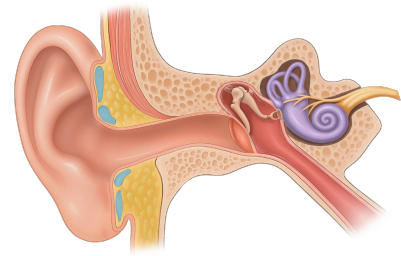


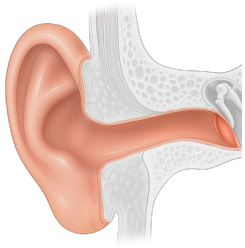
CONCEPT: OVERVIEW OF THE EAR

Introduction to Ear Anatomy

- ◆ The ear is responsible for the special senses of _____ and equilibrium.
- ◆ The ear has ___ distinct anatomical divisions.

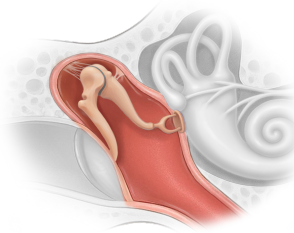


External Ear



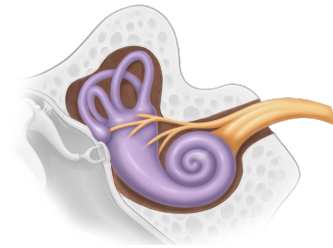
- ◆ Visible part & auditory _____.
- ◆ Transmission & conversion of sound waves into vibrations.

Middle Ear



- ◆ _____-filled cavity.
- ◆ Amplifies & transmits vibrations to inner ear.

Inner Ear



- ◆ _____-filled cavity.
- ◆ Converts vibrations to nerve impulses.

EXAMPLE

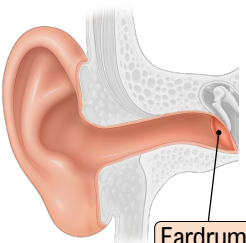
Which of the following is incorrect about the ear and its functions?

- Converts sound waves into mechanical vibrations.
- Contains organs for hearing and equilibrium.
- Middle ear transmits vibrations to the inner ear.
- Inner ear converts auditory signals to nerve impulses.

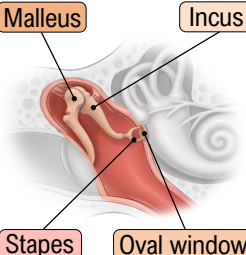
CONCEPT: OVERVIEW OF THE EAR

Structure of the Ear

- ◆ Each part of the ear has distinct anatomy and function.

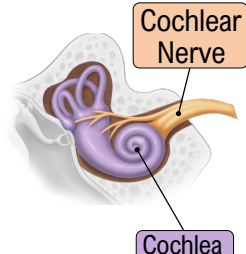
External Ear	
	<ul style="list-style-type: none">◆ Auricle: The visible outer part of the ear, funnels _____ waves into auditory canal.◆ Auditory Canal: Transmits sounds deeper into the ear.◆ Cerumen: _____ keeps unwanted substances out of the ear.

- ◆ **Tympanic Membrane (Eardrum):** _____ between external & middle ear, converts sound waves to vibrations.

Middle Ear	
	<ul style="list-style-type: none">◆ Contains 3 tiny bones called _____.▸ Malleus, incus, & stapes amplify vibrations from the tympanic membrane.◆ Oval Window: Small thin membrane attached to stapes covers the _____ to the inner ear.

Memory Tool

O My Inner Sound.

Inner Ear	
	<ul style="list-style-type: none">◆ Referred to as _____ due to its mazelike shape.◆ Houses cochlea and the vestibular apparatus.▸ Cochlea: _____-shaped bone contains _____ that convert vibrations to nerve impulses.- Cochlear nerve transmits auditory information to the brain.



CONCEPT: OVERVIEW OF THE EAR

EXAMPLE

Use the words in the word-bank to fill in the blanks and complete the sentences.

Word-Bank: Vibrations, cochlear, ossicles, auricle, oval window, cochlea, funnels, vestibular apparatus.

The outermost part of the ear is called the _____ and it _____ sound waves into the auditory canal. The eardrum converts soundwaves to mechanical _____ which are amplified by the _____ in the middle ear. _____ in the inner ear converts vibrations to nerve impulses which are sent to the brain through the _____ nerve.

PRACTICE

Which of the following statements is true about the structure of the ear?

- a) The earwax in the middle ear helps keep unwanted substances away from the inner ear.
- b) The auricle is found on the lateral side in the middle ear and helps the transmission of sound waves.
- c) The vestibular apparatus in the inner ear converts vibrations to nerve impulses and transmits them to the brain.
- d) The ossicles in the middle ear amplify vibrations coming from the eardrum and transmit them to the inner ear.