**EAR: –**

by Assistant Professor, Dr. Mohammed Abbas/Ph.D. Anatomy, Histology and Embryology/ Veterinary Collage, University of Basra………………………………………………………

The ear divided into three portions:- **external, middle, and inner** . The outer ear is called the pinna and is made of ridged cartilage covered by skin. Sound funnels through the pinna into the external auditory canal, a short tube that ends at the eardrum (tympanic membrane)

**HEARING**

Outer Ear & ear canal – brings sound into eardrum.

**Eardrum** – vibrates to amplify sound & separates inner and middle ear (Middle ear h as 3 small bones or Ossicles = anvil, stirrup, stapes )– amplify sound (small bones) which vibrate sound

**Eustachian tube –** connects middle ear to throat and equalizes pressure on eardrum **Cochlea** – in inner ear – has receptors for sound & sends signals to brain via Auditory Nerve.

**Process of hearing:**

• Sound waves enter your outer ear and travel through your ear canal to the middle ear.

• The ear canal channels the waves to your eardrum, a thin, sensitive membrane stretched tightly over the entrance to your middle ear.

• The waves cause your eardrum to vibrate.

• It passes these vibrations on to the hammer, one of three tiny bones in your ear. The hammer vibrating causes the anvil, the small bone touching the hammer, to vibrate. The anvil passes these vibrations to the stirrup, another small bone which touches the anvil. From the stirrup, the vibrations pass into the inner ear.

**Smell:-**

The organ for the sense of smell is the nose.  Nose has nostrils, we breathe in through nostrils.

The olfactory system is responsible for our sense of smell and the nose is also known as an[olfactory organ](https://www.toppr.com/guides/science/acids-bases-and-salts/natural-indicators-around-us/). Usually, animals have a stronger sense of smell than human beings. However, human beings can also smell thousands of various odors and fragrances. The nose is also an organ which helps us in the sense of taste. For example, we can smell a gas leak.

**Skin:-**

The organ for the sense of touch is skin. Skin is the largest organ as it is located throughout the human body. Various receptors are used for different situations like pain, [temperature](https://www.toppr.com/guides/physics/thermal-properties-of-matter/temperature-and-heat/), [pressure](https://www.toppr.com/guides/physics/force-and-pressure/introduction-to-pressure), etc. For example, when we touch something hot like a hot cup of tea or coffee, we instantly move our hands away from it.

### Tongue (Sense of Tasting) :-

### The organ for the sense of taste is the tongue. The tongue has various receptors which can detect whether the item consumed is salty, sweet, bitter or sour.  The behind part of the tongue detects bitter taste, the front most part detects salty taste, the side part detects sour taste and the middle and front part detects sweet taste.