

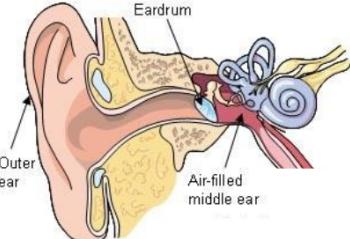


Paganel Primary School –Knowledge Organiser

Year Group: 4 Topic: Sound

What? (Key Knowledge)	
Sound	
What is a sound?	A noise that can be heard by someone.
How is a sound made?	<p>A sound happens when something vibrates.</p> <p>This can be obvious:</p> <p>Like when a drill is hitting the ground repeatedly which causes a loud noise</p>  <p>This can be less obvious:</p> <p>Here the air in the bottle vibrates to produce the noise</p> 
So how do we hear sounds?	
How do sounds travel?	<p>Sounds can travel in two ways:</p> <ul style="list-style-type: none"> 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 these vibrations?	<ul style="list-style-type: none"> The vibrating air hits our ear drums and makes them vibrate.  <ul style="list-style-type: none"> The vibration is picked up by our brains and converted to sounds we recognise.
Changing sounds	
Volume	<ul style="list-style-type: none"> 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	<p>The pitch is how high or low a sound is.</p> <ul style="list-style-type: none"> The shorter the vibrating object, the higher the pitch of the sound. The longer the vibrating object, the lower the pitch of the sound. <p>With string instruments, the tighter the string, the higher the pitch of the sound.</p>

What? (Key Vocabulary)	
Spelling	Definition/Sentence
sound	sound is created when something vibrates and sends waves of energy (vibration) into our ears
source	the place where something comes from
vibrate	vibration or oscillation means quick moving back and forth (or up and down) about a point of equilibrium
travel	journeying from one place to another
pitch	is how high or low a sound is at the rate at which vibrations are produced
volume	this refers to the amount of space the object takes up e.g. how much (volume) water is in a cup
loud	the most southern point of the earth

Take it further at home...

- Use musical instruments or glasses of water 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
- Fill in the vocabulary chart – try and do this from memory with them!

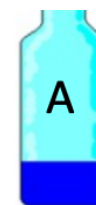
Diagram and symbols

The pitch of a sound

Higher pitch

Lower pitch

The shorter the object the higher the pitch

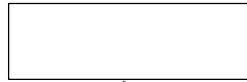


Lowest pitched

Highest pitched

The shorter the vibrating column of air, the higher the pitch so bottle B will give a higher pitch sound

The pitch of a sound



The shorter the object the
higher the pitch



The shorter the
vibrating column
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volume	
	the most southern point of the earth

