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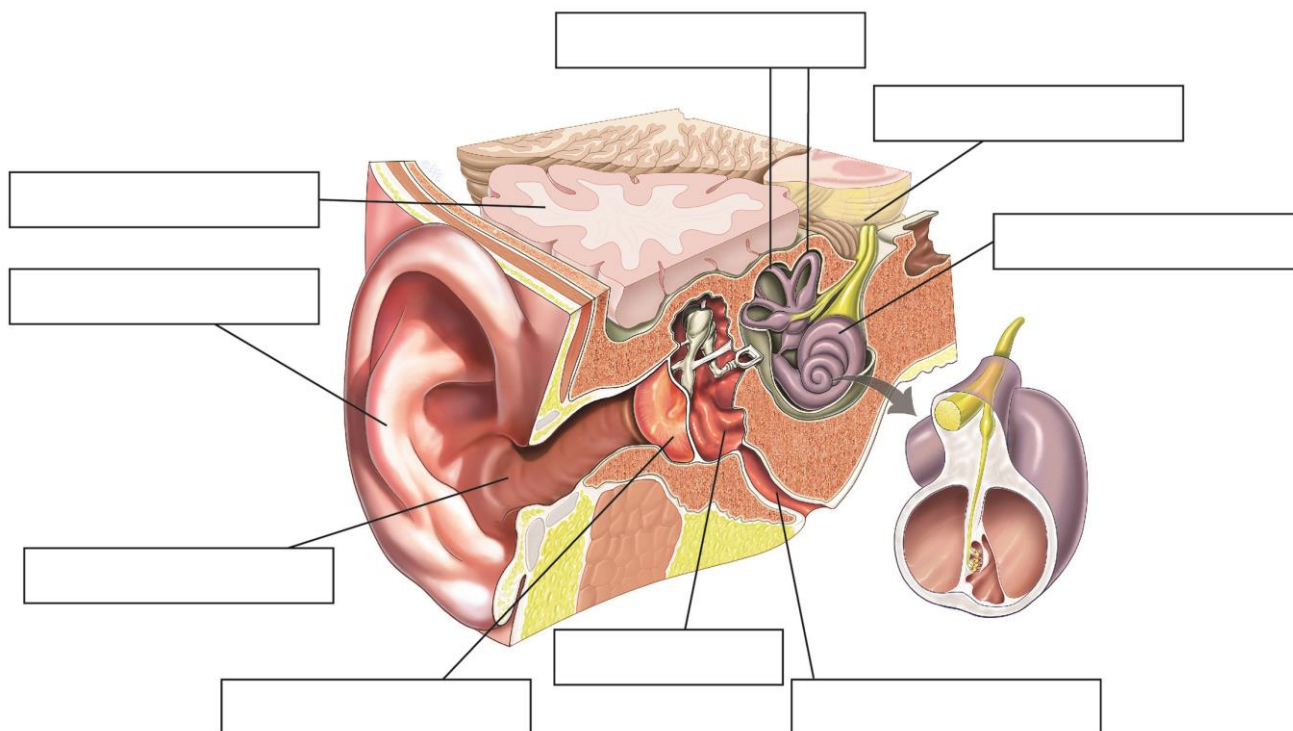
Student worksheet

4.3 Our ears hear sound

Pages 74–75 and 195

The structure and function of the ear

1 Label the structure of the ear.



2 State the function of the 3 main parts of the ear and the structures belonging to each part.

a outer ear

b middle ear

c inner ear



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3 Match the following structure within the ear to its correct function.

Auditory nerve	Keeps the air pressure inside the middle ear the same as the air pressure outside; it can do this because it is joined to the back of the throat behind the nose
Eustachian tube	Sound waves enter here and cause the air in the canal to vibrate right down to the thin skin covering at the end of the tube
Ossicle bones	Carries all of the information about the sound signals coming out of the receptor cells to the brain
Ear canal	A set of tubes attached to the cochlea which are filled with fluid and help us to keep our balance
Brain	The last ossicle bone, which presses against a thin layer of skin near the entrance to the inner ear
Cochlea	Collection of bones that vibrate when the eardrum vibrates
Semicircular canals	Sound waves hit and it vibrates at the same rate as the sound waves coming in
Stirrup and oval window	Filled with fluid and tiny hairs attached to receptor cells, which set off an electrical signal along the auditory nerve to which the receptor cells are all connected
Eardrum	Responsible for the collection and interpretation of sound and the body's response to it

Extend your understanding

- 4 Using as much of the sound terminology as you have learnt, explain the path that sound waves must follow through the ear and how they are converted into electricity before being transferred to the brain.
