

Science Knowledge Organisers

Science Focus

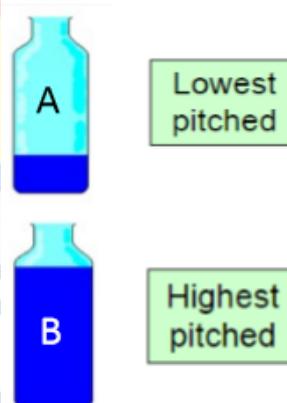
Sound

Year 4

Autumn 2

Key Knowledge	
What is sound?	A noise that can be heard by someone.
How is sound made?	A sound happens when something vibrates. This can be obvious: Like when a drill is hitting the ground repeatedly which causes a loud noise This can be less obvious: Here the air in the bottle vibrates to produce the noise
How does sound travel?	Sounds can travel in two ways: □ Through the air - like from a TV speaker across the room to your ears □ Through an object/material - like stone, brick, water and glass. If someone moves furniture upstairs, the sound can travel through the floor to you.
How do we hear vibrations?	□ The vibrating air hits our ear drums and makes them vibrate. □ The vibration is picked up by our brains and converted to sounds we recognise.
Volume	□ The closer we are to the sound source, the louder the sound will appear to us. □ The further away we are from the sound source, the quieter the sound will appear. □ The more energy in the initial vibration the louder the sound will be. For example, if you tap a hammer on a desk the sound will be quiet, but if you smash a hammer on a desk it would be much louder.
Pitch	The pitch is how high or low a sound is. □ The shorter the vibrating object, the higher the pitch of the sound. □ The longer the vibrating object, the lower the pitch of the sound. With string instruments, the tighter the string, the higher the pitch of the sound.

Key Vocabulary	
Vibrated	Move continuously very quickly
Obvious	Clear and easily seen
Material	What something is made of
Recognise	To see or spot something
Initial	Happening at the beginning

Diagrams and Symbols	
	<p>The shorter the vibrating column of air, the higher the pitch so bottle B will give a higher pitch sound</p>

Possible Experiences
<ul style="list-style-type: none"> □ Use violins in school to experiment with pitch □ Use one object (such as a saucepan) and try and create a scale of sounds by manipulating it □ Experiment with a tin can telephone

Greater Depth Thinking

Show understanding by using scientific vocabulary correctly
 Apply knowledge in familiar related contexts, including a range of enquiries
 Work scientifically to explore the concept with greater independence
 Consider a 'Big Question' to answer over a series of lessons to connect the learning