Etwall Primary School

Sound

Year 3/4

Sound is a type of energy. Sounds are created by vibrations. The louder the sound, the bigger the vibration.

Key vocabulary

Soundproof To prevent sound from passing.

Sound waves Invisible waves that travel through air, water and solid objects as vibrations

Vibrations Moving (wobbling) very quickly back and forth.

Particles Solids, liquids and gases are made of particles. They are so small we are unable to see them.

Volume How loud or quiet a sound is.

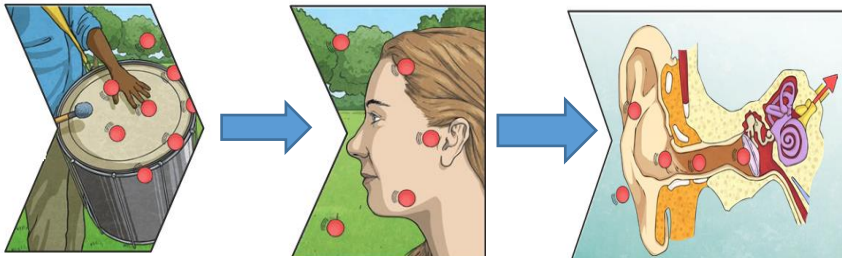
Pitch How high or low a sound is.

Cochlea In the inner ear, turns vibrations to electrical signals.

Ear drum A thin sheet in the ear.

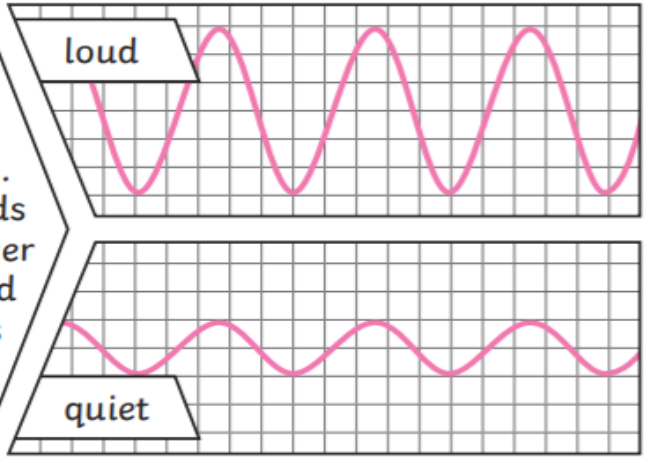
How is sound made and heard?

Sound is created when something vibrates and sends waves of energy (vibration) into our ears. The vibrations travel (through the air, solid or a liquid) to the ear. Inside your ear, the vibrations hit the eardrum and are then passed to the middle and then the inner ear. They are then changed into electrical signals and sent to your brain. Your brain tells you that you are hearing a sound. The stronger the vibrations, the louder the sound. Sounds are fainter the further you get from the sound source. Sound changes depending on how fast or slow an object vibrates to make sound waves. Sounds are usually a mixture of lots of different kinds of sound waves.



If you throw a stone in a pond, it will produce ripples. As the ripples spread out across the pond, they become smaller.
When sound **vibrations** spread out over a distance, the sound becomes quieter, just like ripples in a pond.

The size of the **vibration** is called the **amplitude**. Louder sounds have a larger **amplitude**, and quieter sounds have a smaller **amplitude**.



Pitch is a measure of how high or low a sound is. A whistle being blowncreates a high-**pitched** sound. A rumble of thunder is a low-**pitched** sound.