



# Sound Year 4

## What I need to know

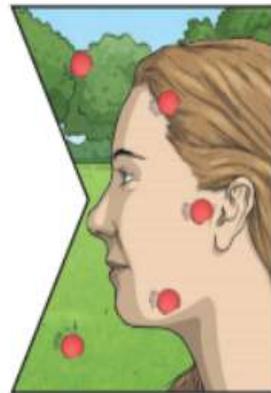
- Sounds are made when objects vibrate and travel to our ears.
- Sound vibrations can travel through solids, liquids and gases.
- Vibrations cause parts of our body inside our ear to vibrate so we can hear or sense the sound.
- The loudness (volume) of the sound depends on the strength or size of the vibrations. They decrease as they travel through the air.
- Because of this, sounds decrease in volume as you move away from the sound source.
- A sound insulator is a material that is good at blocking sound.
- Pitch is the highness or lowness of the sound. The features of the object affects the pitch. For example, smaller objects usually produce higher pitched sounds.

## How are sounds made?

When you hit a drum, the drum skin **vibrates**. The drum skin is the **source** of the sound. The air particles closest to the drum start to **vibrate** as well. These vibrations travelling through the air are called **sounds waves**.



The **vibrations** then pass to the next air particle, then the next, then the next. The **sound waves** travel through the air until they reach the ears of the listener. Our ear drums **vibrate** and we hear the drum sound.





# Sound

## Low Pitch Sounds

Lion's Roar      Tuba      Bass Guitar      Thunder

## High Pitch Sounds

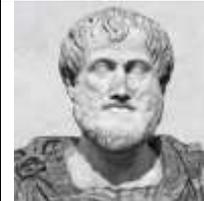
Child's voice      Whistle      Shriek      Mouse Squeak

## Key Vocabulary

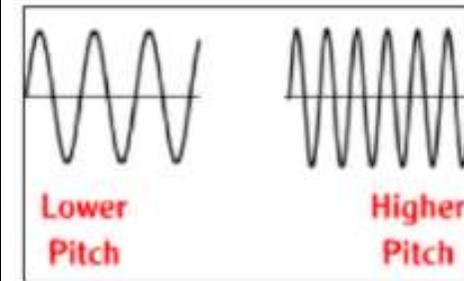
Vibration	Movements backwards and forwards.
Volume	The loudness of a sound
Pitch	The highness or lowness of a sound.
Sound source	The object that makes the sound and where the sound comes from.
Sound waves	Vibrations travelling from a sound source.
Insulation	A material that is used to absorb loud sounds so the sound does not travel as far.
Amplitude	The size of a vibration. A larger amplitude means a louder sound.

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## Pitch – the highness or lowness of a sound

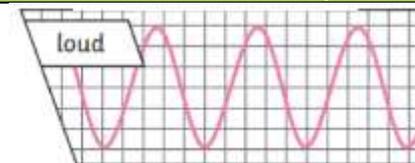


Aristotle 384 BC – 322 BC



- Pitch is caused by the number of vibrations per second.
- The more vibrations per second, the higher the pitch.
- The lower the number of vibrations, the lower the pitch.
- Some sounds are too high or too low for humans to hear.

## Volume/amplitude – the loudness of a sound



- The size of the vibration determines how loud or quiet the noise is.
- Bigger vibrations have more energy so they make louder sounds. Smaller vibrations have less energy so make quieter sounds.