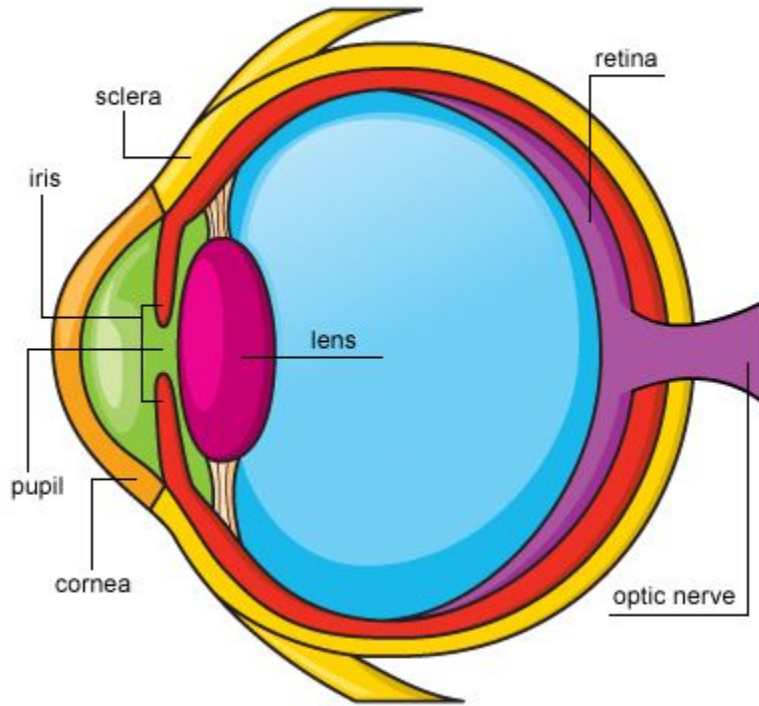


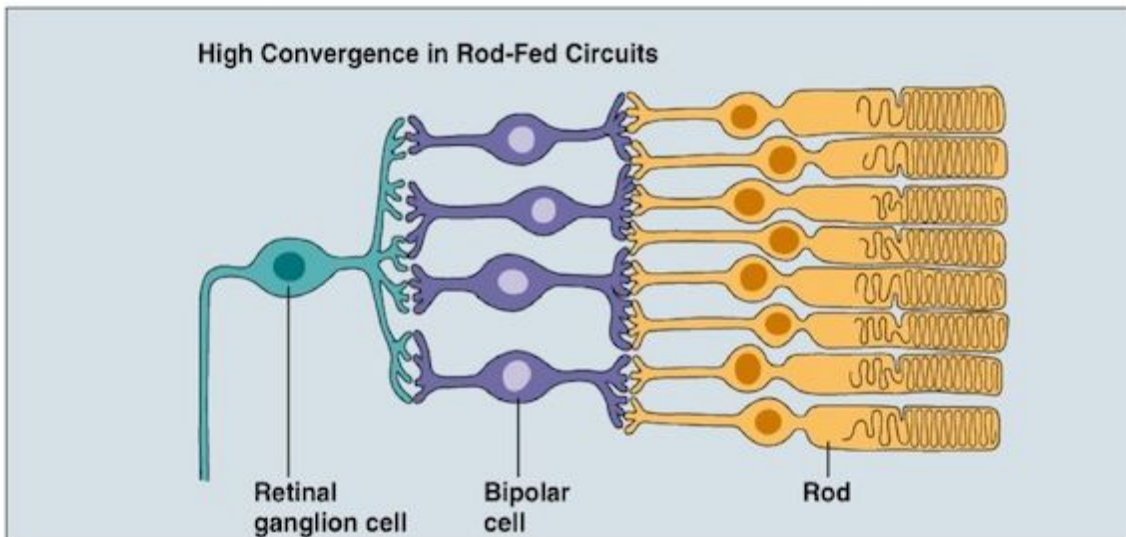
The Eye



Rods vs Cones

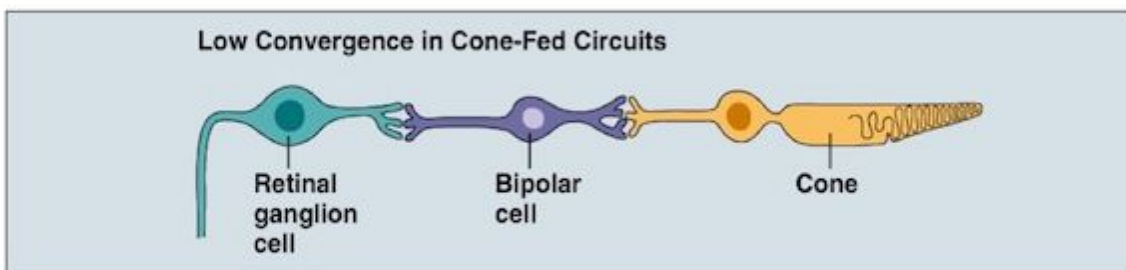
RODS	CONES
Noncolor vision (one visual pigment)	Color vision (three visual pigments)
High sensitivity; function in dim light	Low sensitivity; function in bright light
Low acuity (many rods converge onto one ganglion cell)	High acuity (one cone per ganglion cell in fovea)
More numerous (20 rods for every cone)	Less numerous
Mostly in peripheral retina	Mostly in central retina

Visual acuity in Rod cells



- three rod cells are connected to one bipolar neurone
- light received by rod cells sharing the same bipolar neurone will only generate a single action potential
- the brain cannot distinguish between the light sources that stimulated the (three) rod cells
- low resolution

Visual acuity in cones



- one cone connected to one bipolar neurone
- if two adjacent cones are stimulated, the brain receives two separate action potentials
- better image resolution, high visual acuity