# ANATOMY OF THE EYE

1. **Conjunctiva:**
   - Mucous membranes that line the eyelid.
   - Covers the eyeball and fuses with the eyelids, preventing foreign objects from getting behind the eye.
2. **Cornea:**
   - Outer, front layer of the eye.
   - Focuses incoming light by a fixed amoun
3. **Sclera:**
   - Opaque; does not permit entry of light.
   - Lines the border of the eye to ensure ligh enters only where intended.
4. **Iris** (Coloured Part):
   - Composed of muscles that contract and relax.
   - Determines pupil size and regulates how much light enters the eye.
   - Optimizes the retina's ability to perceive images.

   *(Analogy: Camera Lens)*
5. **Lens:**
   - Composed of several transparent layers.
   - Its shape changes to focus on objects at varying distances (near or far).
   - This adjustment process is called **accommodation**.
6. **Light Pathway** (after Lens):
   - Light passes through the lens, then cross the **vitreous humor fluid** region.

7. **Retina** (Furthest Back):
   - Location of photoreceptor cells.
   - **Fovea:** The central region of the retina, containing **cone cells** (responsible for detailed color vision).
   - **Periphery Retina:** The outer regions of the retina, containing **rod cells** (most sensitive to light, responsible for night vision).

8. **Optic Disc:**
   - The point where blood vessels enter and leave the eye.
   - Where the **optic nerve** exits the eye, carrying visual information to the brain.
   - Contains **no photoreceptors**, creating a natural blind spot.

## MOVEMENTS OF THE EYE

*(Why the Blind Spot is Not Noticed)*

- The eyes are suspended in bony sockets at th front of the skull, called **orbits**.
- **Six extraocular muscles** are attached to the **sclera** (the tough, outer white part of the eye)
- These muscles rotate and hold the eye in plac
- **Saccadic Eye Movements:** Rapid, jerky shift gaze from one point to another, which we are compelled to make.
- **Pursuit Movements:** Smooth eye movement that maintain focus on a moving object.
- > *Note: These constant movements, combined wit brain processing, prevent us from noticing the natural blind spot created by the optic disc.*

## ORGANIZATION OF THE RETIN

- **Visual Information Propagation:**
  - Visual information flows from **Photorecep cells** → **Bipolar cells** → **Retinal ganglio cells** → **Brain**.

  > *(Mnemonic: PORB - Photoreceptor, Bipolar, Reti Ganglion, Brain)*

- **Light Pathway Through Retinal Layers:**
  - When light enters the eye, it must pass thr each of the cell layers in the retina *before* reaching the light-sensitive proteins in the photoreceptor cells.
  - Therefore, light is detected only after trave these initial cell layers.