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| How We Hear |

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Outer Ear
The outer ear is the part that people can see. Sound moves through the air in waves. The sound waves go into our ears. The pinna or ear flap catches the sound. After the sound comes in, it makes its way through the ear canal towards the middle ear.

Middle Ear
The middle ear's job is to take the sound waves it receives from the outer ear, turn them into vibrations, and deliver them to the inner ear. It does this by using the eardrum (which actually separates the outer ear from the middle ear) and the three tiniest bones in your body (ossicles), commonly called the hammer, anvil, and stirrup.

When the sound waves hit the eardrum, the eardrum starts to vibrate. The vibrations pass through the three tiny bones. These bones transfer the vibrations into the deepest part of the ear- the inner ear.

The middle ear is connected to the back of your nose by a narrow tube called the eustachian tube. The eustachian tube and middle ear keep the air pressure equal on both sides of your eardrum.

Inner Ear
After sound waves get changed to vibrations in the middle ear, they enter the inner ear. The vibrations go the cochlea. The cochlea is shaped like a "snail." It is filled with liquid and lined with cells that have thousands of tiny hairs on their surface. When the sound vibrations hit the liquid in the cochlea, the tiny hairs move. The hairs change the sound vibrations into signals that move along the auditory nerve. The auditory nerve sends the message to the brain, so the brain can understand the sound.

The brain needs the help it gets from the different parts of the ear, otherwise it can't recognize the sounds.

That is how we hear.