Vision

- **Hue** = basically the color that the light is
  - Determined by **frequency/wavelength**
- **Intensity** = amplitude of EM wave
  - Associated with how **bright** the color is
- **Wavelength** = distance between the crests of the wave
  - Larger wavelength is associated with lower frequency
- **Frequency** = the amount of oscillations the wave undergoes per second
  - Measured in Hertz(Hz)
- **Cornea** = the outer protective layer that covers the eye
- **Pupil** opening of the eye that is adjustable in size when **iris** contracts or relaxes
  - Acts similar to camera shutter
    - If pupil is open, more light will make its way in
  - Pupil helps to adjust vision to changing light conditions
- **Iris** = a colored ring of muscle that contracts and relaxes to adjust the size of the pupil
- **Lens** = transparent structure that is behind the pupil that contorts to adjust the path of incoming light
  - Lens also inverts the image
    - We don't see the world as upside down because the brain flips the image
- **Retina** = a layer of light-sensitive cells that start an action potential if hit by certain kinds of light
  - **Rods** = detect the outline of shape
    - Cannot distinguish color
  - **Cones** = detect the color of objects
    - Cannot distinguish movement
  - **Transduction** = converting of electromagnetic energy into chemical potential energy
- **Fovea** = area of the **retina** that the lens focuses the image onto
  - Where all fine details are made out
- **Accommodation** = the process of the lens contorting in order to focus the image on the **fovea**
- **Acuity** = the accuracy and sharpness of vision

  - Typically deteriorates with age

- **Nearsightedness** = a condition in which it is easier for objects near to the eyes to be seen
- **Farsightedness** = a condition in which it is easier for objects far from the eyes to be seen