

# Year 4: Sound

## Subject Specific Vocabulary

### vibrating

When something moves continuously to and fro. A sound vibrates as it travels through the air.

### pitch

The quality of a sound which depends on the speed of the vibrations. A high sound has a high pitch and a low sound has a low pitch.

### volume

A measure of how loud or quiet something sounds and is related to the strength of the vibrations.

### insulation

Protecting something by surrounding it with material that reduces or prevents the transmission of sound.

### outer, middle and inner ear

The ear is made up of three different sections. These parts all work together so that you can hear and process different sounds.

### cochlea

It looks like a spiral-shaped snail shell deep in your ear which plays an important role in helping you to hear.

### sound waves

Sound waves are vibrating forms of energy that look like waves and travel through solids, liquids and gases.

### frequency

Frequency is how many waves there are per second. The higher the frequency, the more vibrations there are and the higher the pitch.

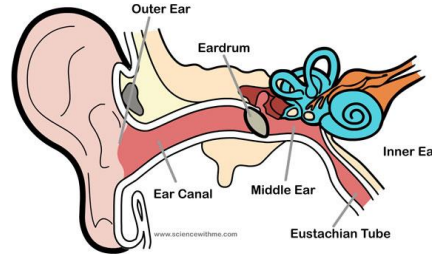
### ossicles

The ear is made up of little bones called ossicles that help you to hear.

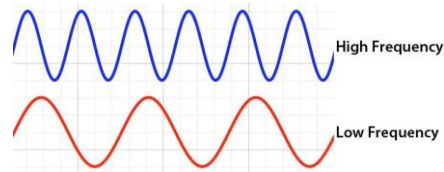
### hammer, anvil, stirrup

One of the ossicles is the hammer; another of these bones is the anvil and the third is the stirrup.

## The ear



## Sound waves & vibrations



## Important knowledge

- ❑ I know that sounds are made when materials vibrate
- ❑ I know that the length of time a material vibrates for depends on that material's physical properties
- ❑ I know that sound travels by vibrations being passed on from particle to particle
- ❑ I know why solids are better at passing these vibrations from particle to particle
- ❑ I know that pitch is the 'squeakiness' of a sound
- ❑ I know that loudness and pitch are not the same thing
- ❑ I know that volume describes the loudness of a sound
- ❑ I know that louder sounds will travel further than quieter sounds
- ❑ I know why sounds get fainter with distance
- ❑ I can record data relating to sound in a table

- ❖ I can describe the patterns between the length of a material and the sound it makes when it vibrates
- ❖ I can collect and record data relating to how sound travels through solids, liquids and gases using tables, diagrams and annotations
- ❖ I can compare how sound travels through different media and explain why there are differences
- ❖ I can make observations and collect data related to pitch
- ❖ I can explain the relationship between pitch and frequency
- ❖ I can record my findings in a way that I choose and set up a fair test
- ❖ I can use the internet to find out about the loudness of different sounds