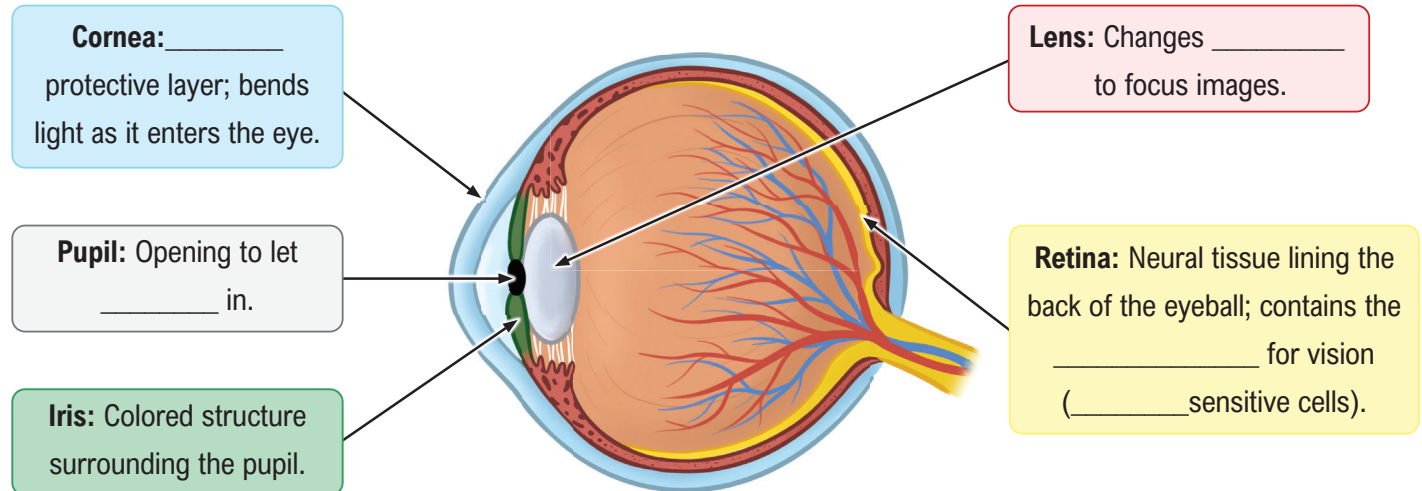


TOPIC: VISUAL ANATOMY

Anatomy of the Eye

◆ Eyes are highly complex sense organs:

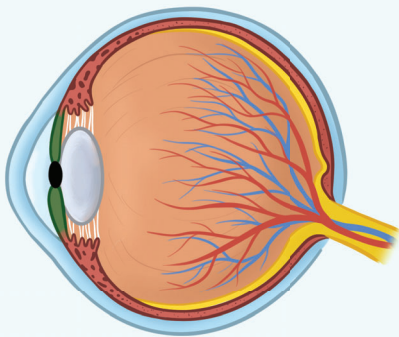


◆ **Accommodation:** Ability of the lens to change shape to focus on objects at different _____.

- Contraction and relaxation of muscles around the lens change its shape.

EXAMPLE

In the image below, draw the pathway of light as it enters the eye. Then, using the words in the box, put the structures in order that they come in contact with light.



- a) Retina
- b) Lens
- c) Cornea

Light → ____ → ____ → ____ → Neural signal.

PRACTICE

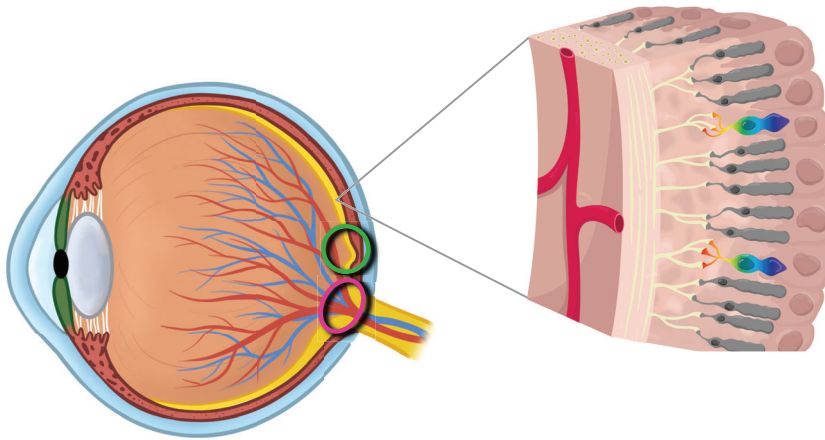
As we age, our eyes lose the ability to accommodate, causing many people to need reading glasses. Which structure of the eye is likely affected?

- a) Cornea.
- b) Lens.
- c) Retina.
- d) Pupil.

TOPIC: VISUAL ANATOMY

Photosensitive Cells

- ◆ Recall: The retina contains photosensitive cells.
- ◆ There are ____ types:



Rods: Rod-shaped cells that respond to ____ light.

- ◆ ____ chromatic vision
- ◆ Located on periphery.
- ◆ ____ of them.

Cones: Cone-shaped cells that respond to ____ light.

- ◆ Detect ____
- ◆ Located in ____.
- ◆ Few of them.

- ◆ **Fovea:** Center of the retina. Contains many cones → ____ visual acuity.
- ◆ **Blindspot:** Where the optic nerve leaves the eye → ____ receptors.



Cones see in **C**olor, near the **C**enter and are **sC**arce

EXAMPLE

For each situation below, determine which type of photosensitive cell you are relying on.

- Looking at Van Gogh's Sunflowers: _____
- Walking through a forest at night: _____
- Deciding which color shirt to wear: _____
- Seeing movement in your peripheral vision: _____

PRACTICE

Why do our eyes have a blind spot?

- Having a place with no rods or cones saves biological resources.
- A blind spot helps create a sense of depth perception.
- Our blind spot is rich in rods, so it isn't fully blind but lacks visual acuity.
- Our blind spot is where the optic nerve leaves the eye to go to the brain.