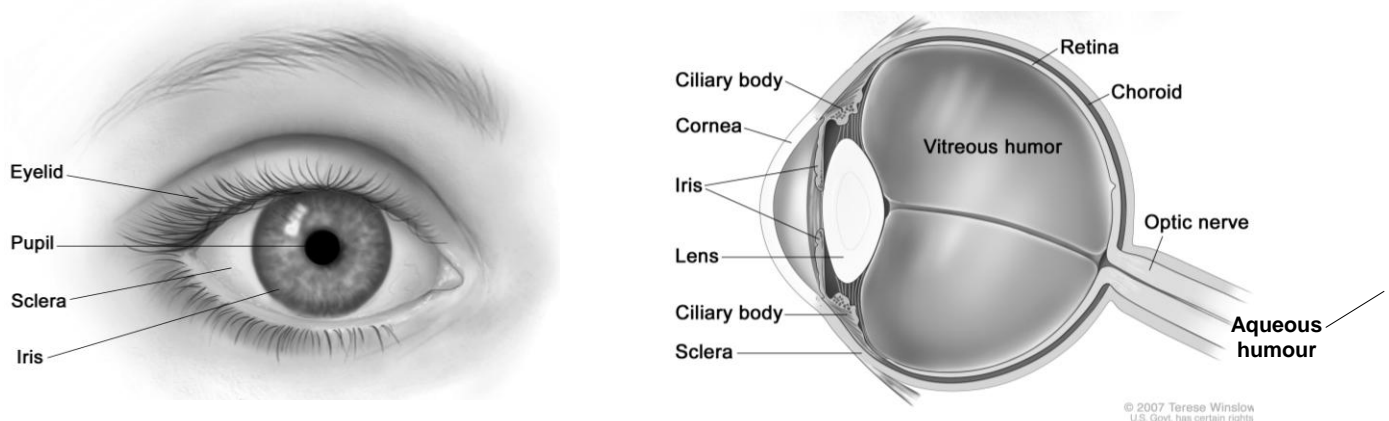


# The Eye:



**Sclera:** rigid membrane that protects the eye and gives it shape.

**Choroid:** middle layer of eye, with blood vessels that nourish the eye.

**Retina:** Innermost layer of eye; covered with millions of nerve cells that are sensitive to light and transform the information into nerve impulses.

**Blind-spot:** connects retina with optic nerve and is NOT sensitive to light.

**Cornea:** an extension of the sclera.

**Iris:** an extension of the cornea, contains the pigments that make up your eye colour; controls the amount of light entering the eye, by expanding or contracting to decrease or increase the size of the pupil.

**Pupil:** opening in the iris that allows light to come into the eye.

**Lens:** structure that focuses light on the retina.

**Aqueous humour:** transparent liquid that fills the spaces between the cornea and lens.

**Vitreous humour:** transparent jelly-like substance that fills the spaces between the lens and the retina.

## How the eye functions:

We can see objects because they emit or reflect light, and our eyes capture the light to create an image. The light enters our eyes through our pupil. If there is too much light, the iris dilates (expands) and the pupil become smaller, so that less light can enter the eye. If there is not enough light the iris will contract (shrink) and the pupil will become larger, so that more light can enter. Once the light that enters our eyes reaches the sensory receptors on the retina and is then transformed into nerve impulses. These impulses are sent to the brain through the optic nerve, where it gets processed and analyzed. An image is then formed on the retina of each eye, but is then superimposed one on top of the other, so that we get only one image of the object. The lens of the eye also adjusts according to the distance so the object being looked at, so that a clear image on the retina can be formed.

# The Ear:

## Outer Ear:

### **Outer Ear:**

*Pinna:* Funnel shaped part of the ear that can easily pick up sound vibrations from the air.

*Auditory canal:* canal that carries sound vibration to the eardrum; has hair and glands that produce wax, which prevents dust and foreign substances from entering the ear.

### **Middle Ear:**

*Eardrum:* thin membrane that moves to the rhythm of the sound vibrations.

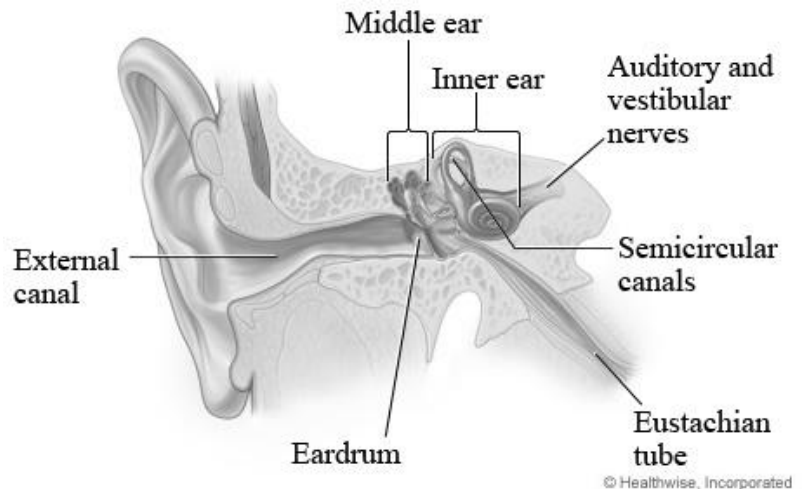
*Eustachian tube:* canal that connects the ear to the pharynx (throat); it balances pressure on either side of the ear drum when you swallow

### **Inner Ear:**

*Semi-circular canals:* canals filled with liquid; regulate balance when the body is moving

*Vestibule:* liquid filled structure that balances the body when it's not moving

*Cochlea:* Liquid filled structure that is covered with nerve cells linked to the auditory nerve.



**The Skin:** The skin is a very large organ that covers the entire body. It has 3 layers: epidermis, dermis, hypodermis.

## **Epidermis:**

*Dead Layer:* outer layer of skin that are killed by atmospheric pressure

*Living Layer:* layer of constantly dividing cells that help in the healing process

## **Dermis:**

*Sensory receptors:* structure that pick up stimuli

*Blood vessels:* vessels that nourish the skin cells

*Sebaceous glands:* glands that secrete sebum, and oily substance that waterproofs the skin

*Sweat glands:* gland that produce sweat to get rid of waste and regulate the body temperature

*Hair*

## **Hypodermis:**

*Fat cells:* layer of fat-containing cells that act as energy reserves and thermal insulator.

# The Nose:

- Nerve cells sensitive to odour are located in the upper wall of the nasal cavity. These nerves transmit impulses to the cerebrum

## The Tongue:

- The tongue is a muscle that is scattered sensory receptors called taste buds of the tongue. Three cranial nerves carry the nerve impulses from the taste bud to the cerebrum.
- Taste is only 10% of the senses you receive.