Activity 1

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1. Light interacts with different objects, the object either transmits, reflects, or absorbs, etc. the reflection of light depends on the wavelength of light and the texture of the object's surface.

   Examples:

   When light reflects off leaves we get to see the green color, when light passes through tinted glass the amount of light that passes through it is less, the way mirrors work allowing us to see our reflection.

2. Light interacts differently with different objects, the object absorbs some of the light and reflects the rest of it, the color that we see is the wavelength of the light reflected off the object.

3. YUV scale is useful for producing grayscale images, and is more efficient in coding.

4. Colors are added differently for lights compared to paint because light has all wavelengths combined and cannot show different individual colors. In each case, different values of R+G+B will result in different colors, depending on the amount of light passing through

5. Green backdrops are used as they are the furthest colours from human skin tones. In order for the effect to work, the background must use a color that isn't used elsewhere on the set.

6. Tone Mapping is to reproduce the appearance of images having a higher dynamic range than the reproducing media such as prints or standard monitors.

7. Light of different wavelengths produces different perceptions of color. Light with the longest wavelength appears red, and light with the shortest wavelength appears violet. When all the waves are seen together, they make white light.