

**Final Outcome:** Pupils will understand how sound travels and how sounds enter the human ear. They will carry out experiments and learn about sound-proofing. Children will be able to record patterns of different sounds and explain what they have learnt.

**Component 6:** Find patterns between the volume of a sound and the strength of the vibrations that produced it and recognise that sounds get fainter as the distance from the sound source increases.

**What we will know after this sequence:**

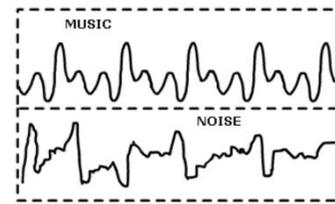
- Pupils will be able to describe their product to others.
- Demonstrate their understanding of sound by explaining why their product is the best.
- Provide evidence to show that the results of their product testing came from a fair test.
- Present their findings to a panel of judges (Mrs Birchall, Mrs Guthrie and Mrs Gidley).
- Evaluate their product against the original criteria.

**Vocabulary:** fair-test, evidence, results, conclusion, evaluate.

**How will this feed into my next learning:**

Pupils will use all that they have learnt in this teaching sequence to explain why their product works best.

**SEND:** Visual word mat with newly learnt vocabulary. Extra support when explaining the brief and task. Discussion to ensure full understanding.



**Component 4:** Recognise that vibrations from sounds travel through a medium to the ear.

**What we will know after this sequence:**

- Pupils will understand some of the workings of the human ear.
- Pupils will consider some of the ways we try to reduce the sounds that we hear.
- Pupils will understand that we hear because sound waves (vibrations) enter our ears.
- Pupils will understand why we see lightning before we hear thunder.

**Vocabulary:** vibrations, sound waves, sign language.

**How will this feed into my next learning:**

Pupils will learn that we have two ears to decide which direction the sound is coming from because the sound wave reaches one ear before the other.

**SEND:** Extra support when explaining the task. Discussion to ensure full understanding.



**Component 5:** Investigate sound-proofing materials by considering all the variables and how to record the results.

**What we will know after this sequence:**

- Pupils will consider reasons needed to reduce sounds and reasons for not reducing sounds.
- Pupils will work in a group to plan an investigation that will find out which material will best reduce sound.
- Pupils will consider the different variables of their test and plan how to ensure their investigation is fair.
- Pupils will record the results of the investigation and use the results to draw a conclusion.

**Vocabulary:** investigation, fair-test, factor (variable), prediction, results, resources, planning, muffle.

**How will this feed into my next learning:**

Pupils will understand how to prevent loud noises from entering ears and how to sound-proof.

**SEND:** Visual word mat with new vocabulary. Extra support when planning the scientific task. Discussion to ensure full understanding.



**Component 3:** Find patterns between the volume of a sound and the strength of the vibrations that produced it.

**What we will know after this sequence:**

- Pupils will understand that sound is a form of energy and will know that the more energy that is put into creating a sound, the louder the sound that is made.
- Pupils will look for patterns between the pitch of a sound and features of the object that produced it.
- Pupils will begin to see a pattern between the pitch and volume of a sound and the shape of the wave it produces.

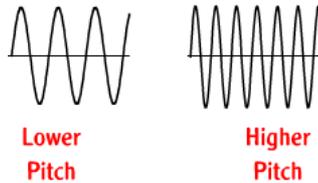
**Vocabulary:** volume, loudness, amplitude, pitch, soundwave, frequency.

**How will this feed into my next learning:**

Discuss what children have discovered about changing the loudness and pitch of sounds. This will help them when completing their experiment.

**SEND:** Visual word mat with newly learnt vocabulary.

Extra support when explaining the brief and task.



**Component 2:** Recognise that vibrations from sounds travel through a medium to the ear and that sounds get fainter as the distance from the sound source increases.

**What we will know after this sequence:**

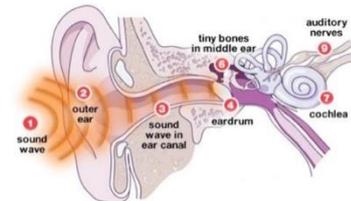
- Pupils will learn that there are many kinds of sound and that there are many ways of making sound.
- Pupils will understand that sound is made through vibrations from a source and research how sound travels.
- Pupils will know that sound travels through different mediums, including air, water and solids.
- Pupils will be able to recognise that sounds get fainter as the distance from the sound source increases.

**Vocabulary:** sound, transmit, medium, air, water, solid, vibrations, source, sound waves, particles, travel.

**How will this feed into my next learning:**

Pupils will learn how to control the volume of sound and how distance affects the sounds going into an ear.

**SEND:** Discussion to ensure understanding.



**Component 1:** Identify how sounds are made in our school and recognise that some sounds are made when something is vibrating.

**We should know:** How to create loud, soft, quiet, sudden sounds and differ the volume using our instruments, bodies and voices.

**What we will know after this sequence:**

- Pupils will consider which areas of the school will be quiet, which will be loud and which will have no sound at all.
- Pupils will move around the school listening for different sounds and record what they hear and where they hear it.
- Pupils will begin to consider sound, levels of sound and how different sounds are made.
- Pupils will understand the term 'noise pollution'.

**Vocabulary:** sound, listen, hear, ears, noise, loud, quiet, silent, vibrations.

**How will this feed into my next learning:**

Pupils will be more aware of sounds they can hear around them at school and how the sounds made can be increased in volume by machines or those making the sound.

**SEND:** Be aware of children who have a hearing impairment or who become distressed with loud

noises and make changes if necessary.

