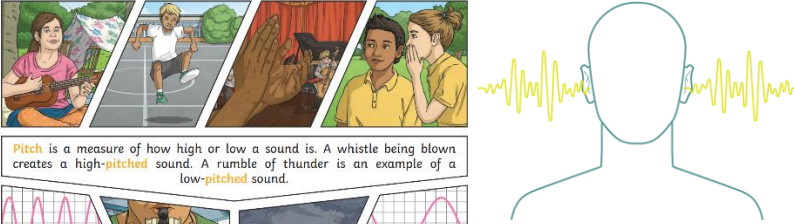

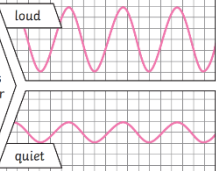
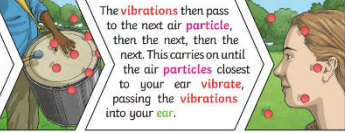

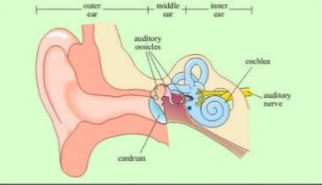





Leamington Primary Science Knowledge Organiser Year 4 – Sound – Physics



Pitch – What caused that 'racket'?

What I should already know	What I will learn	Important words to help me. (vocabulary)	Ideas for Scientific Enquiry																
<ul style="list-style-type: none"> • That we use our ears to hear sounds • That sounds can come from number of sources • That speech is a type of sound. 	<p>Key Knowledge Sound is a type of energy. Sounds are created by vibrations. The louder the sound, the bigger the vibration.</p>  <p>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.</p> 	<table border="1"> <tr> <td>Vibration</td> <td>A movement backwards and forwards.</td> </tr> <tr> <td>Sound wave</td> <td>Vibrations travelling from a sound source.</td> </tr> <tr> <td>Amplitude</td> <td>The size of the vibration. The larger the amplitude = the louder the sound.</td> </tr> <tr> <td>Pitch</td> <td>How high or low a sound is.</td> </tr> <tr> <td>Ear</td> <td>An organ used for hearing.</td> </tr> <tr> <td>Insulation</td> <td>A material that prevents sound from travelling as far.</td> </tr> <tr> <td>Soundproof</td> <td>To prevent sound from passing.</td> </tr> </table>	Vibration	A movement backwards and forwards.	Sound wave	Vibrations travelling from a sound source.	Amplitude	The size of the vibration. The larger the amplitude = the louder the sound.	Pitch	How high or low a sound is.	Ear	An organ used for hearing.	Insulation	A material that prevents sound from travelling as far.	Soundproof	To prevent sound from passing.	<ul style="list-style-type: none"> • Set up an experiment to find out who has the best hearing in your household. Hypothesise why you think this is. • Make your own tuned musical instrument from recycled materials. Can you change the volume and the pitch? 		
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<p>Interesting Facts</p>	<p>The size of the vibration is called the amplitude. Louder sounds have a larger amplitude, and quieter sounds have a smaller amplitude.</p>  <p>When you hit the drum, the drum skin vibrates. This makes the air particles closest to the drum start to vibrate as well.</p> <p>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.</p> 	<table border="1"> <tr> <td>Absorb</td> <td>To take in sound energy. Absorbent materials have the effect of muffling sound.</td> </tr> <tr> <td>Vacuum</td> <td>A space where there is nothing. There are no particles in a vacuum.</td> </tr> <tr> <td>Eardrum</td> <td>A part of the ear that 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. Soundwaves make the eardrum vibrate.</td> </tr> <tr> <td>Volume</td> <td>The loudness of a sound.</td> </tr> <tr> <td>Sound source</td> <td>Where a sound originates from.</td> </tr> <tr> <td>Percussion</td> <td>Instruments that are unable to change pitch.</td> </tr> <tr> <td>Tune</td> <td>A melody made by musical instruments.</td> </tr> <tr> <td>Tuned instrument</td> <td>Instruments that can change in pitch and volume.</td> </tr> </table>	Absorb	To take in sound energy. Absorbent materials have the effect of muffling sound.	Vacuum	A space where there is nothing. There are no particles in a vacuum.	Eardrum	A part of the ear that 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. Soundwaves make the eardrum vibrate.	Volume	The loudness of a sound.	Sound source	Where a sound originates from.	Percussion	Instruments that are unable to change pitch.	Tune	A melody made by musical instruments.	Tuned instrument	Instruments that can change in pitch and volume.	
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<ul style="list-style-type: none"> • Dogs can hear sound at a higher frequency than humans, allowing them to hear noises that we can't. • The speed of sound is around 767 miles per hour • When traveling through water, sound moves around four times faster than when it travels through air. 	<p>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.</p>  <p>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.</p> 		<ul style="list-style-type: none"> • Survey when your street/ house is the noisiest time of day. What noises can you hear? When? Why do you think some times of day are louder/ quieter than others? 																