

Worksheet: The Ear

A. Match the description in column A with the correct part of the ear from Column B by writing the correct letter on the line. Each correct response is worth 1 point. *Some responses are used more than once.*

Column A	Column B
1 _____ Collects sound waves and directs them into the ear	A Auditory nerve
2 _____ Helps the body to maintain balance	B Cochlea
3 _____ These are the smallest bones in the human body	C Ear canal
4 _____ Separates the outer ear and the middle ear	D Eustachian tube
5 _____ Helps to balance air pressure in the ear	E Ossicles
6 _____ Contains fluid and sensory cells that detect vibrations	F Pinna
7 _____ Contains cells that produce a bitter tasting wax	G Semi-circular canals
8 _____ Carries the message of the vibrations to the brain	H Tympanic membrane
9 _____ Structure found in the middle ear that connects to the nasal cavity	
10 _____ Helps to amplify the sound vibrations	

B. The steps describe how you come to hear the sound of a plucked guitar string. Place these steps in order by writing a number (from 2 through 9) on the line of the next step in the hearing process. The first step has been done for you.

- a. _____ The vibrating air travels in a wave-like pattern to your ear.
- b. _____ The stirrup bone taps against a membrane on the opening to the inner ear, causing the cochlea to vibrate.
- c. **1** _____ The guitar string is plucked, causing it to vibrate.
- d. _____ The sound waves cause the ear drum to vibrate.
- e. _____ As it vibrates, nerve endings in the cochlea are stimulated, sending nerve impulses along the auditory nerve to the brain.
- f. _____ The vibration of the string causes air particles surrounding it to begin vibrating also.
- g. _____ The vibrations from the eardrum travel along three small bones: the hammer, the anvil and the stirrup.
- h. _____ The pinna collects the sound waves and funnels them down the ear canal to your ear drum.
- i. _____ The brain interprets the impulses to determine the type of sound.

C. The diagram below shows a human ear. Label the diagram by dragging the word to the part it matches on the diagram.

Anvil

Auditory nerve

Cochlea

Ear Canal

Ear drum

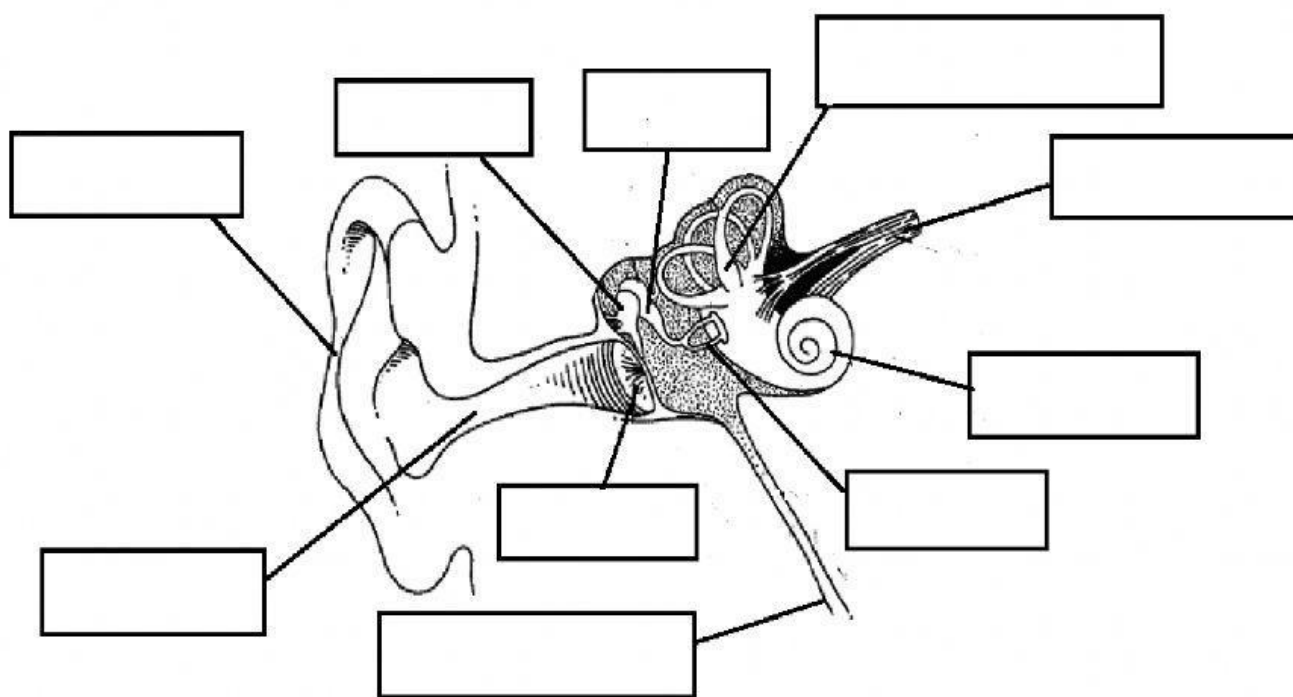
Eustachian tube

Hammer

Pinna

Semi-circular canals

Stirrup



D. Match each description in Column A with the correct word from Column B.
Write the letter on the line next to the correct phrase.

Column A

Column B

- | | | | | |
|---|-------|---|---|---------------|
| 1 | _____ | Type of hearing loss caused by damage to the cochlea and or auditory nerve | A | Conductive |
| 2 | _____ | Sensation of moving that results in feelings of dizziness | B | Deafness |
| 3 | _____ | Total loss of the ability to hear | C | Hearing loss |
| 4 | _____ | Buzzing or humming sounds heard by ear without any sound waves being produced | D | Sensorineural |
| 5 | _____ | A reduction in the ability to hear | E | Tinnitus |
| 6 | _____ | Type of hearing loss caused when sound waves are not transmitted properly | F | Vertigo |