



## Springbank Primary School Knowledge Organiser




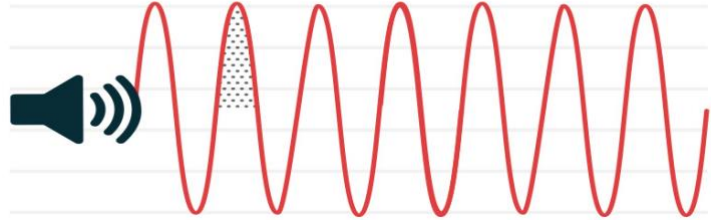
Springbank Primary School Knowledge Organiser		
Year 4	Term: Spring term 2	Focus - Sound

Vocabulary	Definitions
<b>Vibrations</b>	Sounds are made when objects vibrate; a vibration is a rapid repeated movement.
<b>Sound waves</b>	When an object vibrates it makes the air particles in and around it vibrate too. The vibrating air particles bump into each other and travel through the air as a sound wave.
<b>Medium</b>	A medium is the name given to material a sound object travels through. Sounds waves can travel through gasses like air but also through liquids like water and solids like the ground too.
<b>The ear</b>	When a sound wave reaches our ears it travels down the ear canal to the ear drum. The ear drum vibrates which causes the three bones of the middle ear to vibrate. These bones in the middle ear amplify, or increase, the sound vibrations and send them to the cochlea, a snail-shaped structure filled with fluid, in the inner ear. Tiny hairs inside the cochlea pick up the vibrations in the fluid and send signals to the brain along the auditory nerve which turns it into a sound that we recognise and understand.
<b>Vacuum</b>	A vacuum is a totally empty space. If there is a vacuum between your ear and the source of a sound then you will not be able to hear it because there is no medium to for the sound wave to travel through.
<b>Volume</b>	The volume of a sound is how loud or quiet it is. The volume depends on how strongly something vibrates and how far away it is. For example if you are closer to a sound then it will be louder as there is less distance for the sound wave to travel compared to something that is further away which will be quieter.
<b>Decibel</b>	The volume of a sound is measured in decibels. The symbol for decibels is <b>dB</b> .

Diagrams

### Sound wave through air

### The human ear

<p><b>Pitch</b></p>	<p>The pitch of a sound is how low or high it is. A high sound has a high pitch and a low sound has a low pitch. A tight drum skin will produce a high pitched sound compared to a loose drum skin.</p>	<p><b>Pitch and frequency of sound waves</b>  <b>Low Frequency = Low Pitch</b></p> 
<p><b>Frequency</b></p>	<p>Frequency is a measure of how much something vibrates. High pitch sounds vibrate very quickly so have a high frequency and low pitched sounds vibrate more slowly so a lower frequency.</p>	<p><b>High Frequency = High Pitch</b></p> 
<p><b>Echo</b></p>	<p>Echoes are reflected sound waves. If you shout in a large empty room the sound waves will bounce off the walls and travel back to your ears.</p>	<p><b>Echo</b></p> 