***What is sound?***

**Sound** is created when ***something vibrates and sends waves of energy or vibrations into our ears***. The vibrations travel through the air or another medium such as a solid, liquid or gas to our ear. When they reach our ears, these waves make the delicate skin of the eardrums vibrate.

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, that means moves, to make sound waves. ***Pitch is the quality of a sound (high or low) and depends on the speed of the vibrations*.** Different materials produce different pitches; if an object vibrates quickly, we hear a high-pitched sound, and if an object vibrates slowly, we hear a low-pitched sound.

Sounds are usually a mixture of lots of different kinds of sound waves.

For instance, when a drum or a cymbal is struck, the object vibrates. These vibrations make the air move. Sound waves move away from their source (where they came from), travelling on the air. When the vibrating air reaches our ears, the eardrum vibrates, too. The bones of the ear vibrate in the same way that of the object that started the sound wave.

These vibrations let you hear different sounds. Even music is vibrations. Irregular vibrations are noise. People can make very complex sounds. We use them for speech.

Sound waves can travel through [solids](https://kids.kiddle.co/Solid), [liquids](https://kids.kiddle.co/Liquid), and [gases](https://kids.kiddle.co/Gas), but it cannot travel through a [vacuum](https://kids.kiddle.co/Vacuum) (a place with nothing in it). This is why [astronauts](https://kids.kiddle.co/Astronaut) cannot talk to each other in space: they need a [radio](https://kids.kiddle.co/Radio) to hear each other. Sound can travel through water faster than through air; and sound can travel even faster in solids like [stone](https://kids.kiddle.co/Stone), [iron](https://kids.kiddle.co/Iron), and [steel](https://kids.kiddle.co/Steel). Sound travels at 335 metres (1,100 feet) per second in the air.