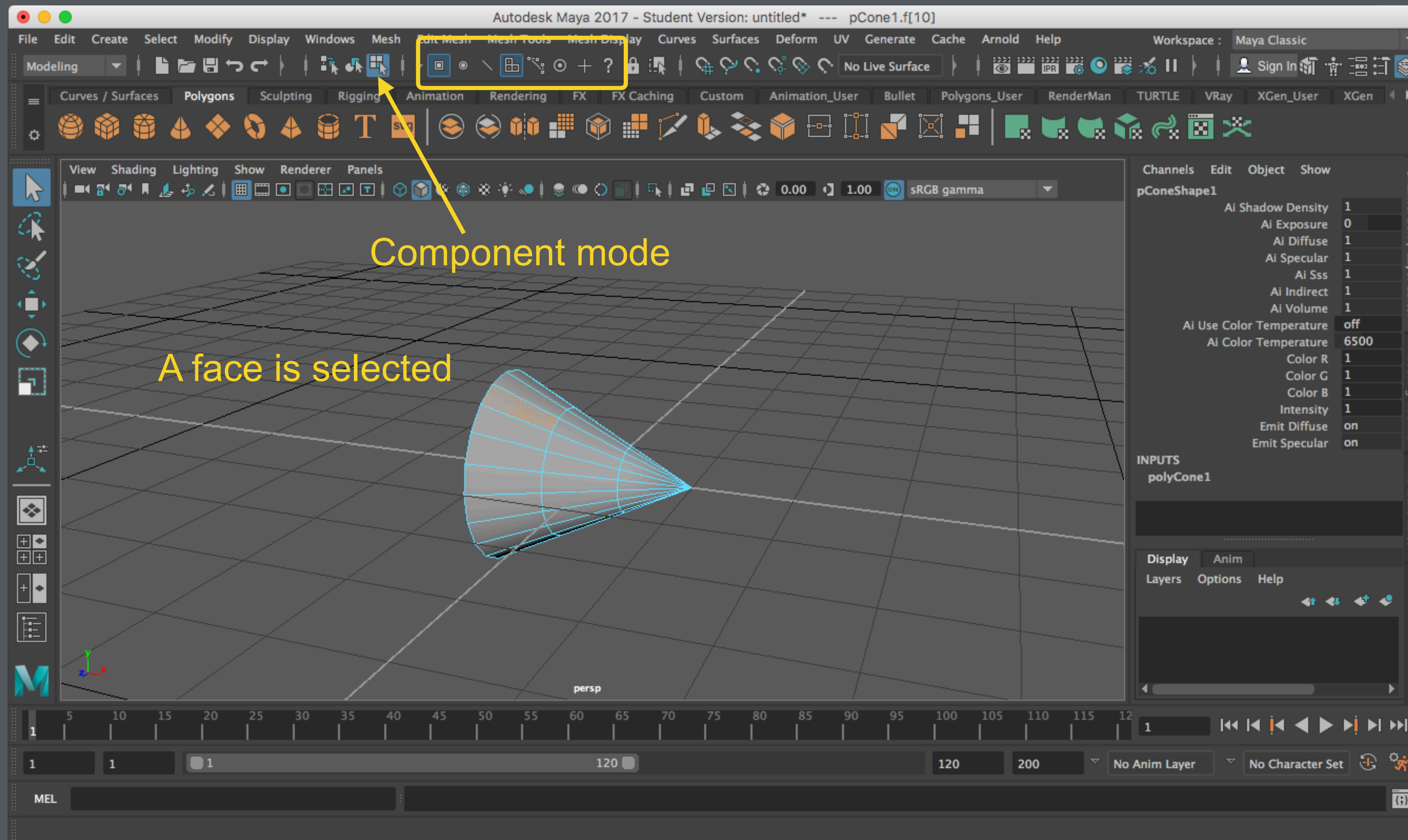


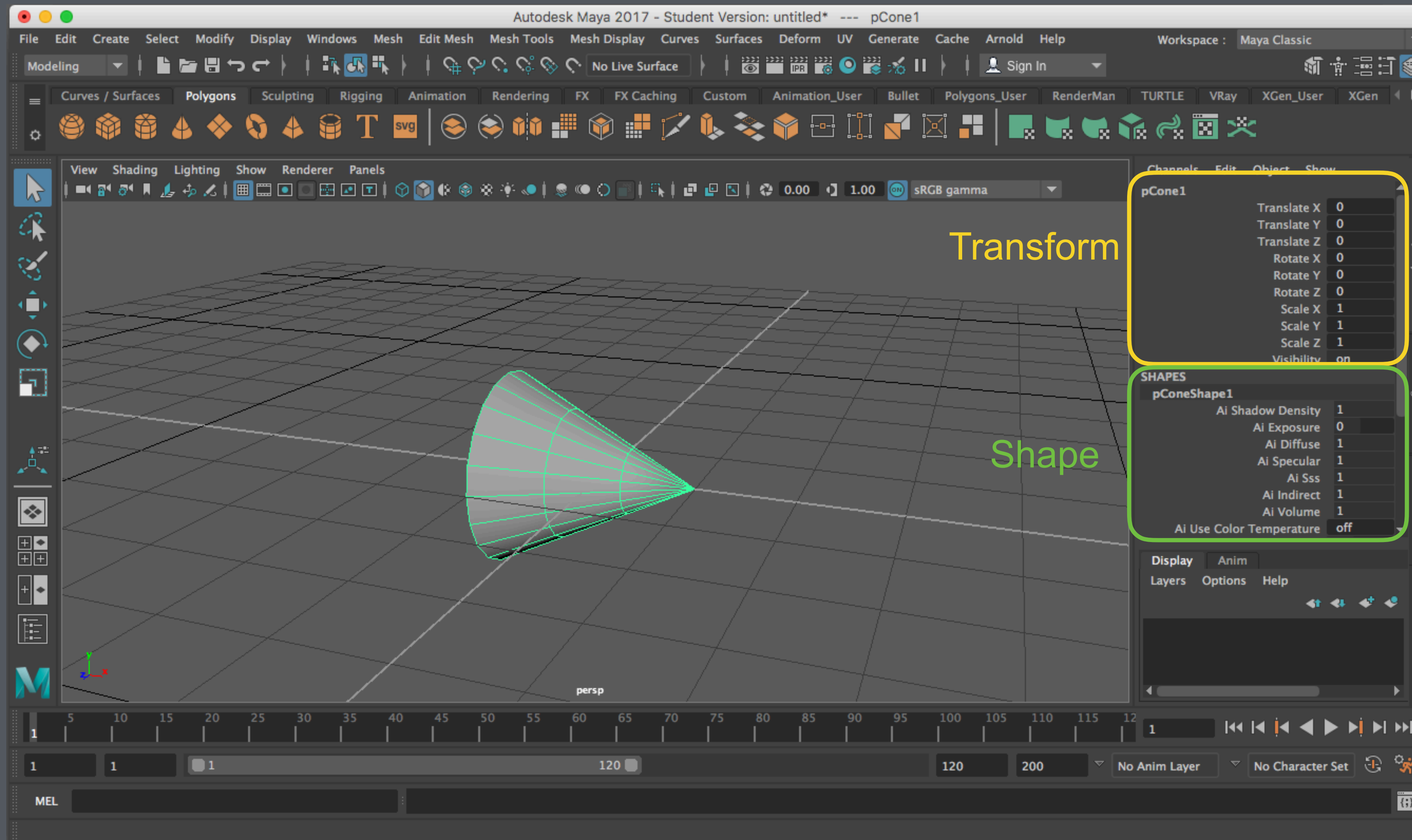


Object mode

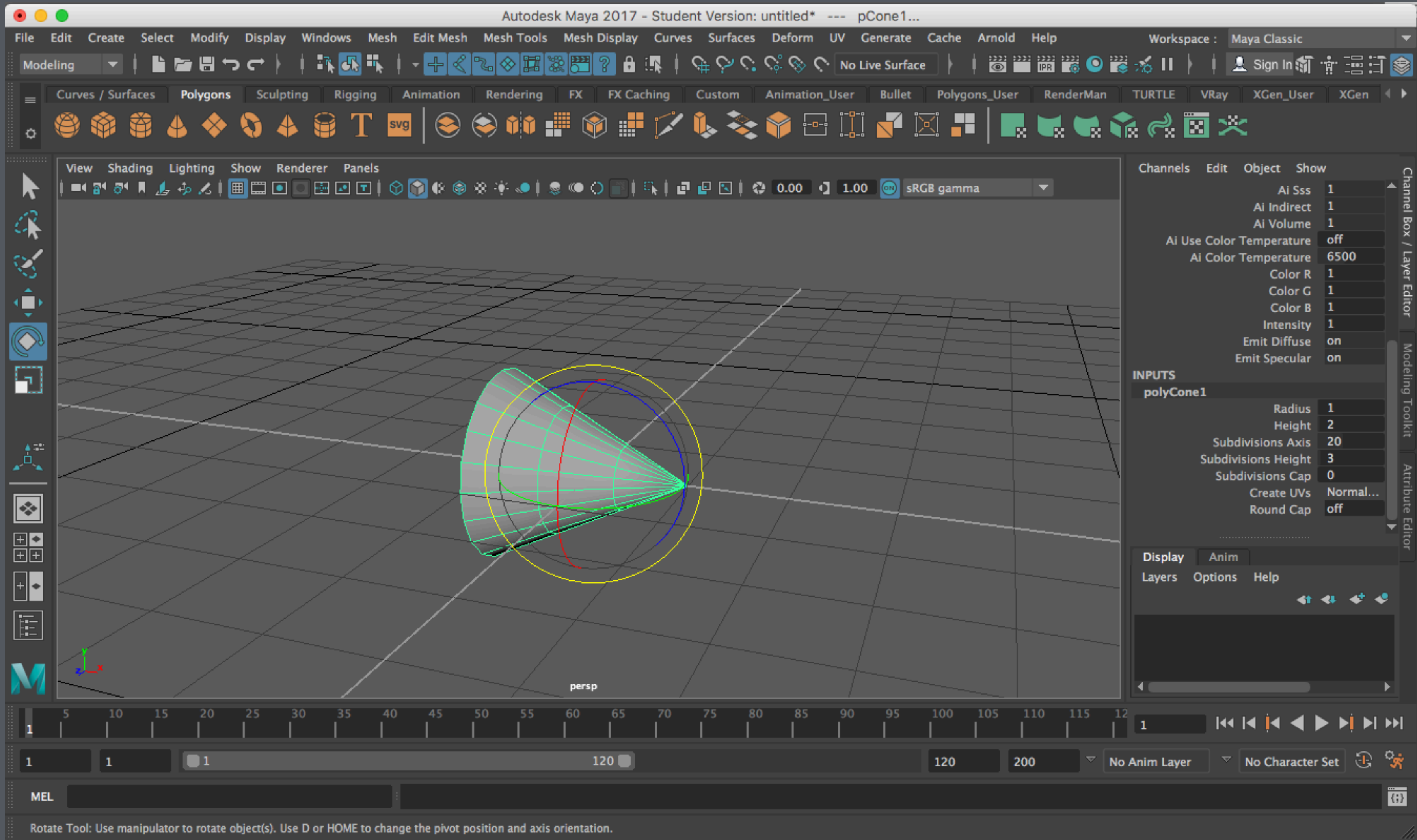


Component Selection Filters





Move, Rotate, Scale



Channels	Edit	Object	Show
Ai Sss			1
Ai Indirect			1
Ai Volume			1
Ai Use Color Temperature			off
Ai Color Temperature			6500
Color R			1
Color G			1
Color B			1
Intensity			1
Emit Diffuse			on
Emit Specular			on
INPUTS			
polyCone1			
Radius			1
Height			2
Subdivisions Axis			20
Subdivisions Height			3
Subdivisions Cap			0
Create UVs			Normal...
Round Cap			off

Display Anim
Layers Options Help

← → ↶ ↷

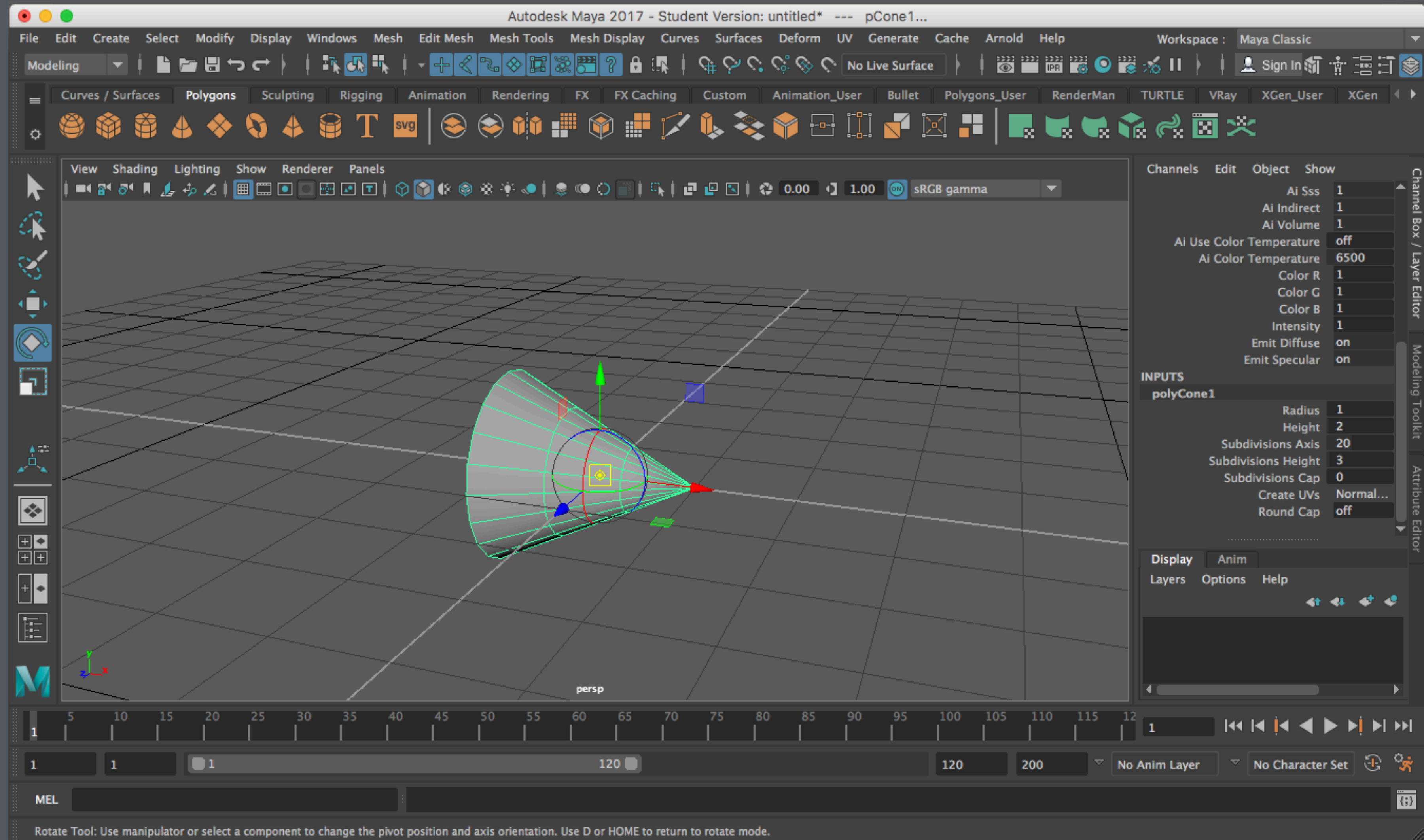
Timeline: 1 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115 120

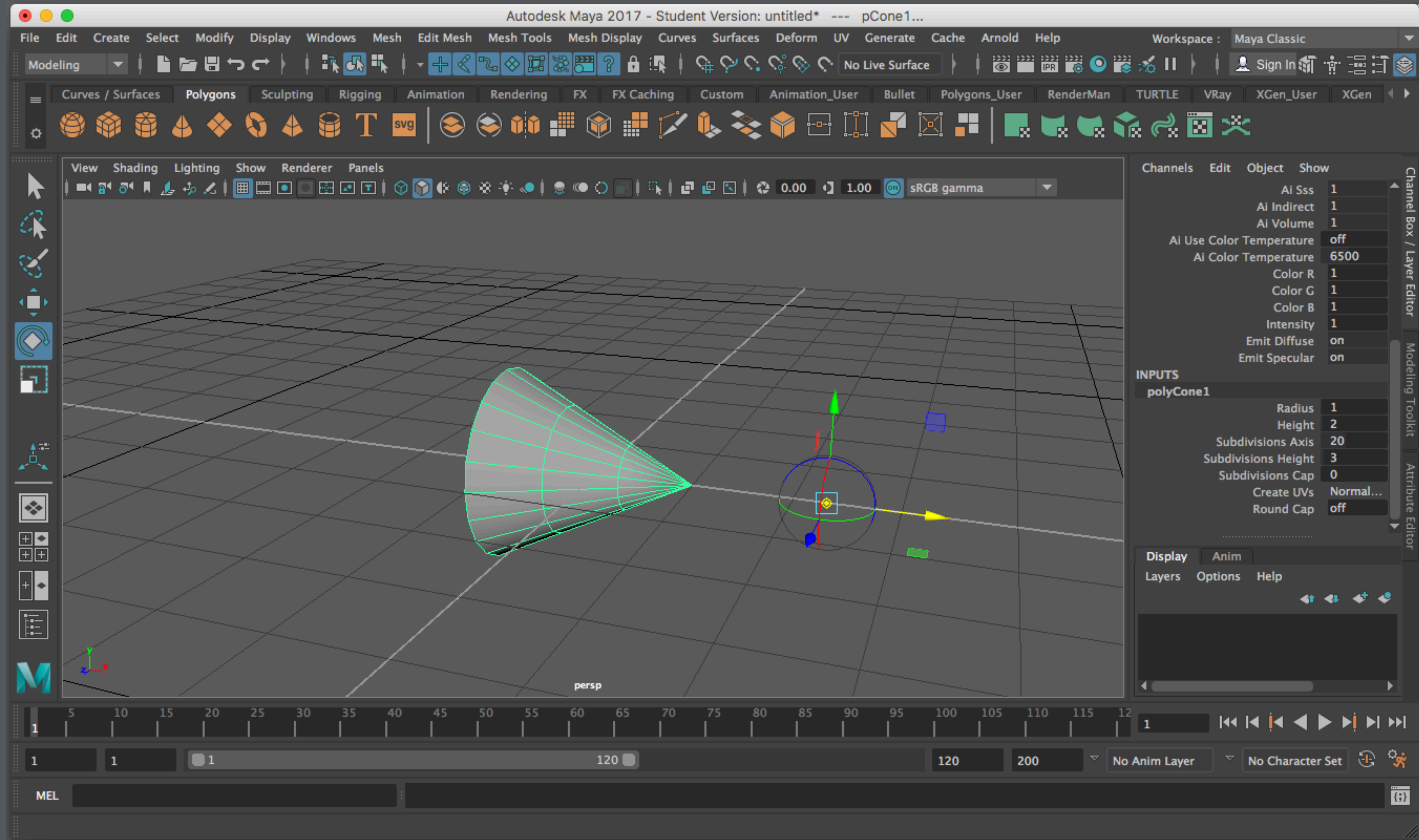
1 1 1 120 120 200 No Anim Layer No Character Set

MEL

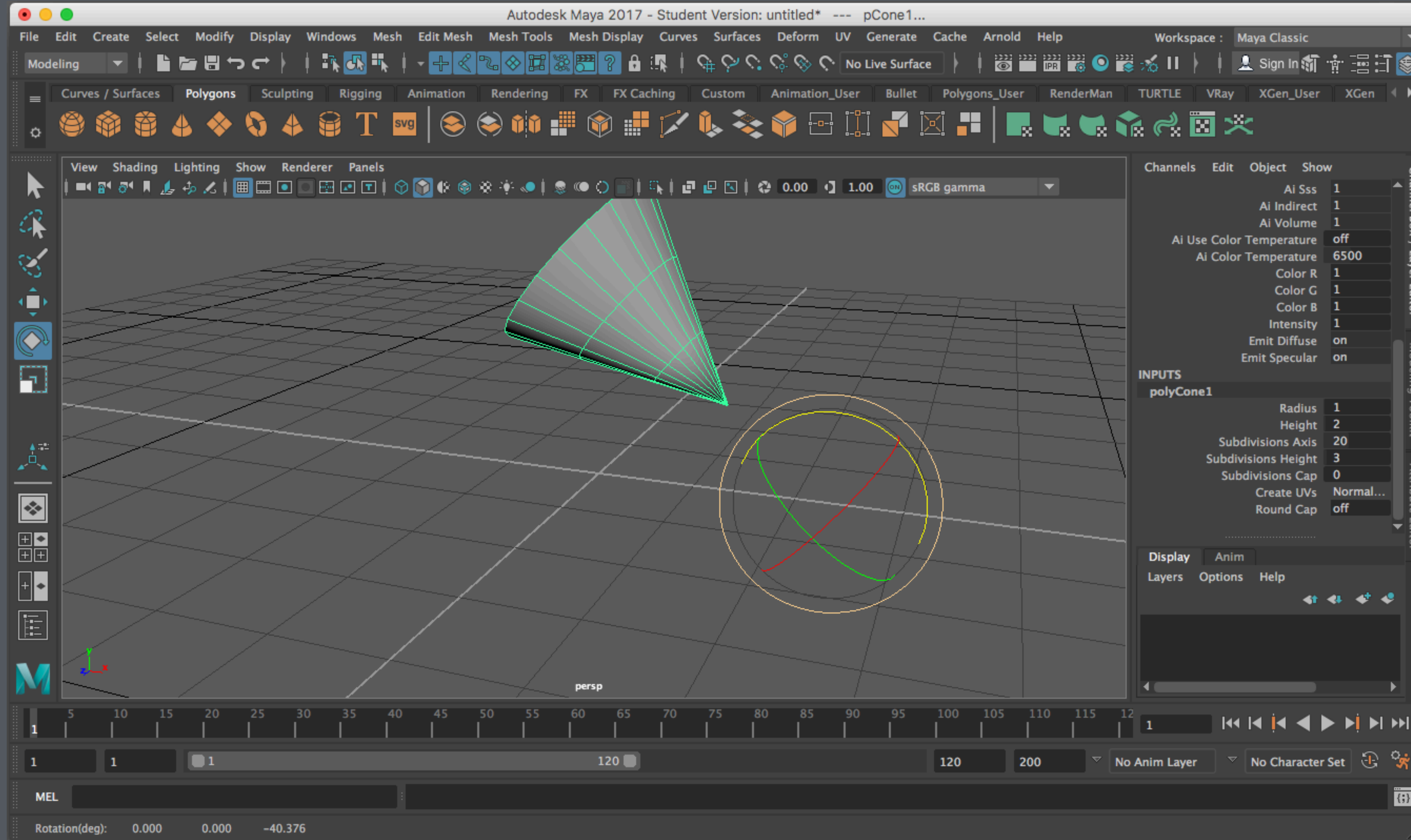
Rotate Tool: Use manipulator to rotate object(s). Use D or HOME to change the pivot position and axis orientation.

Press "d" to change the pivot

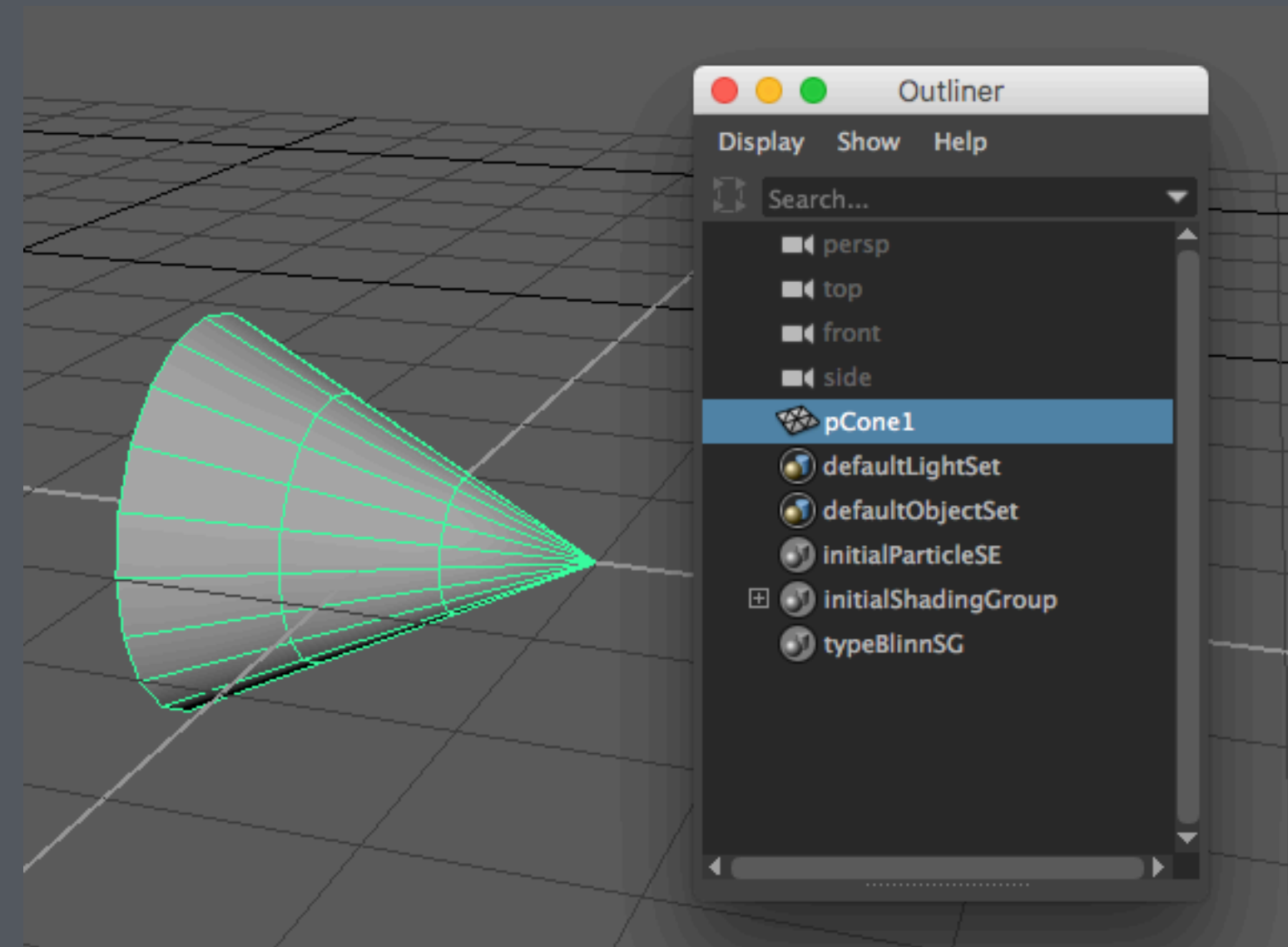
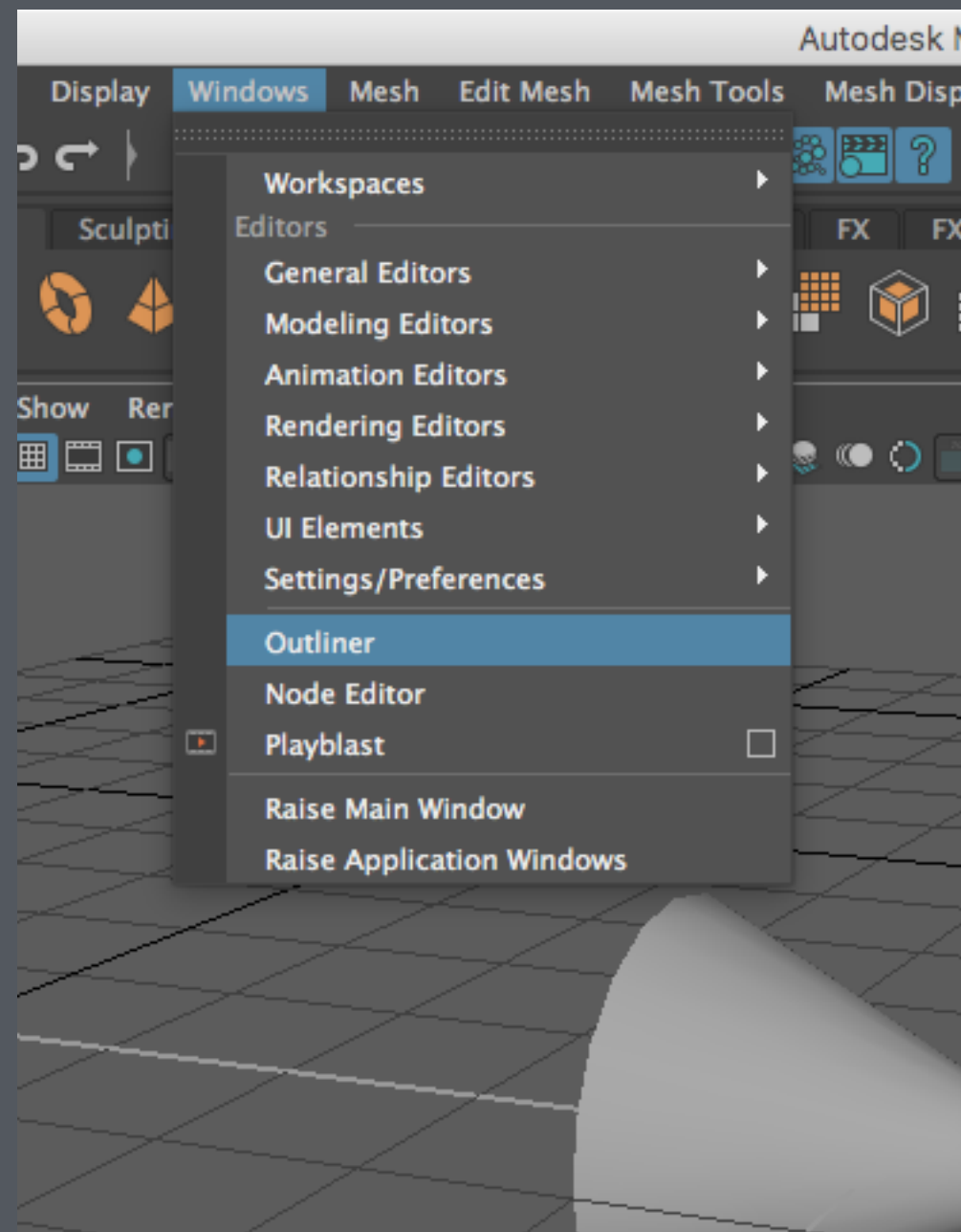




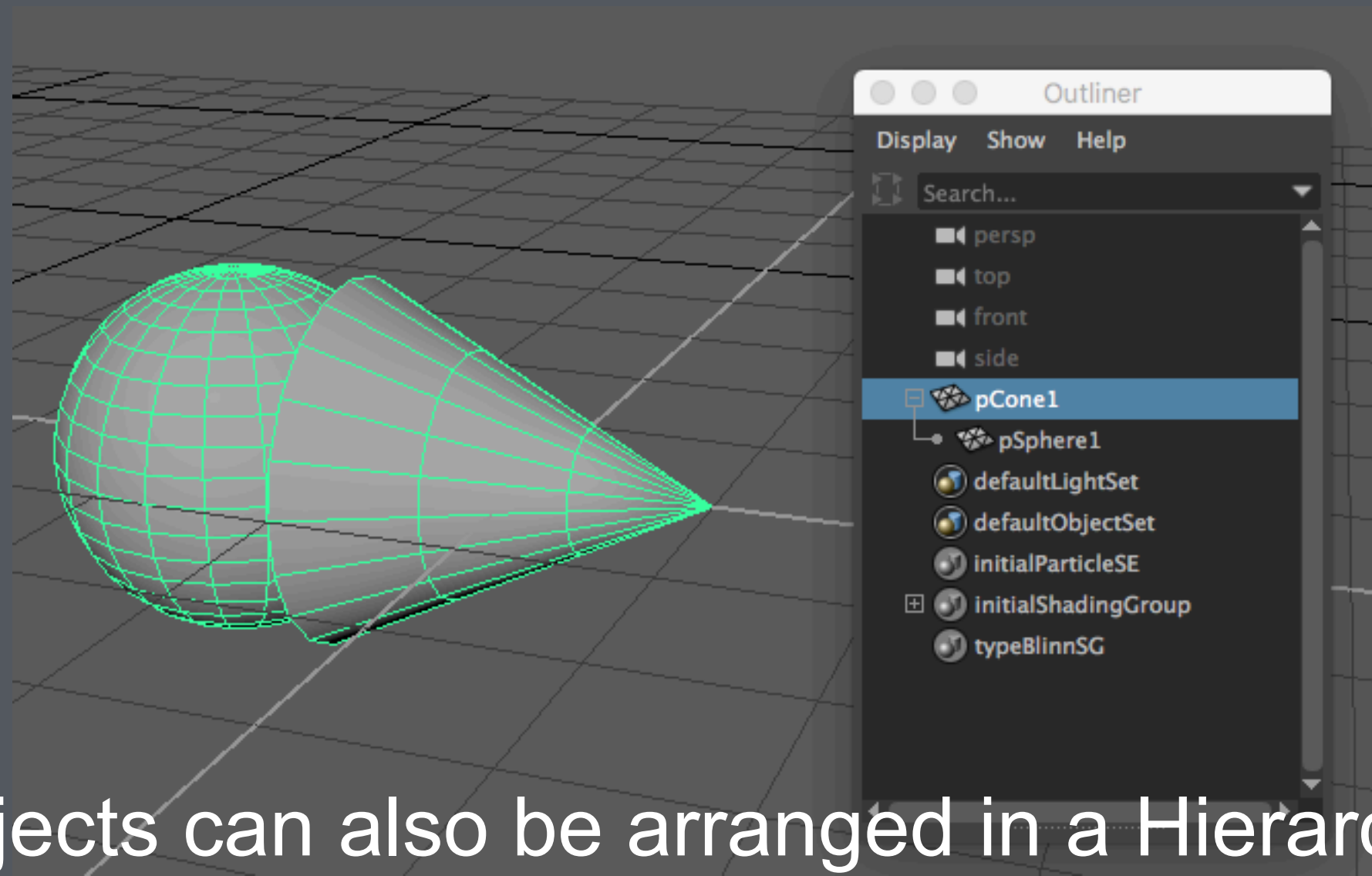
Press “d” again to switch back to the Rotate tool



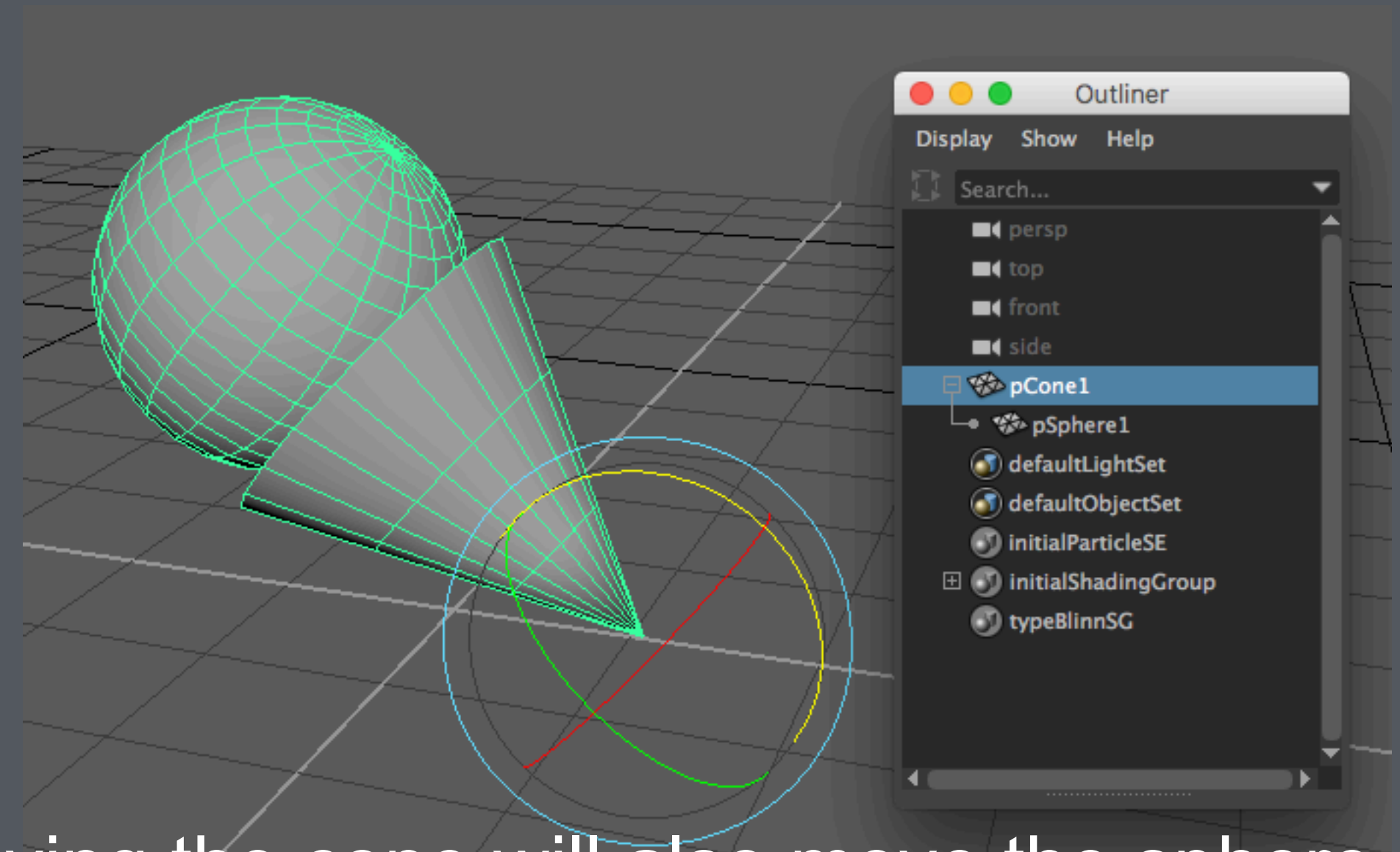
Outliner



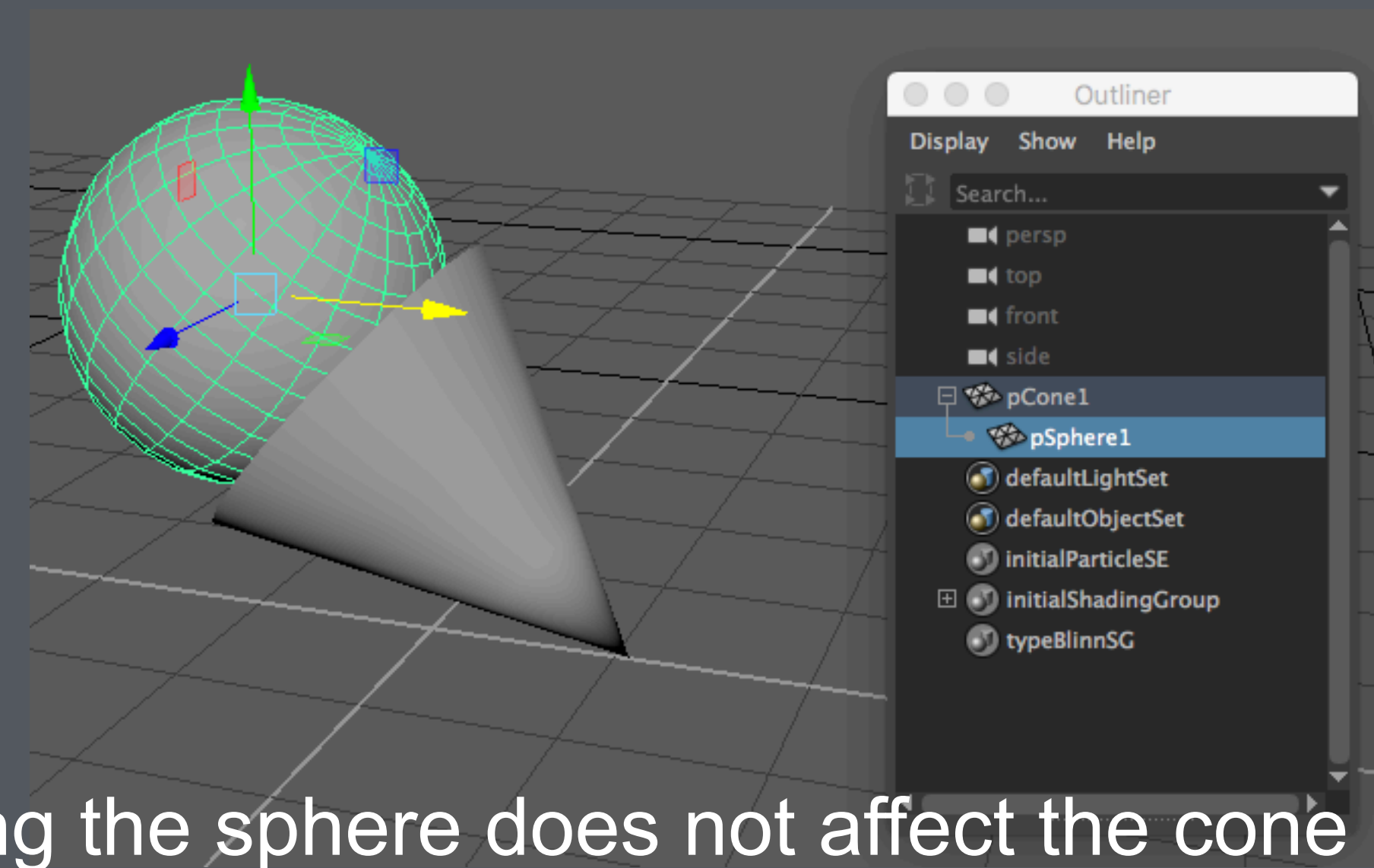
The outliner displays all the objects in a scene in text form



Objects can also be arranged in a Hierarchy
The cone is the parent of the sphere

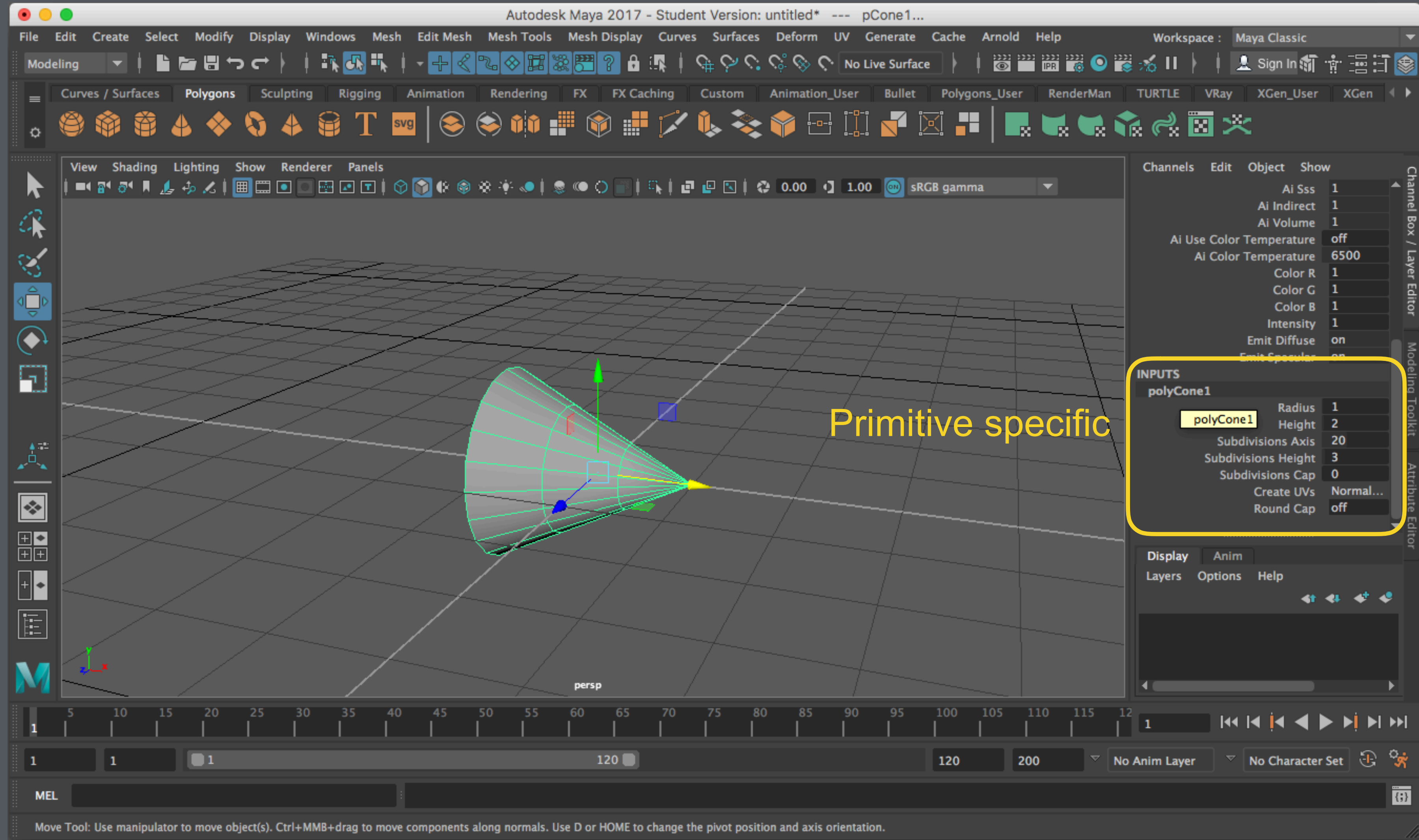


Moving the cone will also move the sphere

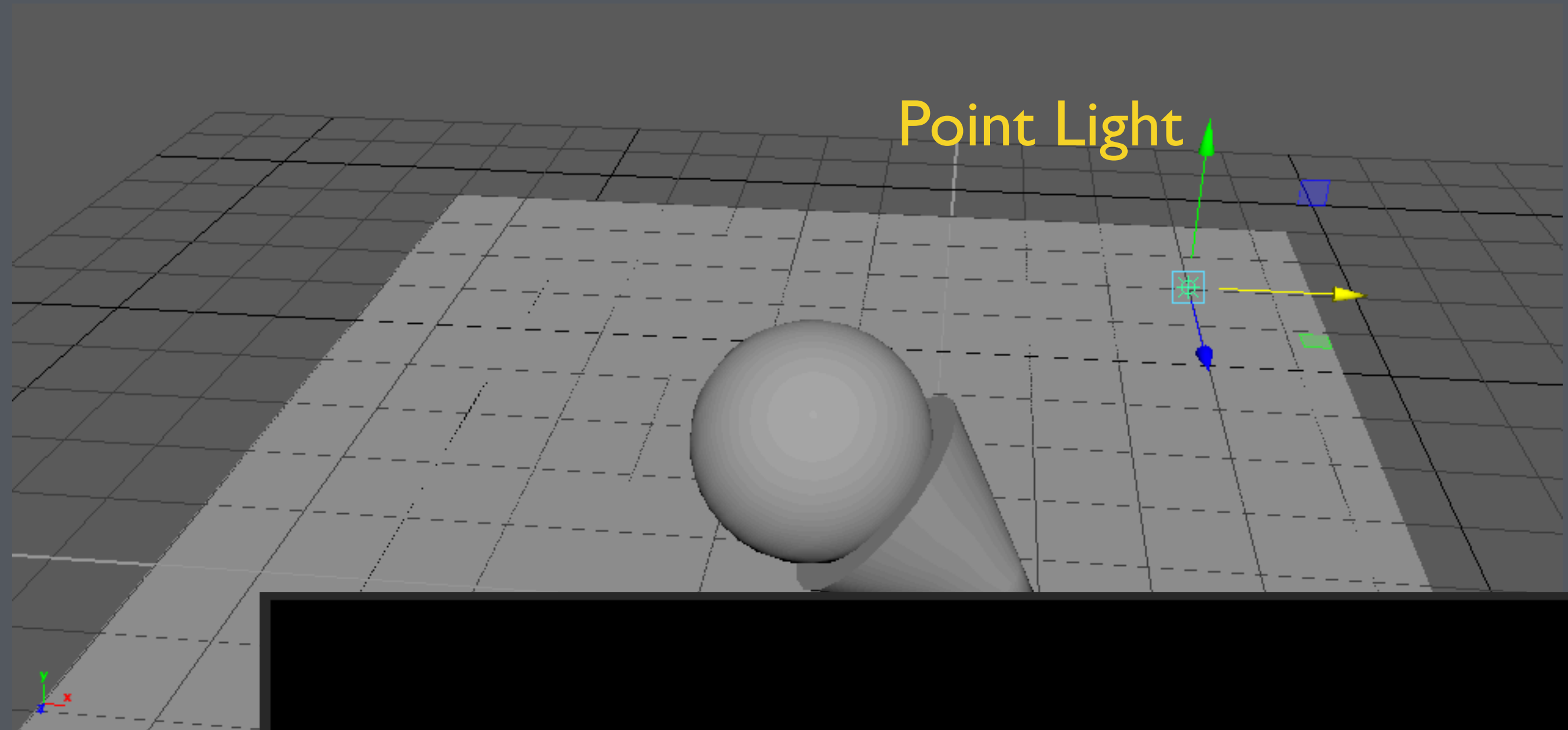
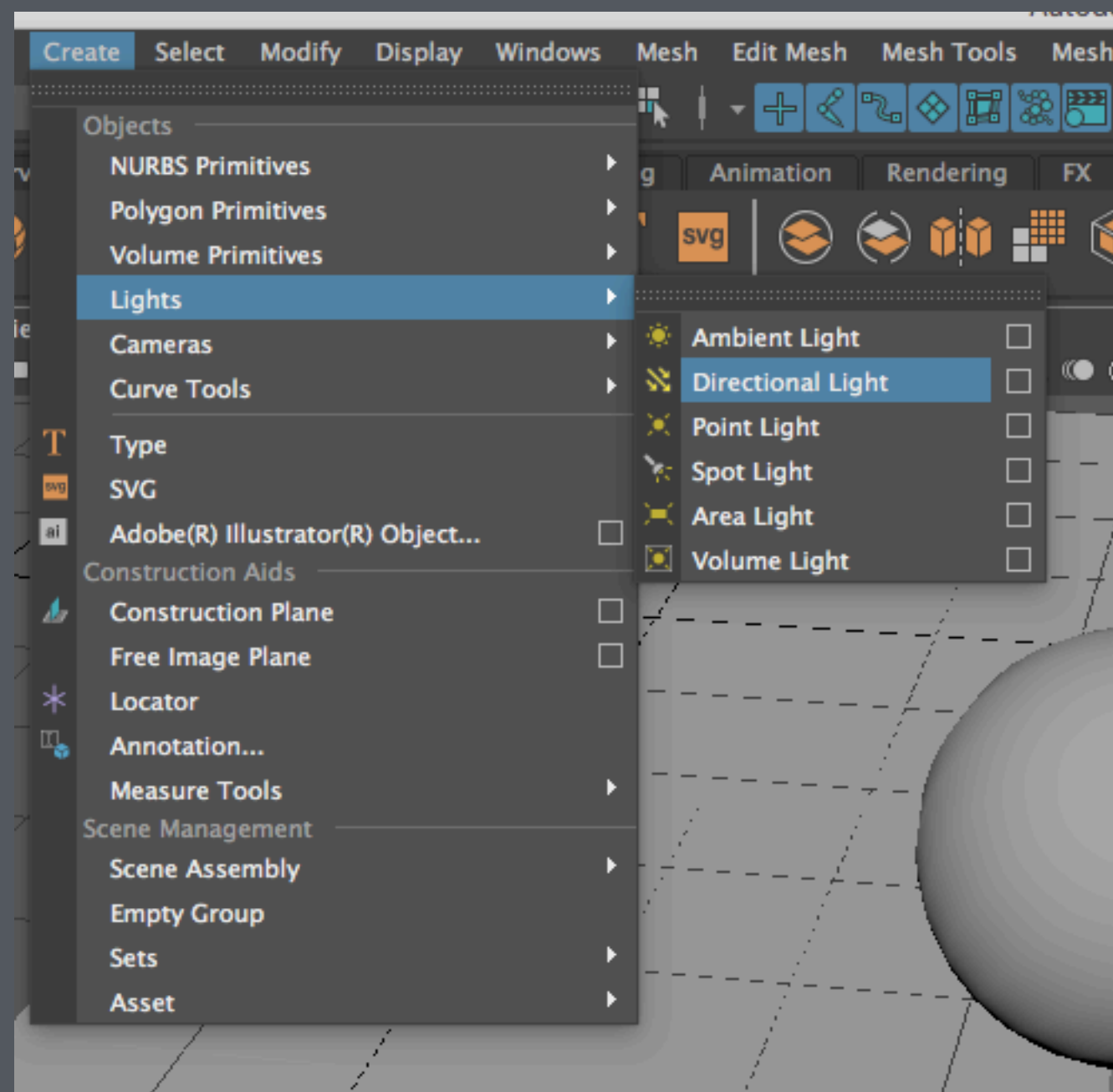


But moving the sphere does not affect the cone

Primitives

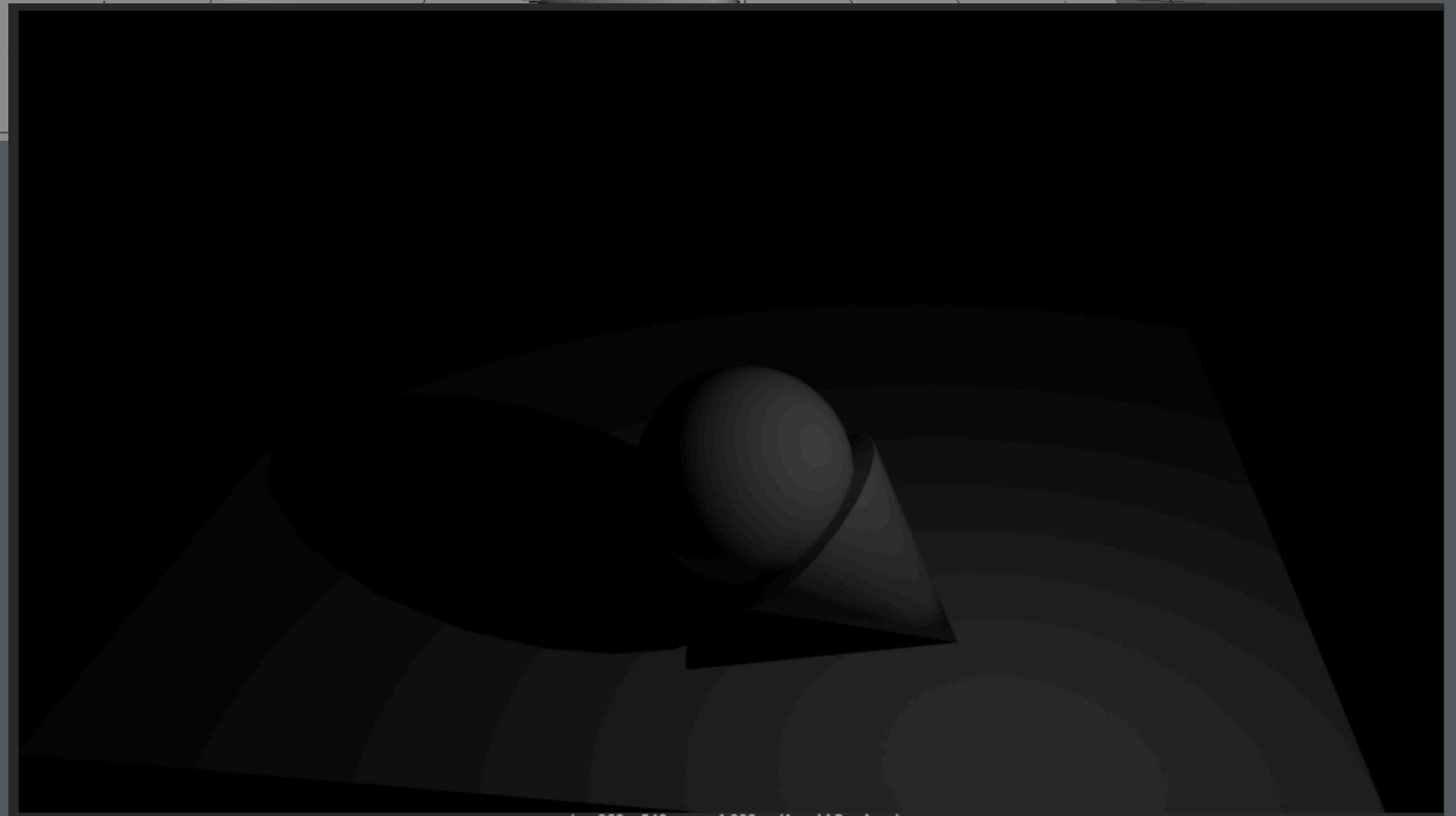


Lighting

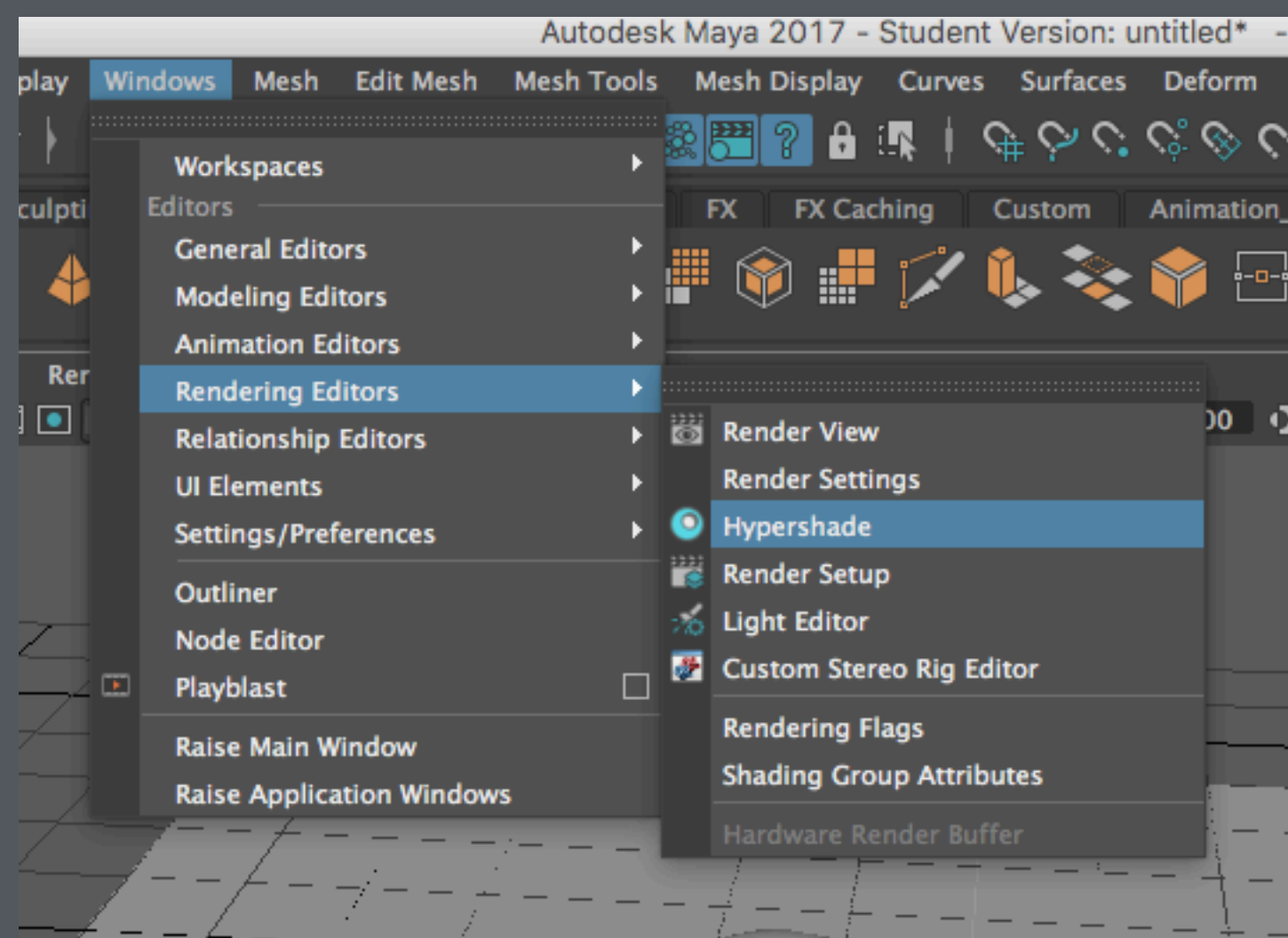


At least one light source is needed to make the objects visible

If no light is in the scene, Maya uses a default light

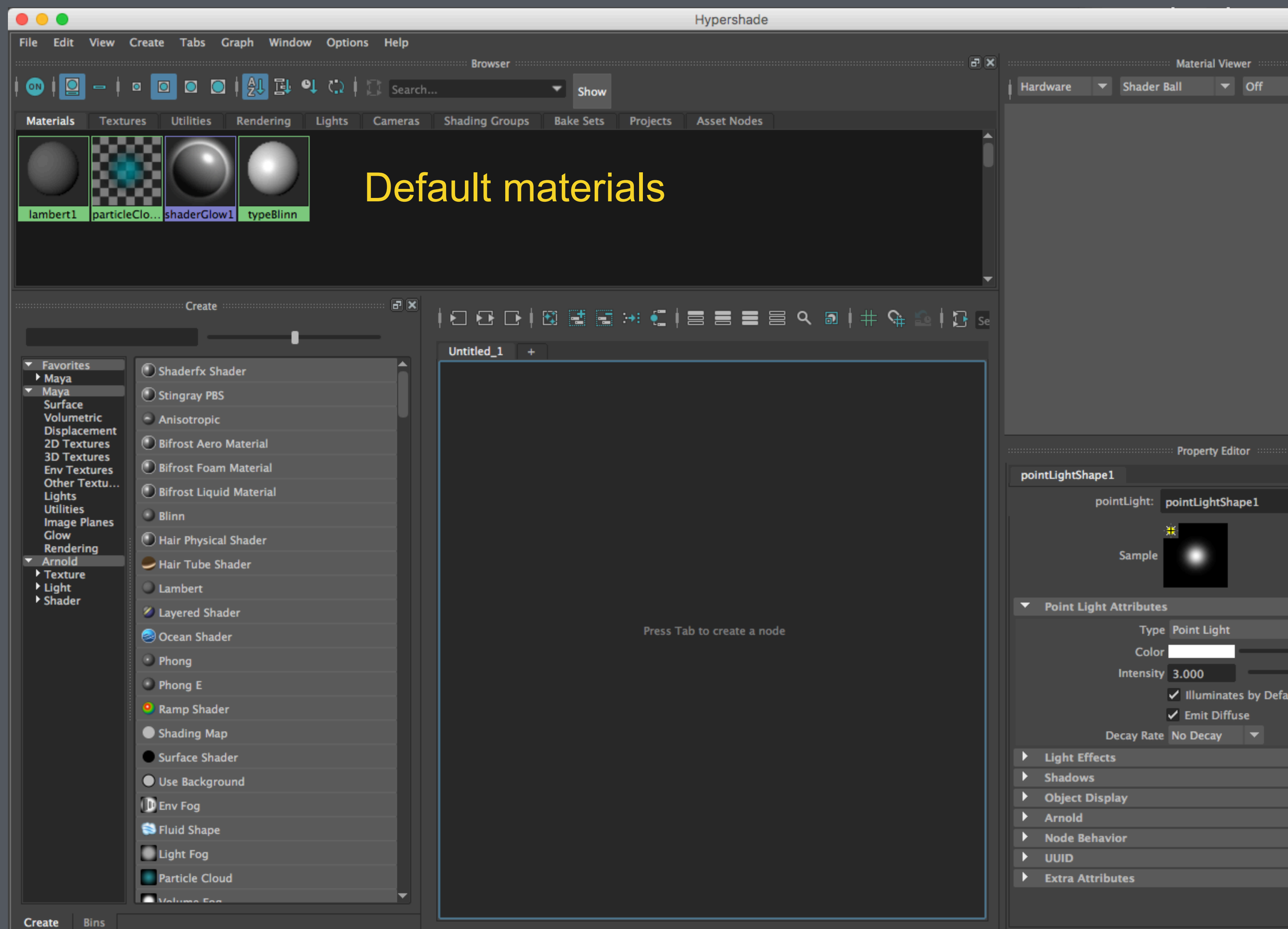


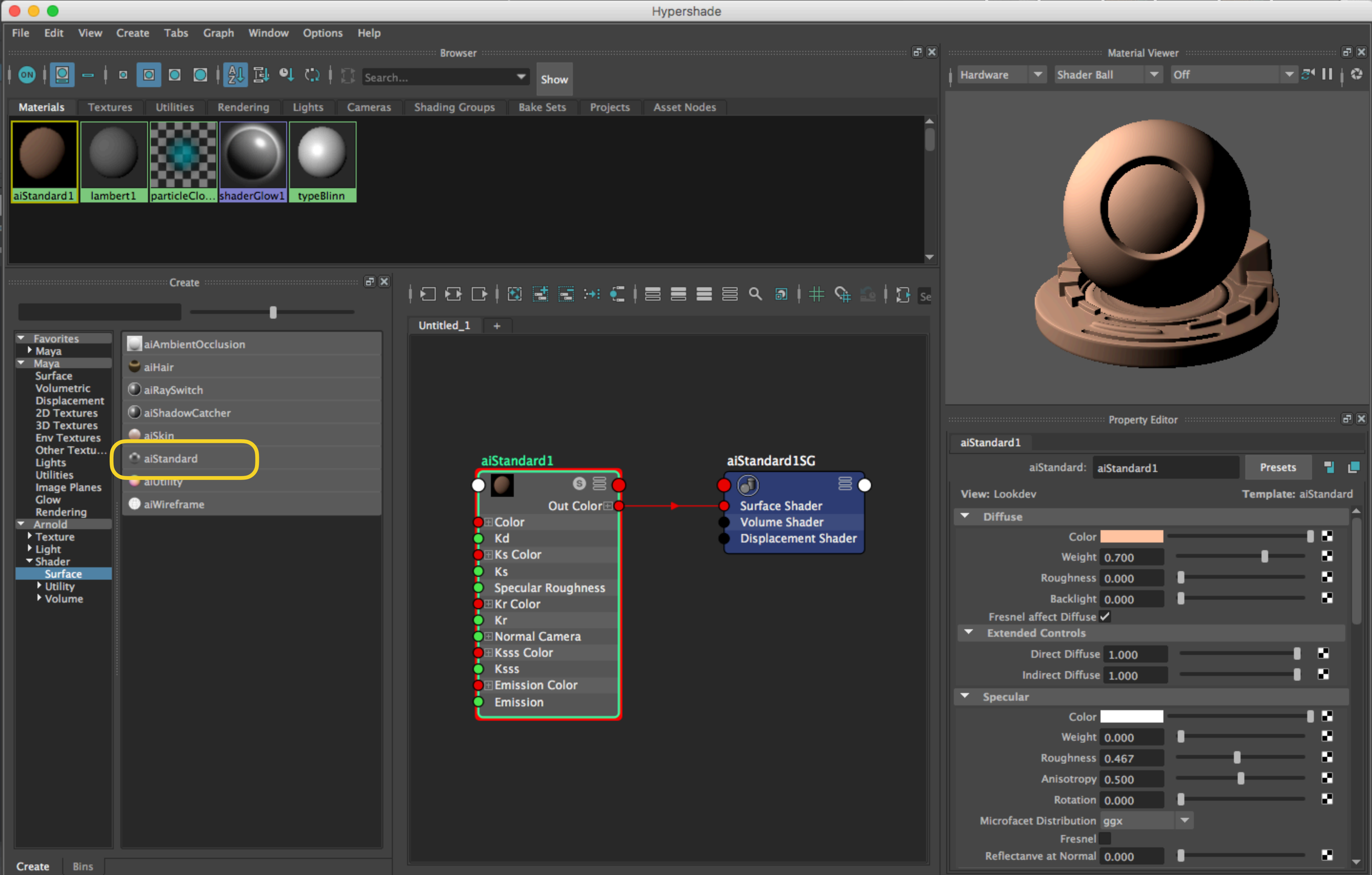
Surface Materials

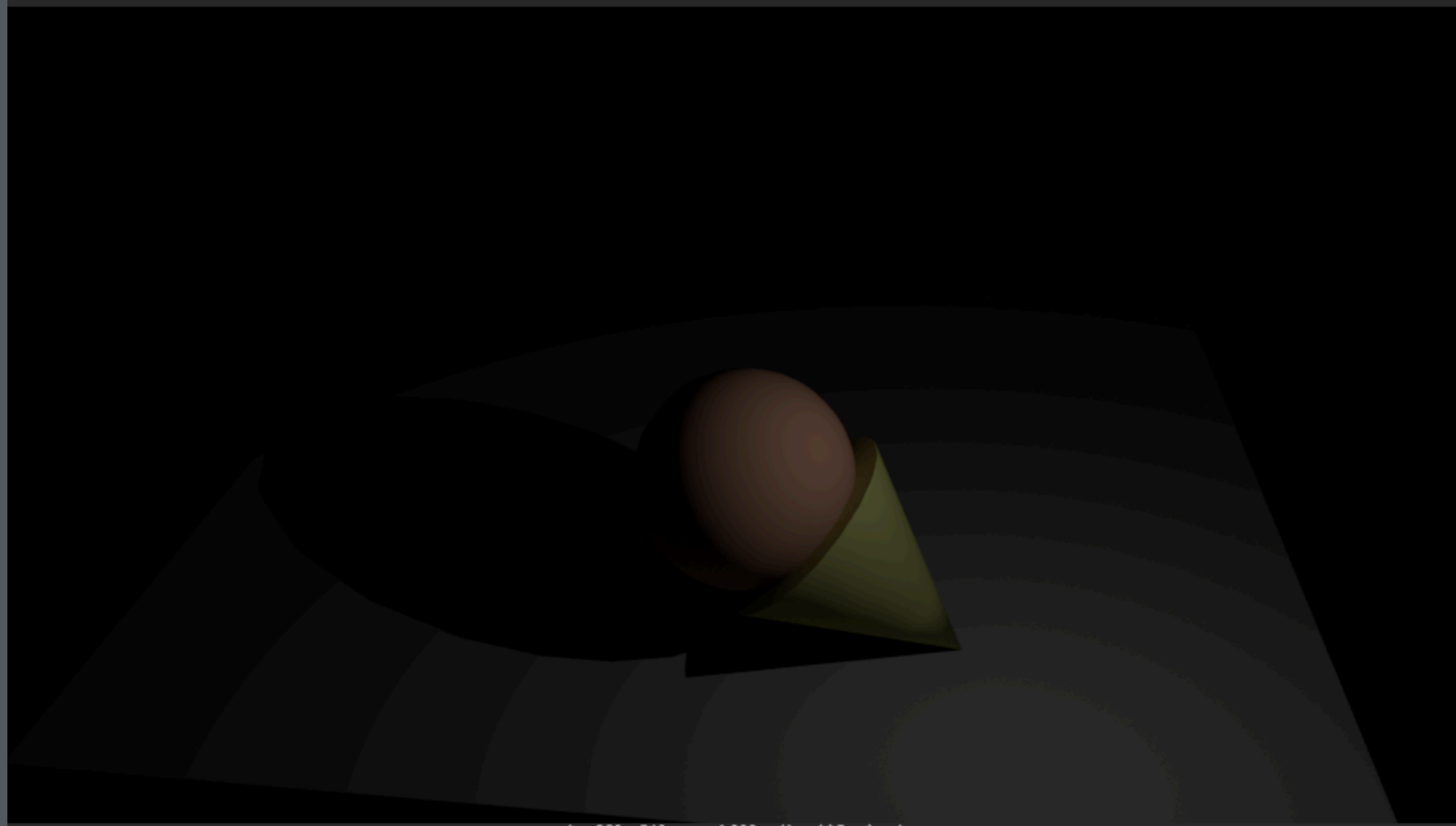


A Surface Material describes how the surface of an object reacts to light

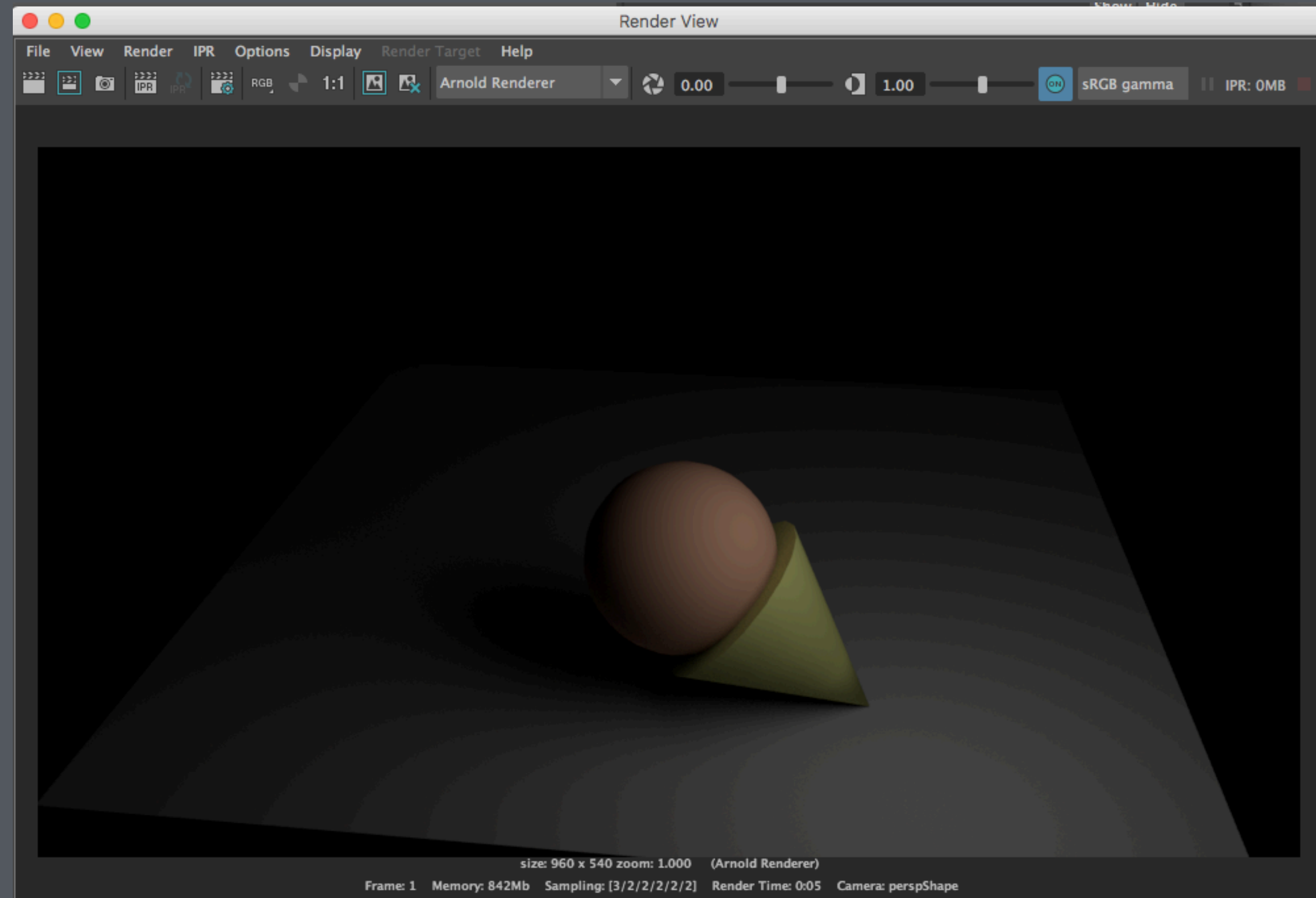
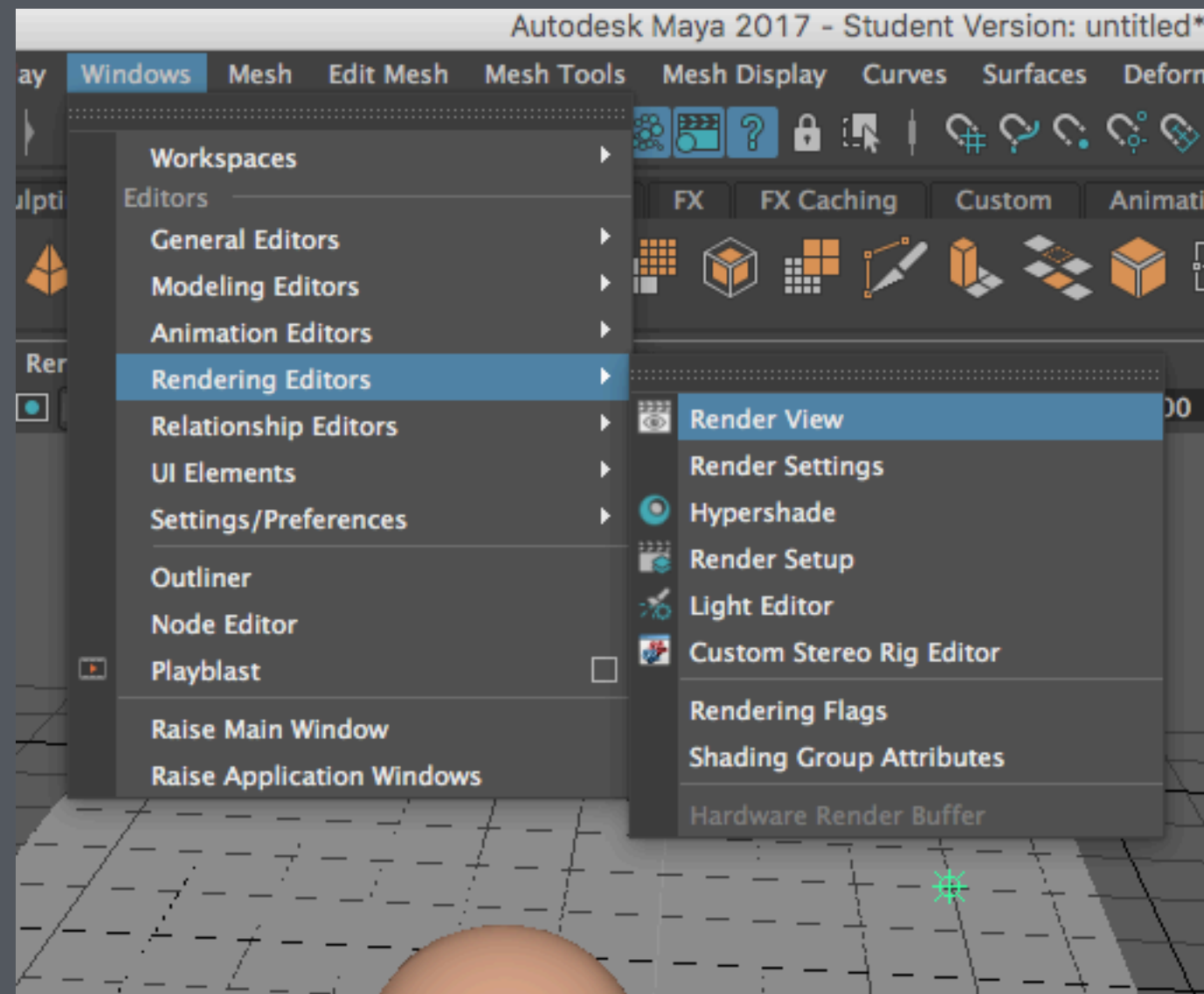
To create Surface Materials, open the **Hypershade** window

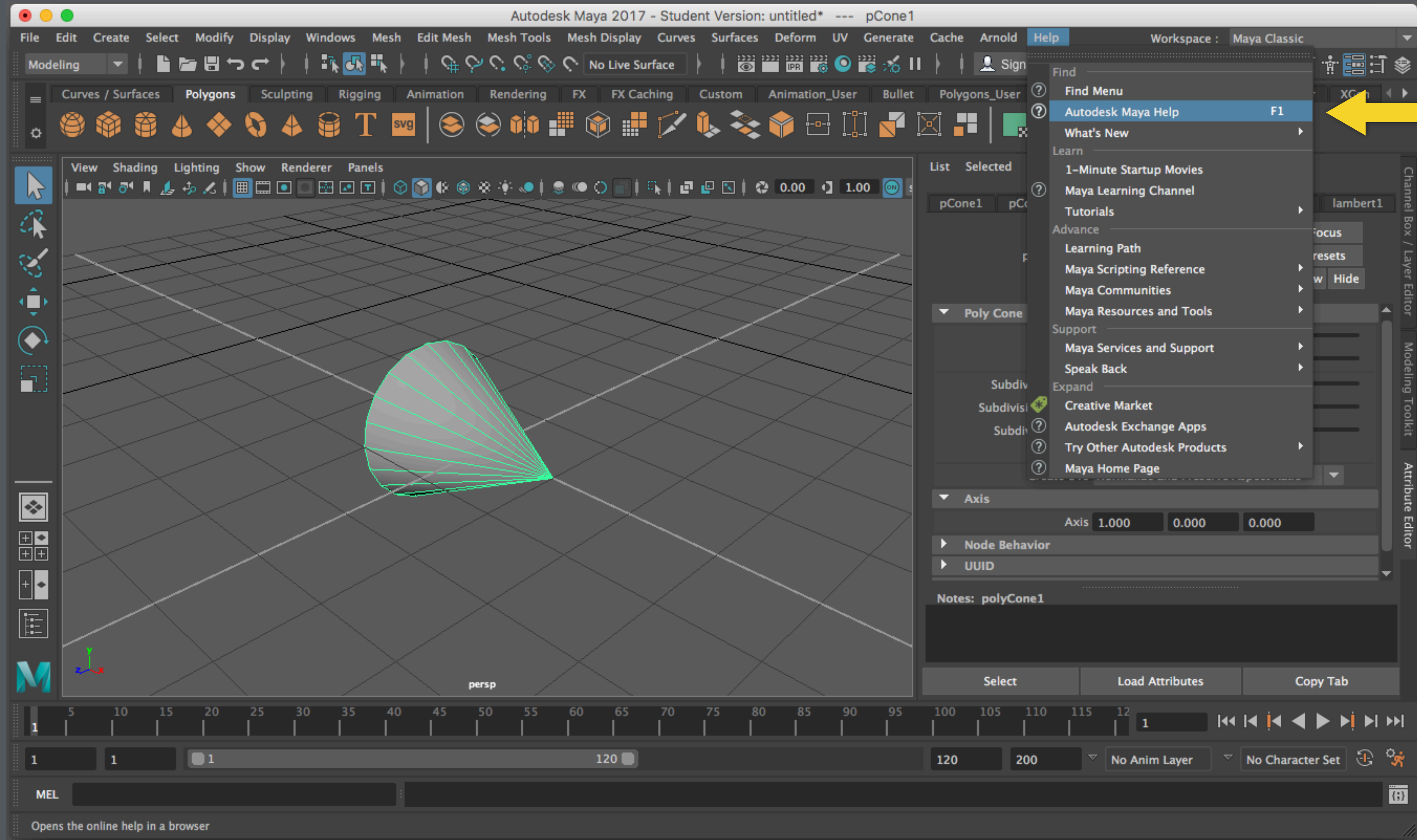






Rendering





Don't Panic

Learning Resources



PLURALSIGHT

www.pluralsight.com



lynda.com

www.lynda.com



MAYA

<https://www.autodesk.com/education/free-software/maya>

<http://help.autodesk.com/view/MAYAUL/2017/ENU/>

Exercise

- Create a room
- Place a number of primitive objects with different colours
- Light up the scene
- Render