Visible light spectrum: 400-700 nm
- Small portion of electromagnetic spectrum
- Low wavelength- UV; high wavelength- radio waves

Structure of eye
- Anterior chamber
  - Aqueous humor
    - At the front of eye
    - Drains via canal of Schlem
    - Pressure builds up due to improper drainage into canal
      - Leads to glaucoma
- Posterior chamber
  - Between lens and iris
    - Pupil connects the two
- Vitreal chamber
  - Not the posterior end
  - Holds vitreous humor
- Normal eye pressure
  - Approx.. 10-20 mmHg
- Cones
  - Respond to color
- Rods
  - Respond to black and white
  - Very sensitive
  - Rhodopsin is a famous visual pigment in rods
- Fovea
  - Highest acuity in the eye

Off axis lighting
- A test that can see if an individual has vision loss when cataract blocks view of retina by seeing if subject can see blood vessels in eye (Purkinje tree)

Blind spot due to optic nerve junction leading out of each eye

Macular pigment
• Polarizing pigment in eye
  • Absorbs blue light; reflects yellow light which we see on eye

Visual projection
• Temporal retinal field stays ipsilateral at optic chiasm
  o Temporal retinal field is nasal visual field
• Nasal retinal crosses to contralateral side
  o Nasal retinal field is temporal visual field
• Optic chiasm
  o Where the left and right optic nerves meet

Occulomotor nerve→ cranial nerve 3

Hyperopia
• Far-sightedness
  • Focal point falls farther behind than retina

Myopia
• Near sightedness
  • Focal point falls in front of retina

Ciliary muscles constrict/relax to curve lens
• Muscles relax- ligaments are pulled tight to flatten lens to see far objects
• Muscles constrict- ligaments slack and lens are relaxed to round lens to see objects close by
• Ability of eye muscles and ligaments to change to allow focus on different ranges of distance→ accommodation

Eye dissection
• Get rid of orbital fat
• Don’t use lots of force to cut the orbital fat to avoid accidentally cutting vitreous humor