



# Knowledge organiser for Science -Sound

## Key Vocabulary

|                  |  |                  |   |                     |   |
|------------------|--|------------------|---|---------------------|---|
| <b>Vibration</b> | A movement backwards and forwards                              | <b>Pitch</b>     | How high or low a sound is  | <b>Soundproof</b>   | To prevent sound from passing.  |
| <b>Soundwave</b> | Vibrations travelling from a sound source                      | <b>Ear</b>       | An organ used for hearing   | <b>Absorb sound</b> | To take in sound energy. Absorbent materials have the effect of muffling a sound.           |
| <b>Volume</b>    | The loudness of a sound  | <b>Particles</b> | Solids, liquids and gases are particles. They are so small they cannot be seen. | <b>Vacuum</b>       | A space where there is nothing. There are no particles in a vacuum.                         |
| <b>Amplitude</b> | The size of a vibration. A larger vibration = larger amplitude | <b>Distance</b>  | A measurement of length between two points.                                     | <b>Eardrum</b>      | Separates the outer ear from the middle and inner ear. Soundwaves make the eardrum vibrate. |

## Key Knowledge

|                               |  |
|-------------------------------|--|
| <b>How is sound made?</b>     | Sound is a type of energy and they are created by vibrations. The louder the sound, the bigger the vibration.  |
| <b>How does sound travel?</b> | Sound can travel through solids, liquids and gases. Sound travels as a wave, vibrating the particles in the medium it is travelling. Sound cannot travel through a vacuum. Sound gets quieter as the distance from the source increases. |
| <b>How is sound absorbed?</b> | Sound energy can travel from particle to particle far easier in a solid as the particles are closer together.<br>Investigation into soundproofing.   |

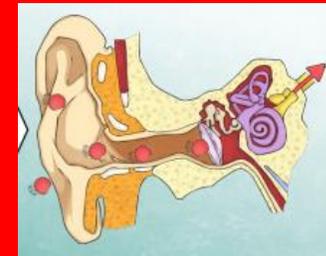
### Investigate pitch and volume:

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

You can change the pitch of a sound in different ways, depending on the instrument that you are playing e.g. the longer the string, the tighter the skin etc. Children to investigate.

Pitch is a measure of how high or low a sound is. Faster vibrations = a higher pitch and slower vibrations = lower pitch.

### The Human Ear:



Children begin to understand the workings of the human ear and label some of the parts e.g. outer/ middle/inner ear, ear drum etc.

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