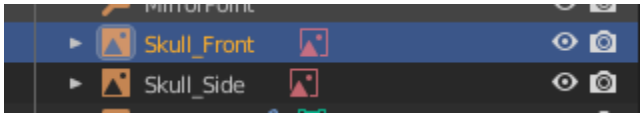
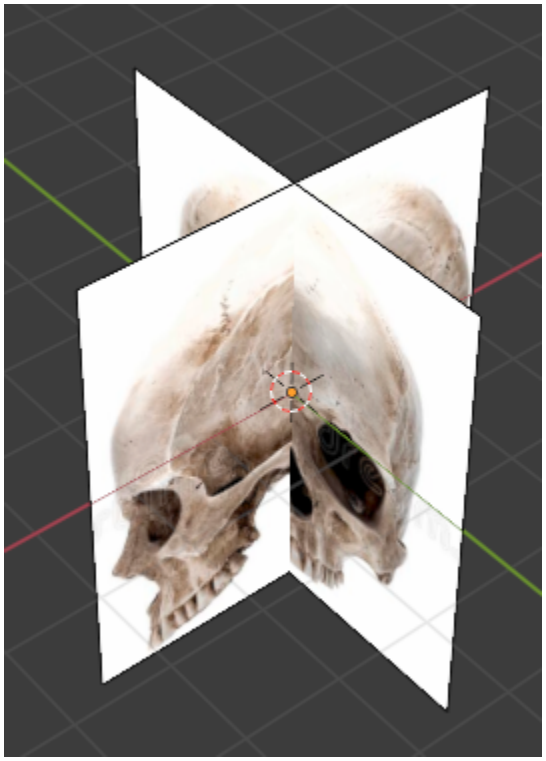
A6 Crystal Skull

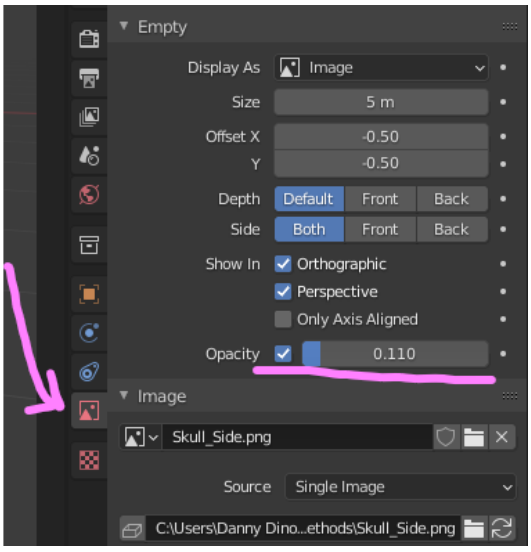
First install Pure Ref
Visit this page: https://www.pureref.com/
We will talk about setting up PureRef in class

Start with an empty scene
Delete the cube and add a sphere
Drag the two images into the scene and reposition them along the plains of the grid. Rename the two empty objects in the hierarchy



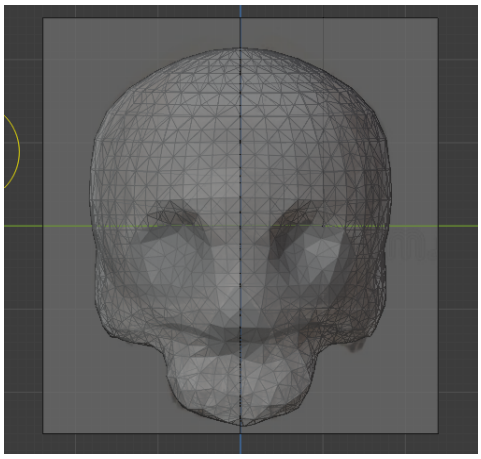
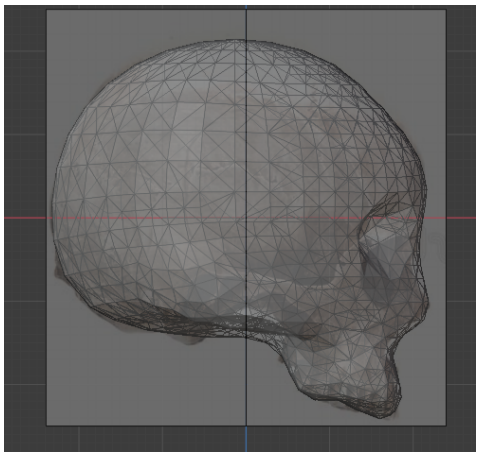


Adjust the opacity of the images in the ImageEmpty properties tab

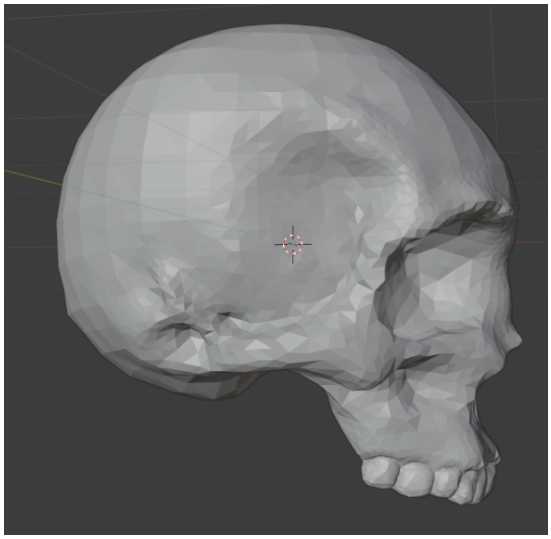


Adjust the sphere to the proper position and scale relative to the two reference images
Enter into Sculpt Mode for the sphere
Enable Symmetry for the proper axis for both sides of the skull to be mirrored

Enable Dynamic Topology
Using the grab and the snake hook brushes, model the sphere to fit the shape of the skull

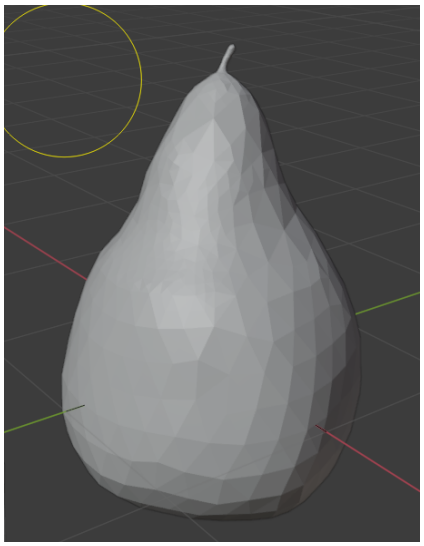



Continue adding more detail to the skull using the variety of brushes and tools available in sculpt mode.

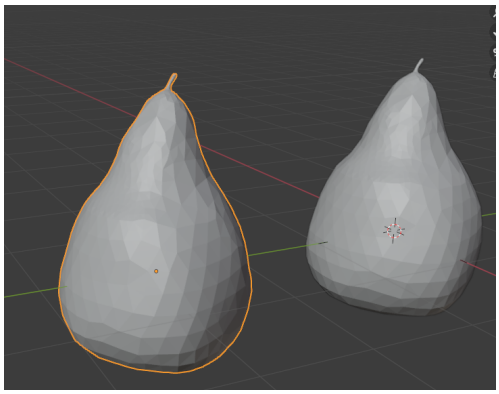


When you have completed the modelling of the skull, move back into object mode
Next we are going to sculpt a pear fruit

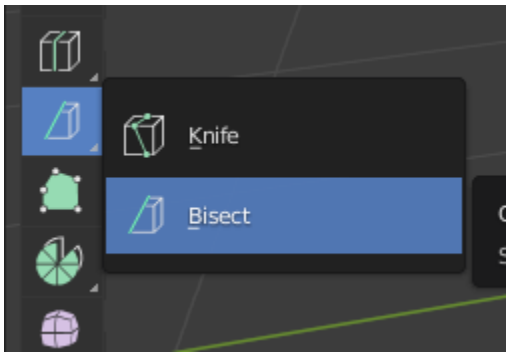
Add a new sphere and hide the skull
Rename the newly added sphere in the hierarchy to Pear1
Enter sculpt mode with the pear object and enable Dyntopo
Pull the sphere into a pear shape using th snake hook tool
Do the same for the stem and add detail to make it more stem-like



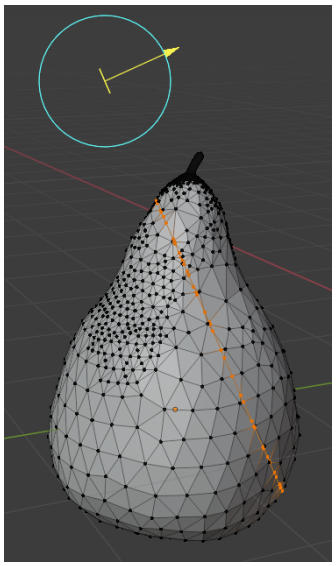
Once complete, return to object mode and duplicate the pear object
Rename the duplicated pear to Pear2 and move the object to a visible location



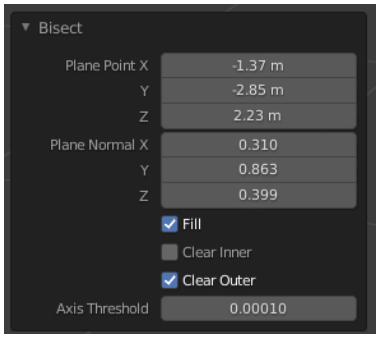
Enter edit mode for the Pear2 object and select all the vertices.
Click and hold the knife tool and select the bisect tool

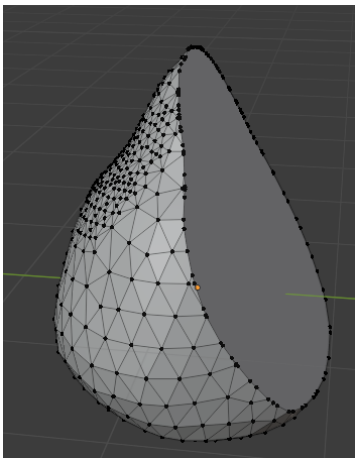
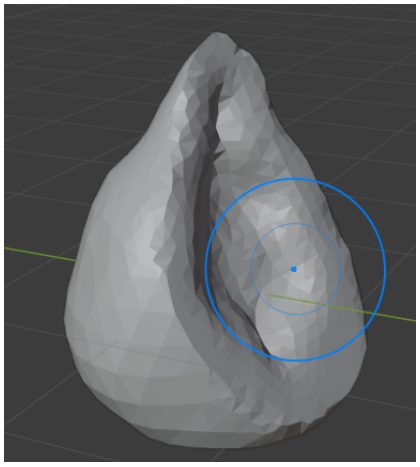


With all of the vertices selected, click and drag the bisect tool across the pear

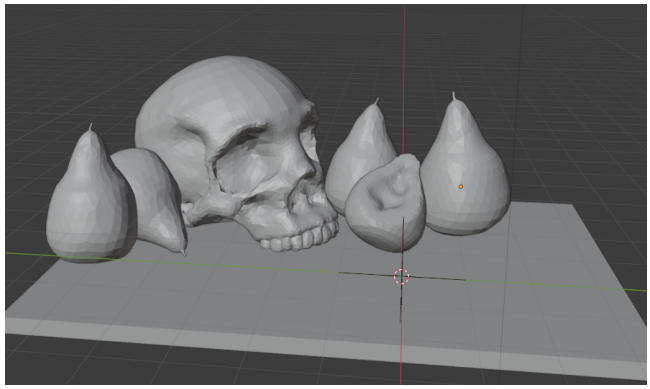


The orange line represents the “knife slice”. Open the Last Action Toolbar and toggle the two “clear checkboxes until you see the side that you want to keep and the side that you want to dispose.
Click the “Fill” checkbox to fill the empty hole with a polygon face.

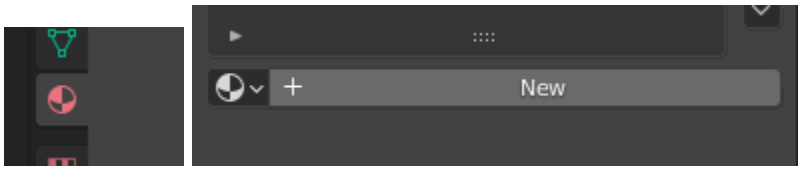


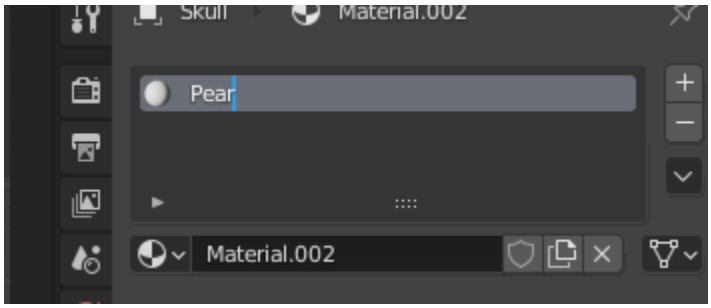
Enter Sculpt mode for the new sliced pear and sculpt the seed pit
When complete, return to object mode. You will now have a skull, and two pear objects (one sliced)
Begin composing a scene similar to this Vanita by Cezanne (ignore the table cloth for now):

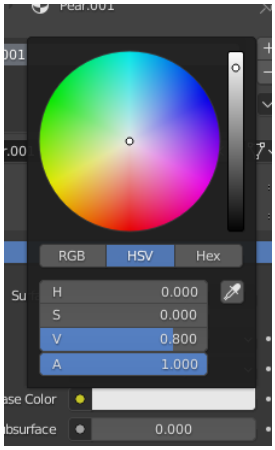
With a pear selected, click the materials tab on the right:



Add a new Material and rename it to Pear

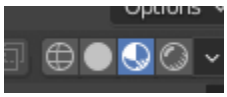


Adjust the surface color of the material by clicking the white color box

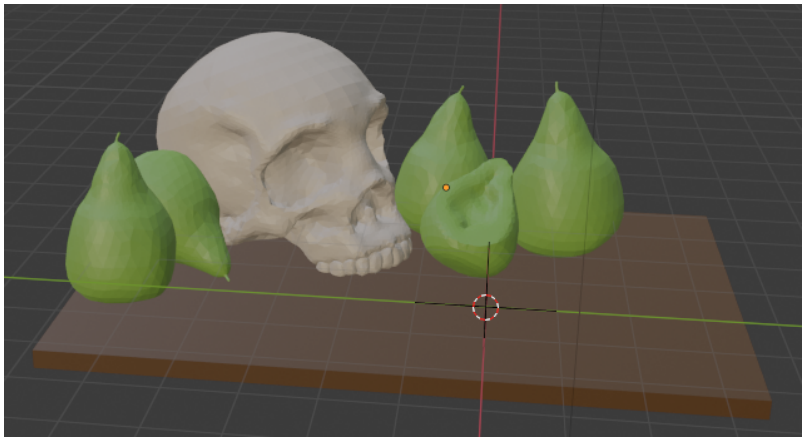


The Selected Pear now has the pear material applied
Select a different pear and apply the previously made material to it

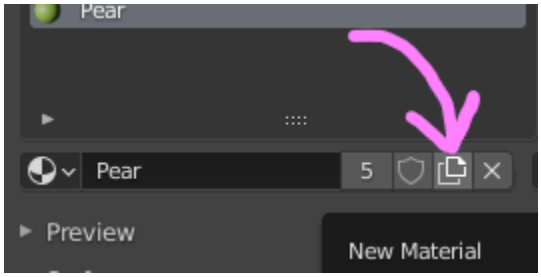
Now two of the pears have the pear material applied to it.
To view the colors of the objects, click the material preview shading view



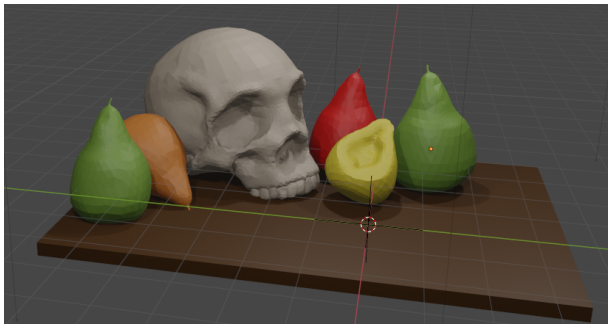
Create materials for the skull and the able as well



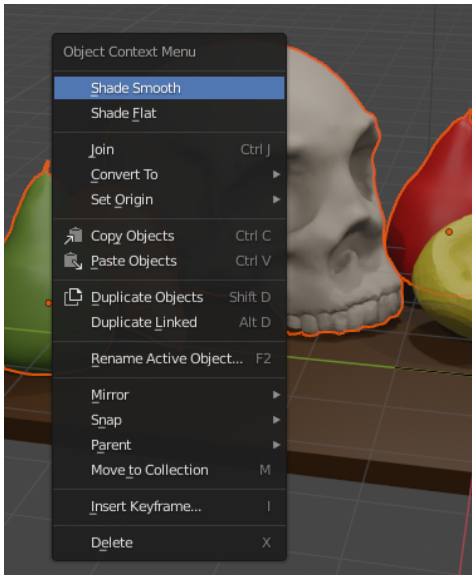
Select one of the pears and create a new material for it and changing the color to red



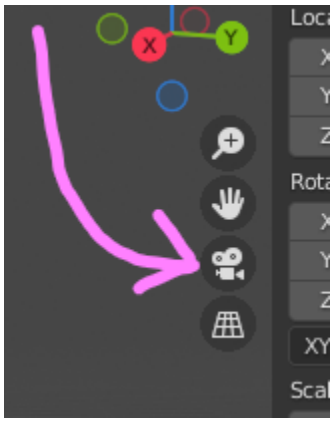
Repeat the same for each pear, making a new material for each (rename them appropriately)



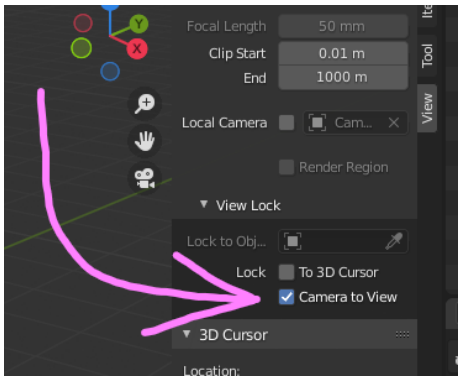
Lets smooth out th e”look” of the polygons
Select one or multiple objects. Right click and set the to Shade Smooth



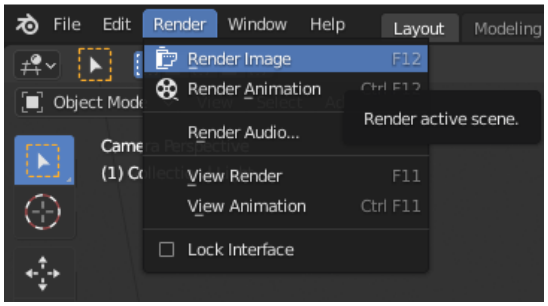
Adjust the lights by duplicating them and repositioning them
Let's explore the camera
Click the camera icon in the sidebar



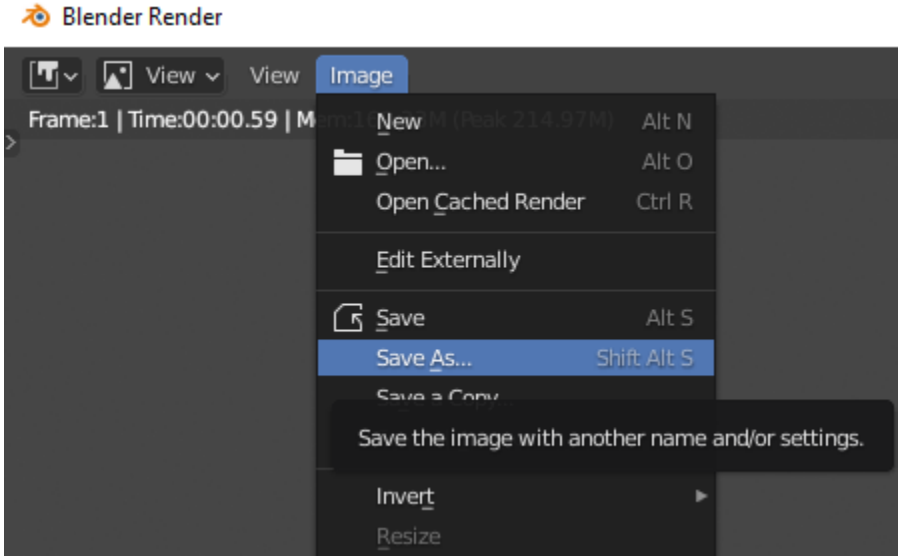
Try orbiting the camer, the view returns to the layout view.
Click the “Lock Camera To View” checkbox in the sidebar View tab



Now the camera is locked to your orbi and you can orbit around the scene from the camera's perspective
Try position the camera in a good location for a photograph (rendered image)
Press F12 to render the scene, or click the render menu from the top bar and click Render Image

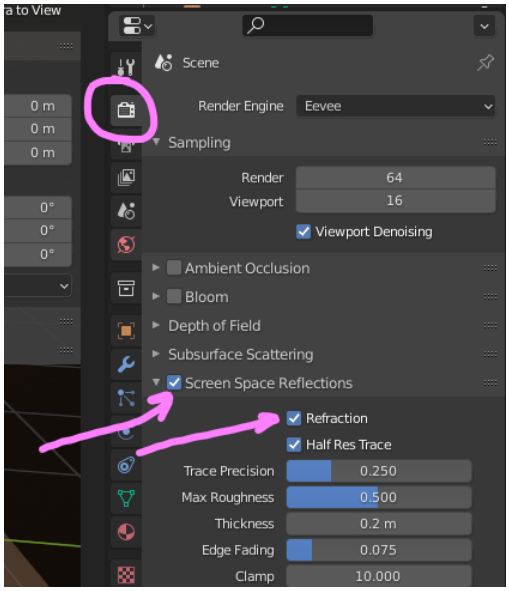


The newly rendered image will appear in a popup window.
Save the image by clicking Image → Save As in the new popup render window

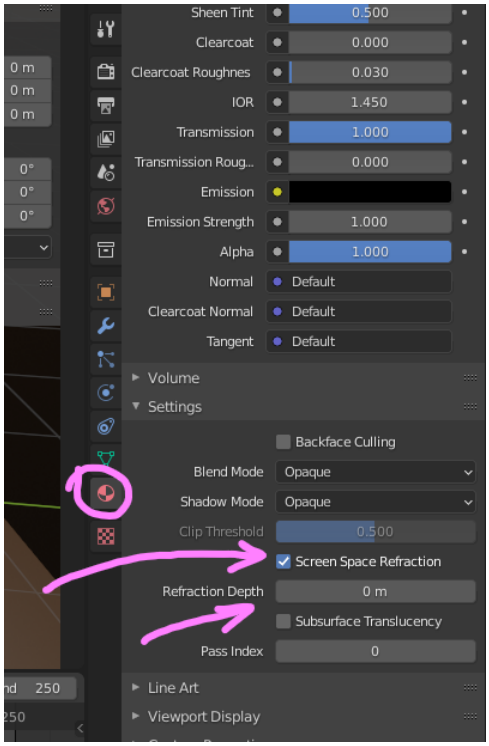


Close the render window after saving the image

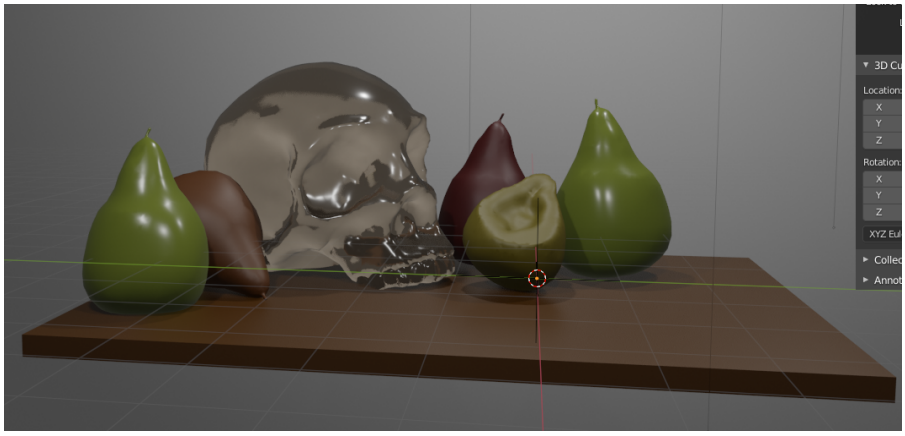
Let's make the skull look like a crystal skull
Select the skull
Set the Transmission value to the highest setting of 1.00 in the skull materials settings
Set the roughness to 0.0 in the skull materials settings
In the render properties tab, enable ScreenSpace Reflections and enable Refraction in the same panel



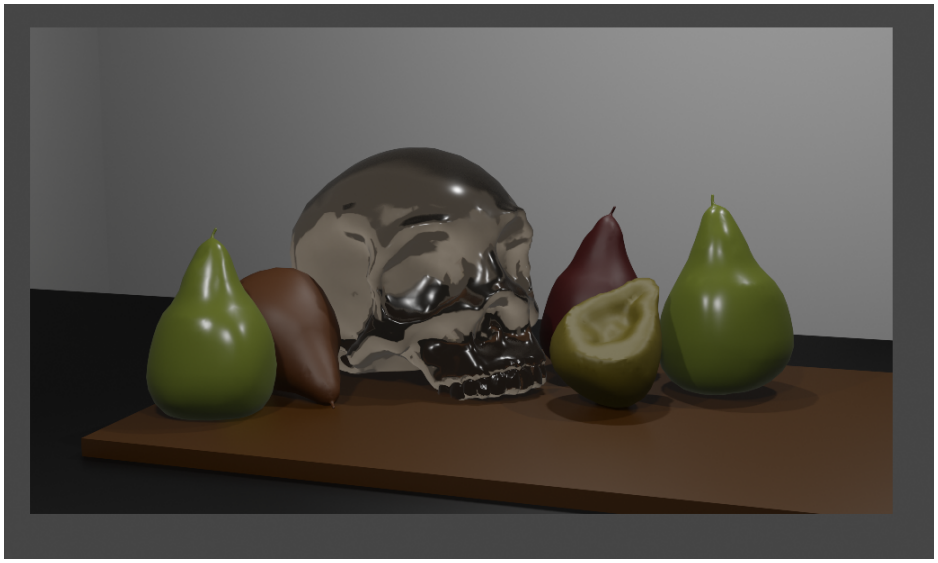
In the Skull materials, near the bottom, enable Screen Space Refraction and explore the Refraction Depth Slider



Finally readjust the roughness value for the Skull material



Reposition the camera and render a new image of the Crystal skull



Homework: Recreate this iconic Vanitas Still Life with a Tulip, Skull and Hour-Glass by Philippe de Champaigne
Think about a way to model the flower petals and the water inside the bottle (for example: as a separate meshes).
Also think about materials and how they will be applied to the glass portions