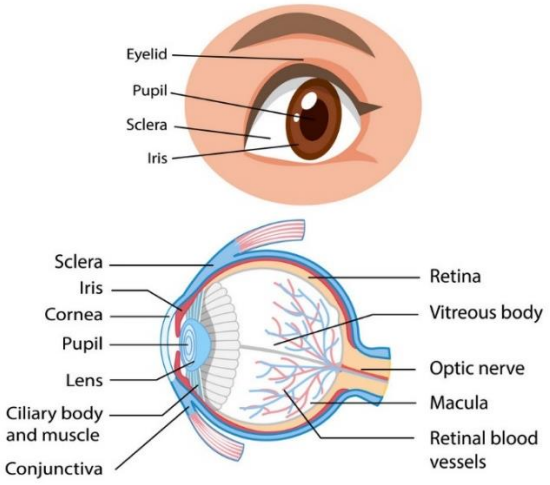

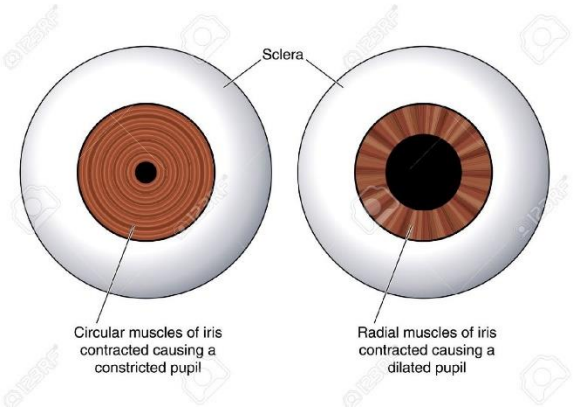

Eyelids	Protect cornea from **mechanical damage** Close eye partially (**squinting**) prevents excessive light **Blinking** spreads tears over eyes so dust is wiped off
Eyelashes	Shield eyes from dust particles
Tear gland	Secret **tears** – washes dust particles, keep cornea moist for atmospheric O2 to dissolve **Lubricates** conjunctiva to reduce friction when eyelids move
Cornea	Dome-shaped transparent layer able to refract/bend light rays into eye
Iris	Circular sheet of **muscles**, contain pigment to make eye's color Controlled by 2 sets of involuntary muscles: **circular and radial muscles**
Pupil	Hole in centre of iris that allows **light** to enter eye
Conjunctiva	Mucus membrane covers sclera, secret mucus to keep front of eyeball moist
Sclera	Tough, <u>white</u> outer covering of eyeball (continuous with the cornea)
Choroid	<u>Black</u> pigmented middle layer of eyeball – prevent internal reflection of light Contain blood vessels that carry O2 and nutrients to eyeball + remove metabolic waste
Retina	Contain light-sensitive cells **photoreceptors** – consist of **rods and cones**
Ciliary body	Contain **ciliary muscles** – control curvature and thickness of lens
Suspensory ligaments	Attaches the edge of **lens** to **ciliary body**
Lens	**Transparent, circular, biconcave** structure Its shape/thickness can be changed to **refract light onto retina**
Aqueous chamber	Space between lens and cornea filled with **aqueous humour** (transparent watery fluid) – keeps front of eyeball firm, refracts light <u>into pupil</u>
Vitreous chamber	Space behind lens filled with **vitreous humour** (transparent jelly-like substance) – keeps eyeball firm, refracts light <u>onto retina</u>
Blind spot	Region where optic nerve leaves the eye Doesn't contain rods/cones, therefore not light-sensitive

Fovea/yellow spot	Small yellow depression where images are focused Contain cones not rods, enable detailed colour vision in bright light
Optic nerves	Transmit impulses to brain upon **stimulation of photoreceptors**

	Under bright light	Under dim light
Circular muscles (of iris)	Contract	Relax
Radial muscles	Relax	Contract
Pupil	Constricts, become smaller	Dilates, enlarges
Effect	Less light enters eye	More light enters eye
	Close object	Distant object
Ciliary muscles	Contract, **relaxing** pull on suspensory ligaments	Relax, **pulling** on suspensory ligaments
Suspensory ligaments	Slacken, **relaxing** pull on lens	Become taut, **pulling** on edge of lens
Lens	Thicker, more convex **Decrease focal length**	Thinner, less convex **Increase focal length**
	Light rays focused on retina Photoreceptors are stimulated Nerve impulses are transmitted to the brain, which is interpreted by the brain to allow the person to see the object	