



*Knowledge is Power...*

Ivington CofE Primary and Preschool

*Reaching together*



# Science - Physics - Sound

## Key Vocabulary

Amplitude	The size of a vibration. A larger amplitude = a louder sound.
Decibel	A measure of how loud a sound is.
Distance	A measurement of length between two points.
Ear	An organ used for hearing.
Ear drum	A part of the ear which is a thin, tough layer of tissue that is stretched out like a drum skin. It separates the outer ear from the middle and inner ear. Sound waves make the eardrum vibrate.
Energy	The power from sources such as electricity that makes machines work or provides heat.
Pitch	How low or high a sound is.
Soundproof	To prevent sound from passing through.
Sound wave	Vibrations travelling from a sound source.
Travel	To move from one place to the other.
Vibration	A quick movement back and forth.
Volume	The loudness of a sound.

## Prior Knowledge

We would expect most children to already be able to: Recognise that hearing is one of my five senses; That sounds can be combined using musical instruments; What the word vibration means.

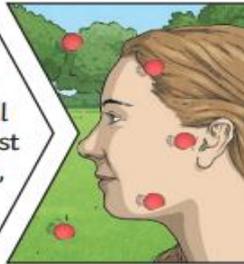
## Aims

- Explain how sound sources vibrate to make sounds.
- Explain how vibrations change when the loudness of a sound changes.
- Explain how sounds travel to reach our ears.
- Describe the pitch of a sound.
- Describe patterns between the pitch of a sound and the features of the object that made the sound.
- Explain how sound travels through a string telephone.
- Identify the best material for absorbing sound.
- Create a musical instrument that can play high, low, loud and quiet sounds.
- Make observations and conclusions.
- Be able to answer questions based on their learning.

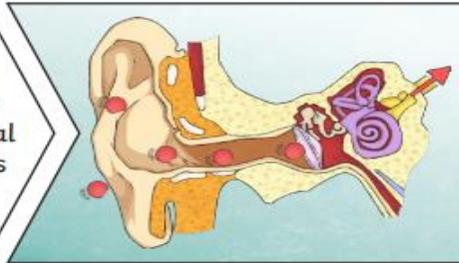
When you hit the drum, the drum skin **vibrates**. This makes the air **particles** closest to the drum start to **vibrate** as well.



The **vibrations** then pass to the next air **particle**, then the next, then the next. This carries on until the air **particles** closest to your ear **vibrate**, passing the **vibrations** into your **ear**.



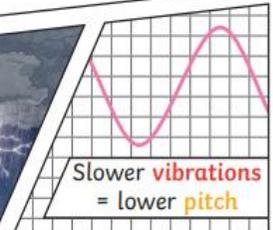
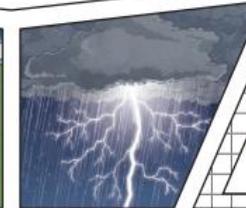
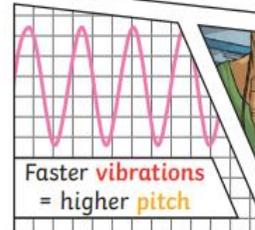
Inside your **ear**, the **vibrations** hit the **eardrum** and are then passed to the middle and then the inner **ear**. They are then changed into electrical signals and sent to your brain. Your brain tells you that you are hearing a sound.



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.



**Pitch** is a measure of how high or low a sound is. A whistle being blown creates a high-**pitched** sound. A rumble of thunder is an example of a low-**pitched** sound.



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

loud



quiet

