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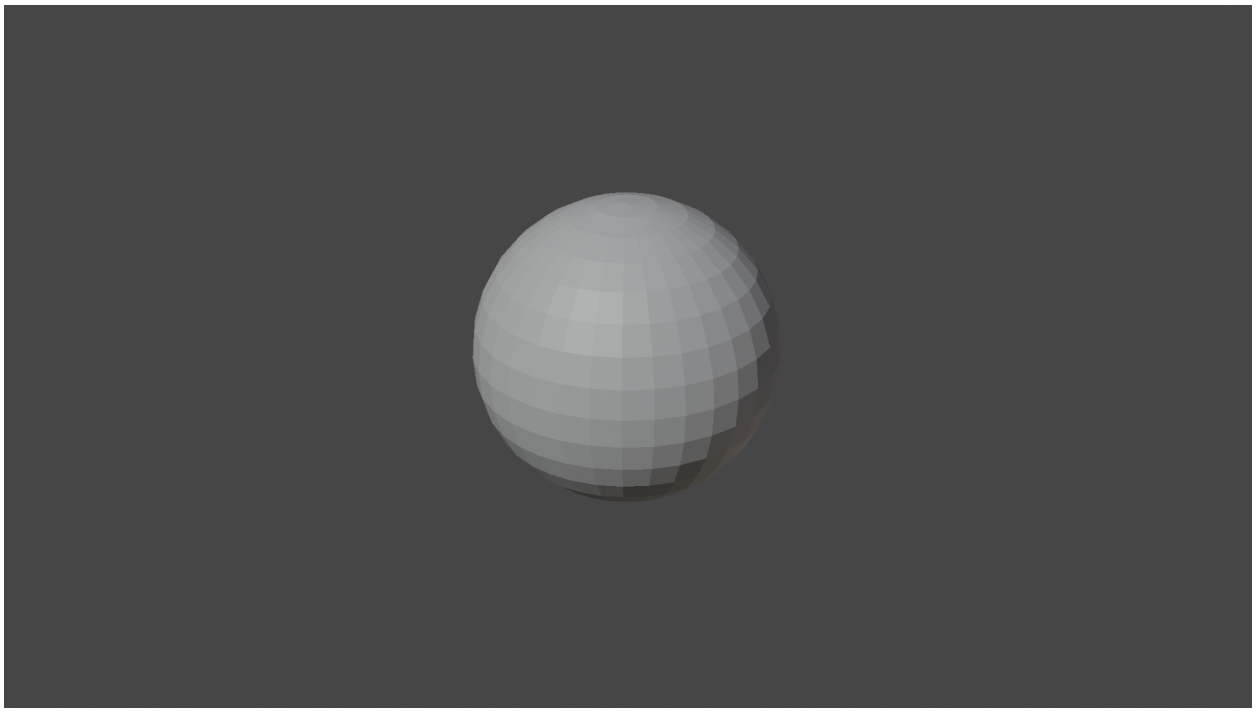
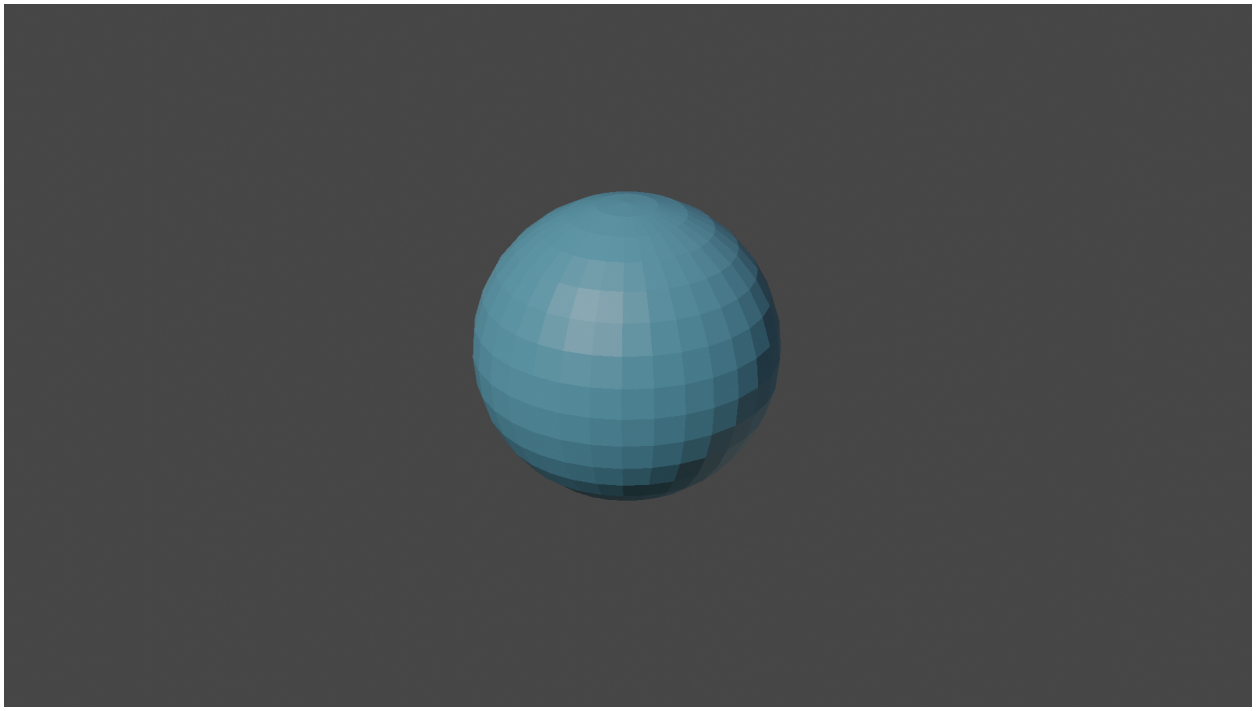
Blender Activity 1

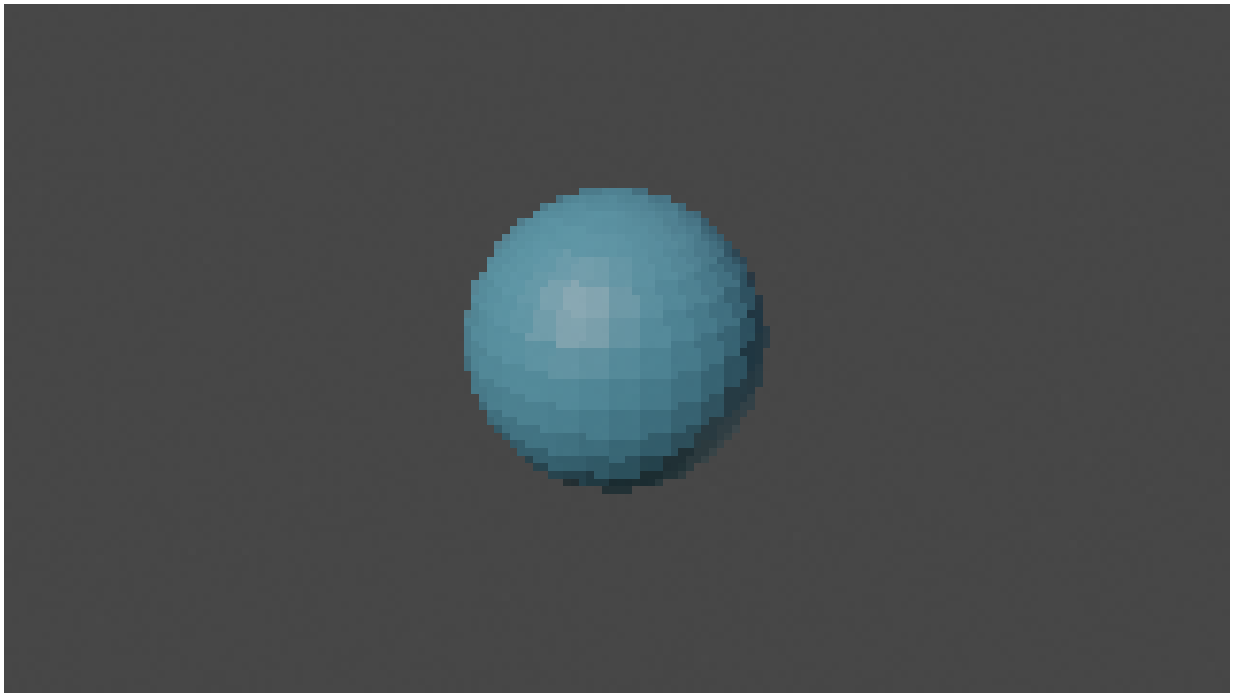
Checkpoint 1:



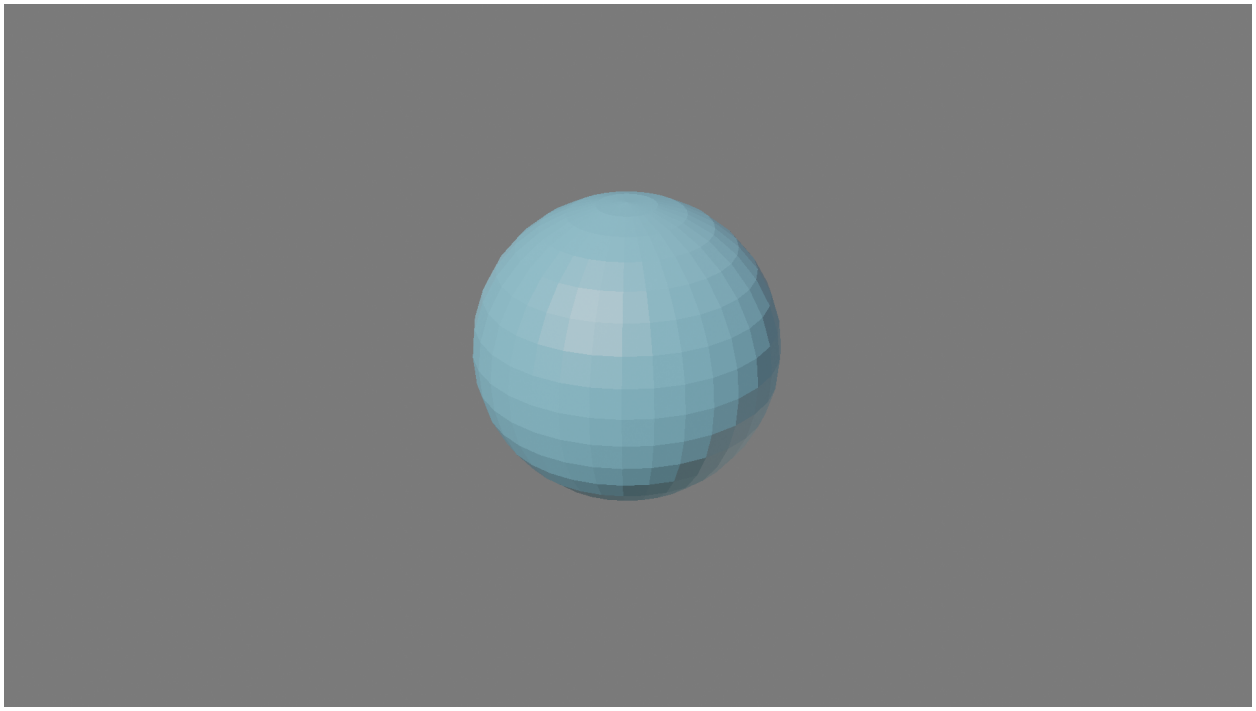
Checkpoint 2:



Checkpoint 3:



Checkpoint 4:
After changing the resolution, the image is much more blurry. The details in checkpoint 2 are lost when the resolution was changed and the edges are not as smooth in checkpoint 3 as in 2.
Checkpoint 5:



Checkpoint 6:
After changing the gamma value to be larger than in checkpoint 2, the image is lighter. Not only is the sphere lighter, the background is also a lighter gray.

1. Light interacts with objects based on the material of the object. Light hitting a wooden chair will not go through the object and will form a shadow. Light going through a window will not be as affected and will continue to shine through the window. If you put water in a glass and a light shines through it, the object will refract the light, changing the light rays coming through the other side.

2. Light hits the object as different color rays. The object will absorb some of the colors and reflect some. The rays that are reflected are the color of the object and allow us to see the color.

3. YUV allows you to assign a brightness to the color value of each pixel. The Y is the brightness and the UV is the color. This is better than RGB because it assigns a brightness of the pixel instead of intensities of each color, red, green and blue. It also reduces bandwidth making it more efficient.

4. Colors are added differently for lights than for paint because when you add paint you get a darker color, whereas the more colors you add to light the brighter it gets. This is because adding light is adding more intensity and a higher intensity is closer to white but in paint you are mixing pigments. R+B+G in light equals white whereas for paint it will give you a greyish muddy color.

5. Green screens are green because the filters on cameras are half parts green. This allows it to filter out the green color that it encapsulates. Green is also the furthest color from skin tones which is why it was chosen as the color.

6. Tone mapping is needed for HDR images to make them appear more realistic. Displays cannot reproduce the range of tones in some pictures, so tone mapping will help to alter the image to capture the range.

7. The color of the light is dependent on the wavelength of the light. The color will depend on the wavelength because of the amount of energy it contains. Red is low energy, which is why it has a larger wavelength, vibrating less, than purple which is higher energy, vibrating more.