

Year 4 – Sound – Good Vibrations

What it looked like last year (Year 1)

- Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with which sense.
- Other links made through the music curriculum.

What it looks like next year (KS3)

- Waves on water as undulations.
- Frequency of sound waves.
- Sound needs a medium to travel.
- Sound produced by vibrations in loud speakers.
- Auditory range of humans and animals.
- Pressure waves transferring energy.
- Waves transferring information for conversion.

Vocabulary (definitions)

pitch - the high or low quality of a sound, particularly a musical note

sound	continuous	
source	strike	vibrate
blow		
vibration	shake	
travel	pluck	
taut	volume	
faint	loud	
insulation	repeating	

Sequence of Learning

1. Explore how sounds are made.
2. Explore how sound travels from the source to our ears.
3. Explore and measure the loudness created by different instruments.
4. Carry out an investigation to explore how sounds get fainter as you move away from the source.
5. Explore different ways to change the pitch of a note.
6. Explore how air can be used to make sounds with different pitches.

Cultural Capital

- To be able to identify how sounds are made, associating some of them with something vibrating.
- To be able to recognise that vibrations from sounds travel through a medium to the ear.
- To be able to find patterns between the pitch of a sound and features of the object that produced it.
- To be able to find patterns between the volume of a sound and the strength of the vibrations that produced it.
- To be able to recognise that sounds get fainter as the distance from the sound source increases.
- The real life knowledge that links is: exploration, noticing patterns and simple comparative fair tests
- The jobs it can be used in are: Musician, Sound Technician, Medical Professional (Scanning), Audiologist.

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Principles of Teaching Science.

Exploring – when we look at how things work in the world

Questioning – when we question what will happen

Understanding – when we use scientific language to explain

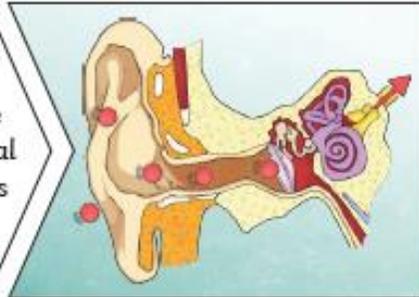
Investigating – when we can explore and are hands on

Predicting – when we use our previous knowledge to say what we think will happen.

Sound is a type of energy. Sounds are created by **vibrations**. The louder the sound, the bigger the **vibration**.



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.



Stringed Instruments

Tighter, thinner or shorter strings make higher pitches. Faster vibrations make pitches high and slower vibrations make pitches low.



Wind Instruments

The column of air inside the instrument causes it to vibrate. Shortening this makes a higher sound, lengthening it makes a lower sound.



Percussion Instruments

The surface is struck and it therefore vibrates. Smaller instruments have higher sounds (smaller keys of a xylophone, hand bells etc.). The tighter or thinner the skin on a drum, the higher the pitch.

