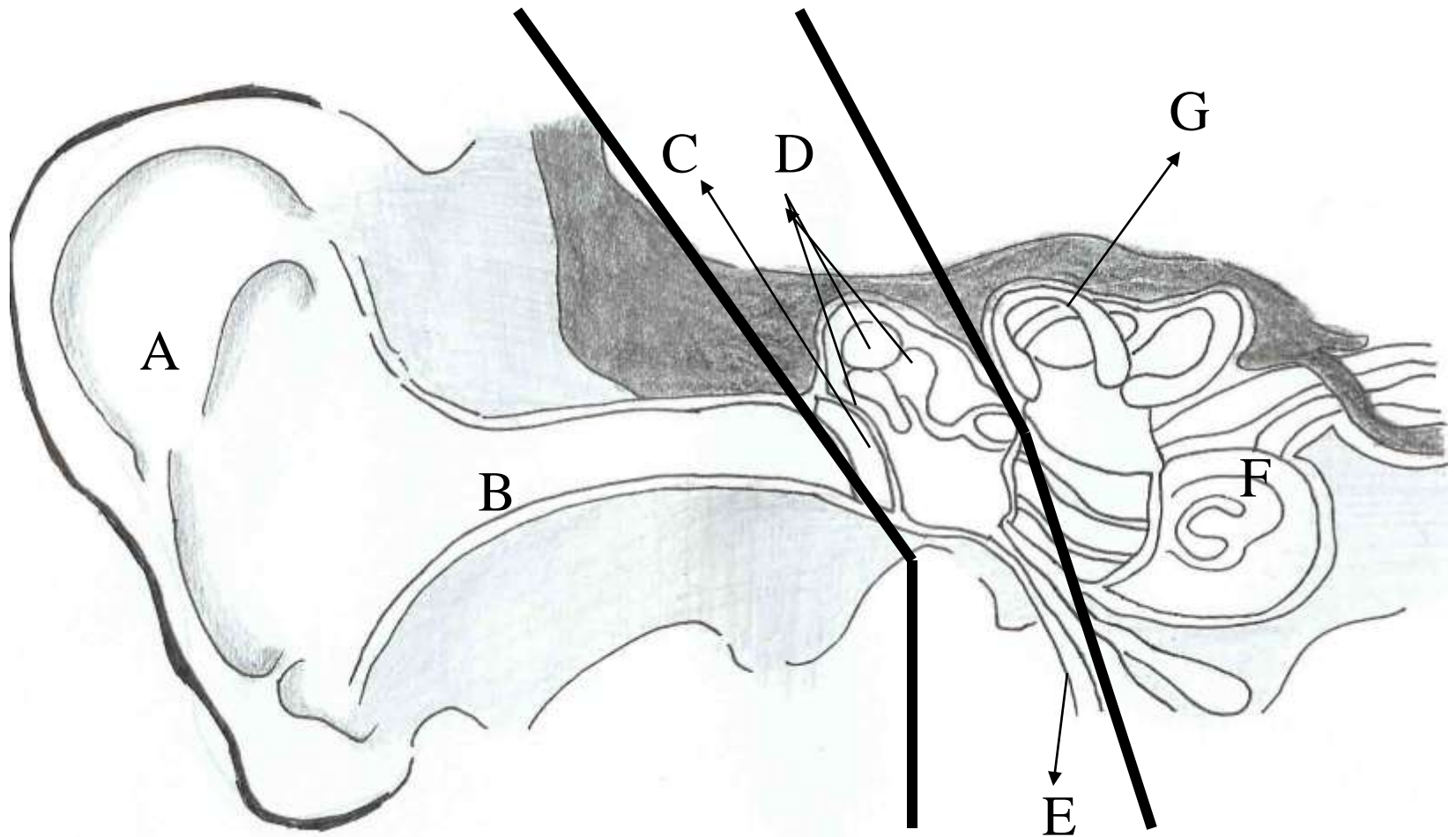




# **ANATOMY AND PHYSIOLOGY OF THE EAR**

**Better Hearing Philippines Inc.**

# PARTS OF THE EAR



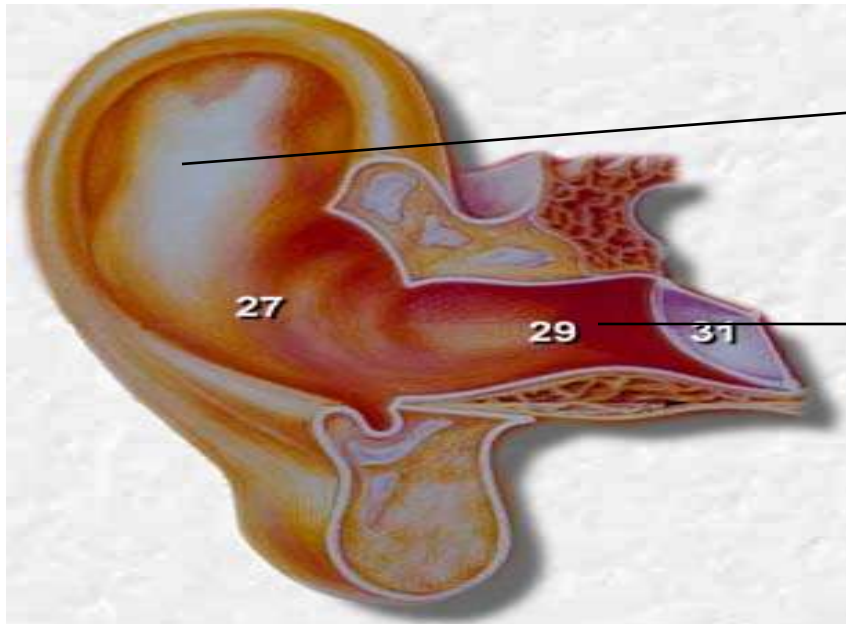
# **PARTS OF THE EAR**

- A. Pinna
- B. External Ear Canal
- C. Tympanic Membrane
- D. Ossicular Chain
- E. Eustachian Tube
- F. Cochlea
- G. Vestibular Organ

# EXTERNAL EAR

## 1. Pinna

- Sound Collector
- Boosts acoustic pressure



Pinna

External Ear  
Canal

# **EXTERNAL EAR**

## **2. External Auditory Canal**

- Channel through which sound is directed
- Protection against physical trauma and entry of foreign bodies
- Protects the tympanic membrane and ossicles
- Permit sound waves to reach the tympanic membrane

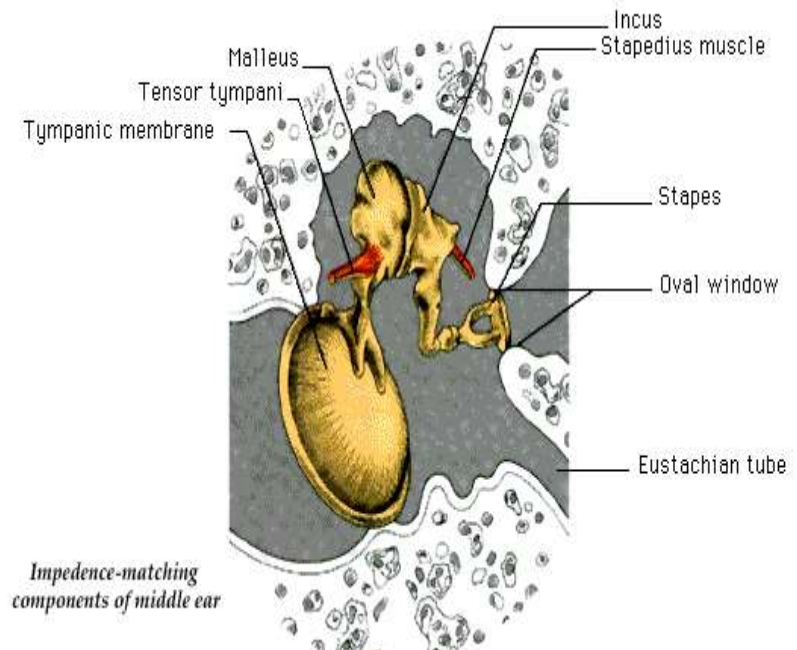
# MIDDLE EAR

## 1. Ear Drum or Tympanic Membrane

- Absorbs the sound waves and directs it to the ossicular chain

## 2. Ossicular Chain

- Malleus (Hammer)
- Incus (Anvil)
- Stapes (Stirrup)



# MIDDLE EAR

## **Cont. Ossicular Chain**

- Vibrates as a unit
- Converts sound energy into mechanical energy

## **3. Eustachian Tube**

- Occasional opening of the Eustachian tube is necessary to ventilate and equalize pressure in the middle ear.

# INNER EAR

## 1. Cochlea

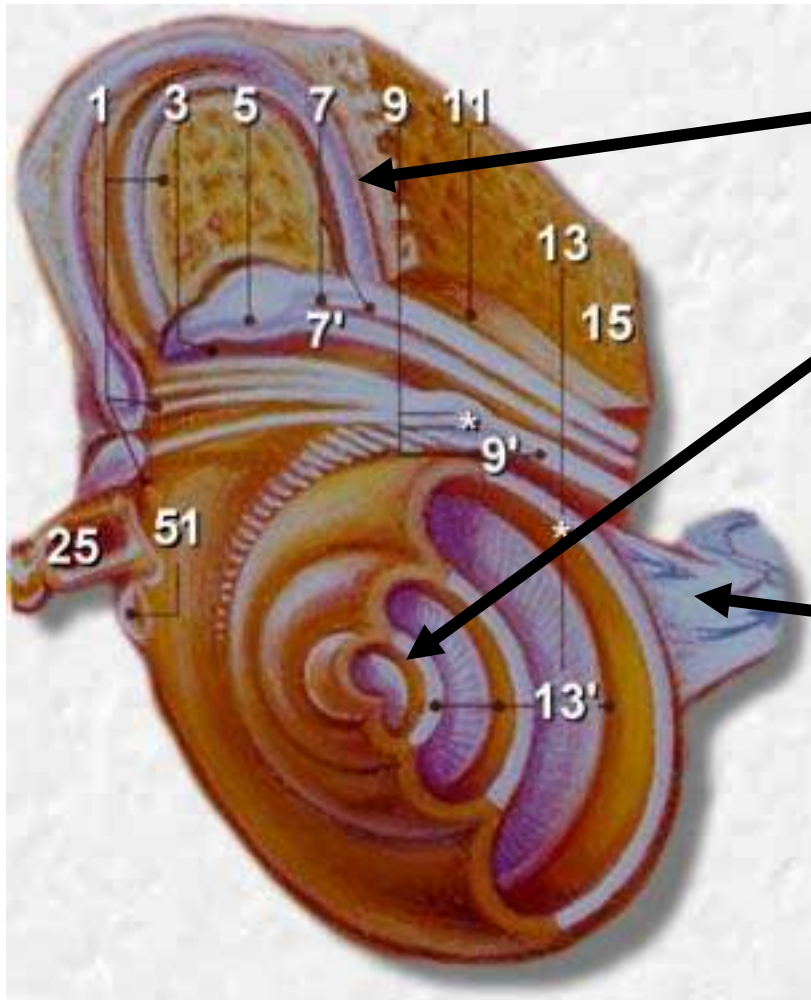
- Where vibration is converted to nerve pulses or electrical impulses

## 2. Vestibular Apparatus

- responsible for balance functions



# INNER EAR

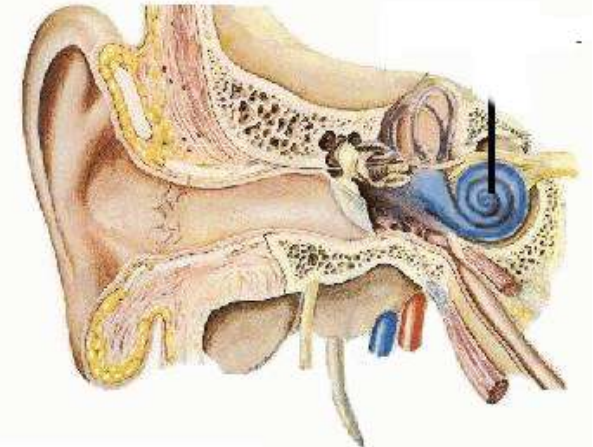
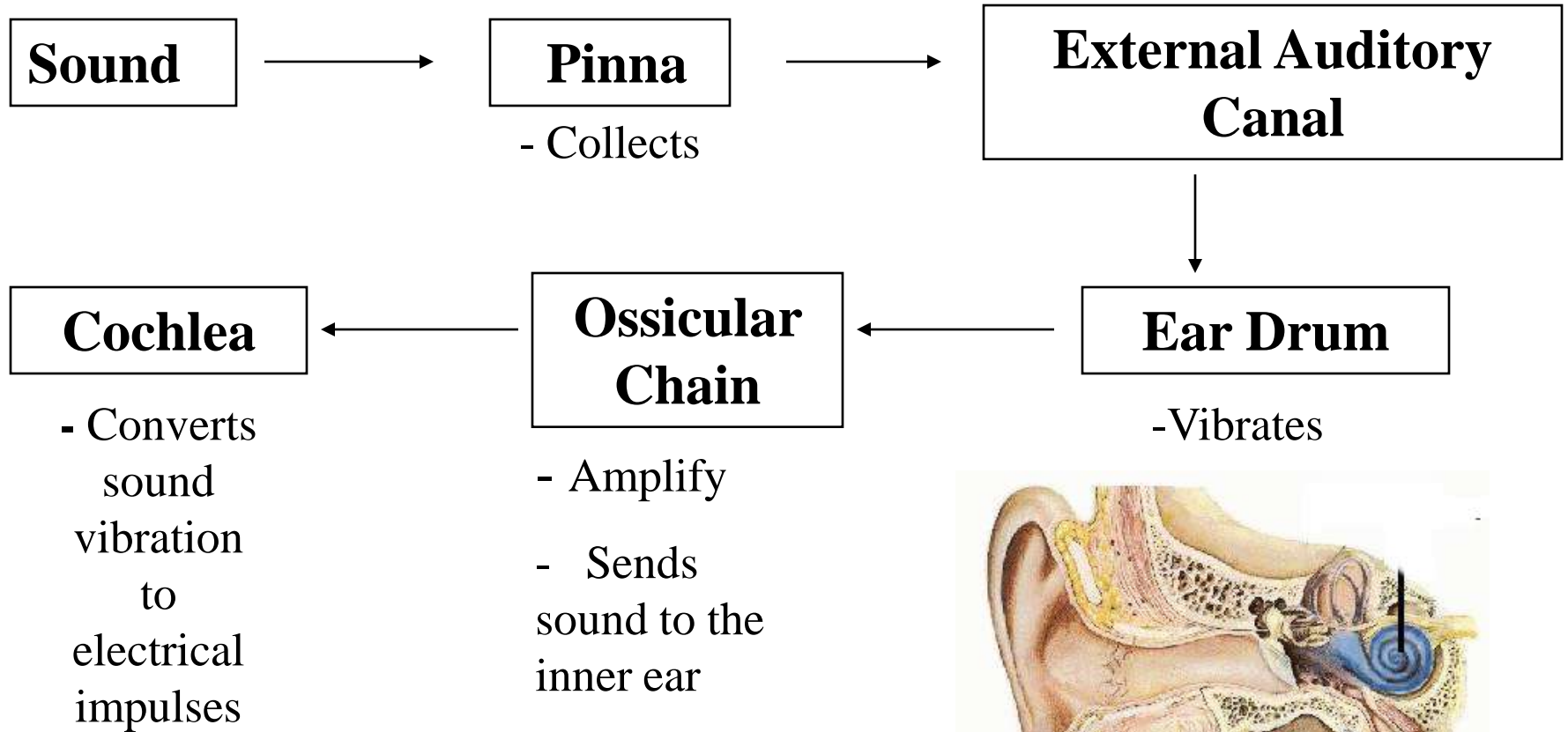


Labyrinth

Cochlea

Auditory Nerve

# MECHANISM



**Cochlea**



**Auditory  
Nerve**



**Auditory  
Cortex**

# PATHWAYS

## 1. Air Conduction

- Conduction of sound through the ear canal
- Through head phones

## 2. Bone Conduction

- Conduction of sound directly to the inner ear through the skull
- Through bone vibrator