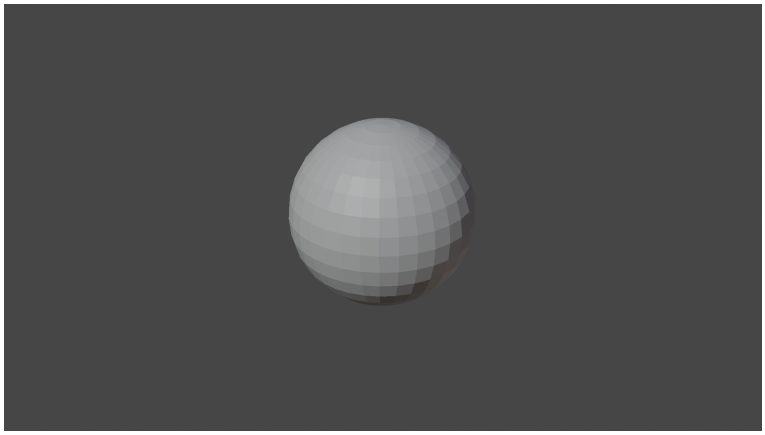
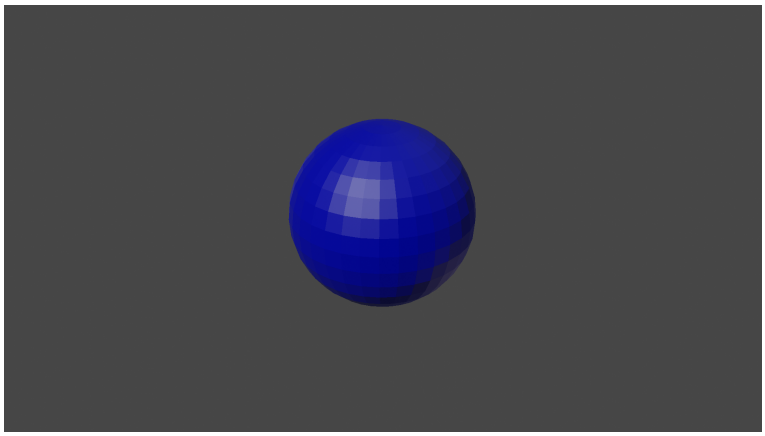
Lucas Alba
Blender Activity 1

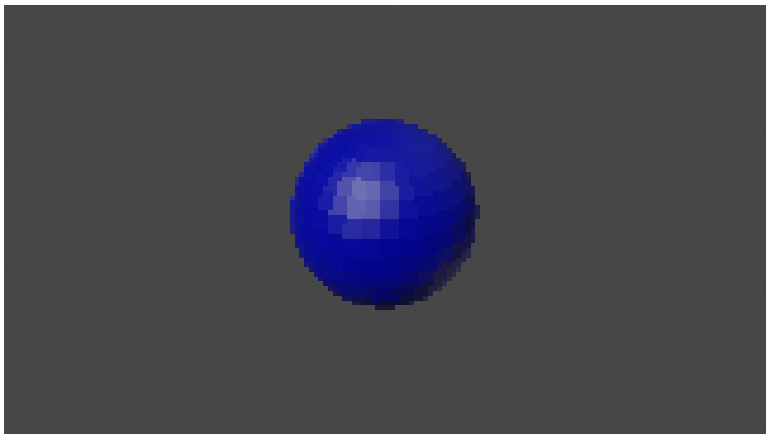
Checkpoint 1:



Checkpoint 2:



Checkpoint 3:



Checkpoint 4: The difference between Checkpoint 2 and 3 is that checkpoint 3 is more grainy than checkpoint 2 which is caused by the lower resolution.

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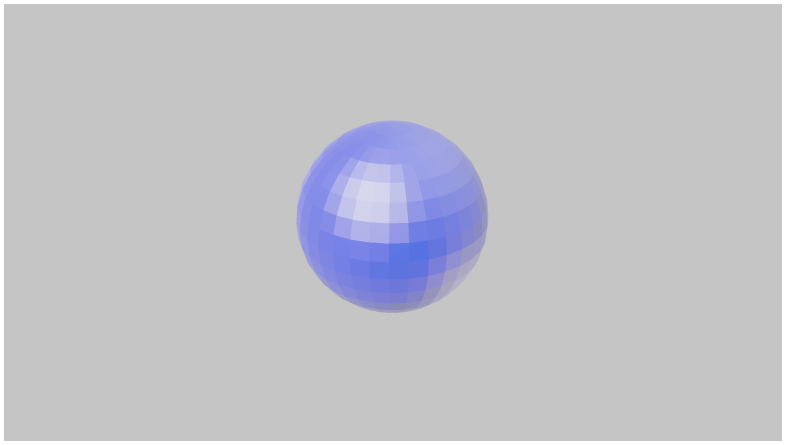
Checkpoint 5:



Checkpoint 6: The difference between checkpoint 2 and checkpoint 5 is that checkpoint 5 contains more light which is caused by increase in gamma.

Questions:

1. How does light interact differently with different objects in real life? Give 3 examples.
    - 3 examples of light interacting differently with objects in real life are light reflecting in a mirror, light going through a window and an object like an apple that absorbs certain wavelengths.
2. Why do objects appear to have different colors to our eyes?
    - Objects appear to have different colors in our eyes because they absorb and transmit different wavelengths, which results in different colors.
3. What's the advantage of using YUV color space?
    - Some of the advantages of using YUV color space is that it can be compressed more effectively than RGB, YUV is also commonly used in color correction and noise reduction because it allows for more effective processing of luminance.
4. How are colors added differently for lights compared to paint? What does R+G+B equal to in each case?
    - Colors are added differently for lights compared to paint because for light it is additive but paint is subtractive. This results in the more paint (R+G+B) you add the duller / darker it gets but the more light (R+G+B) you add the lighter it gets. If you add all the colors of light you will get white but if you add all the colors of paint you will get black.
5. Why are green screens green? Hint: think about the arrangement of color filters in front of the camera sensor.
    - Green is used in green screens because it is the farthest away from the colors in the skin tone and the green color channel is the most important for human perception and camera sensor sensitivity.
6. Why is tone mapping needed for HDR images?
    - Tone mapping is needed for HDR images because it reveals its full details, while also giving them a more realistic look.

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7. What's the relationship between the wavelength of the light and the color of the light? E.g. why is the wavelength of 700nm associated with red, and 400nm associated with purple?
    - The relationship between the wavelength of light and the colors is that light is our perception and understanding of the visible spectrum. While the color of light is detected by the wavelength.

GITHUB: https://github.com/lucas-alba/csc322fa22.git