

**KNOWLEDGE**

1. How are sounds made?  
Sounds are made when objects vibrate. The vibrations enter your ear and you hear them as a sound.

**Questioning and Enquiry Planning**

**KNOWLEDGE**

2. How do sounds change over distance?  
As the distance increases or decreases between the sound source and your ear, the sound becomes quieter or louder.

**Investigating**  
Observing, Measuring and Pattern Seeking

**KNOWLEDGE**

2. Can sound travel through an empty space of matter (vacuum space)?  
Sound cannot pass through a empty space of matter because sound waves need something (medium) to vibrate through such as air or water.

**Research**

**KNOWLEDGE**

4. What is pitch?  
Pitch is the highness or lowness of a sound.

**Investigating**

**KNOWLEDGE**

5. How can the pitch of a sound be changed?  
The pitch of a sound is affected by the size and features of the sound source. Smaller/ shorter objects usually produce higher pitch sounds, whilst larger objects produce a lower sounds.

**Investigating**

**KNOWLEDGE**

6. What is volume?  
Volume is the loudness or quietness of a sound.

**Investigating**

**KNOWLEDGE**

7. How can the volume of a sound be reduced effectively? (Part 1)  
The distance between the sound source and ear can be increased OR a sound source can be surrounded by a sound insulator (a material which blocks sound effectively).

**Questioning and Enquiry Planning**  
Observing, Measuring and Pattern Seeking

**KNOWLEDGE**

8. How can the volume of a sound be reduced effectively? (Part 2)  
The distance between the sound source and ear can be increased OR a sound source can be surrounded by a sound insulator (a material which blocks sound effectively).

**Recording and Reporting**  
Making Conclusions

## Prior Understanding

- Where is sound around us?
- Knowledge of instruments
- Independent observation of environmental sounds in their own life (prior observational skills)

## Links

- Music: pitch, volume
- Art/ DT: creating a musical instrument

## Experience

- Creating an instrument
- Investigation: using different materials to soundproof a shaker.