

SOUND

The Human Ear

- ❖ **Human Ear** : We have learnt that vibrating objects produce sound which is carried in all directions in a medium. How do we hear sound? Our ears help us to hear sound. Human ear has three important parts. Only one of its parts can be seen and felt by you, which is the outer ear. The rest of the ear remains deep inside the skull.
- (i) **Outer Ear** : The outer ear consists of the pinna and the eartube. The shape of the outer part of the ear is like a funnel. When sound enters the ear, it travels down a canal at the end of which a thin membrane is stretched tightly. This tightly stretched membrane is called the eardrum, which performs a very important function.
- (ii) **Middle Ear** : It has three very tiny interlocked bones. The innermost bone is joined to the inner ear.
- (iii) **Inner Ear** : It has a coiled organ of hearing semicircular canals and the auditory nerve. A vibrating body causes air molecules to vibrate. These vibrations reach our ear and are collected by the pinna and then funneled into the ear tube. These vibrations strike the eardrum that starts vibrating with the same frequency. It then forces the interlocked bones to vibrate. The hearing organ passes the vibrations to the auditory nerve, which takes the signal to the brain. This enables us to hear the sound.

