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| **Key vocabulary** | |
| **sound** | Something you can hear or that can be heard. We hear sound with our ears. |
| **sound source** | A source is producing sound when some part of it is vibrating. |
| **vibrations** | Sounds are made when something vibrates. This means it moves quickly backwards and forwards. |
| **pitch** | How high or low a sound is. |
| **volume** | How loud or quiet a sound is. |
| **sound insulation** | A material which blocks sound effectively. |

**How do we hear sound?**



**Sound – Year 4**

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| **Significant scientist** | |
| **Christian Doppler**  *(1803-1853)* | Christian Doppler was an Austrian mathematician and physicist. He is celebrated for his principle known as the Doppler effect. This describes how noises sound different as you move toward or away from a noisy object. |

**As well as travelling through air (gas), sound can travel through solids and liquids:**

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**Pitch**



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| The longer bars on the xylophone make a **lower** sound. | The shorter bars on the xylophone make **higher** sounds. |

**Volume**

The volume (loudness) of a sound depends on the size of the vibrations.



**The closer we are to the sound source the louder it will be.**

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|  | A train arriving at a station sounds loud. |

**The further away from a sound the fainter it will be.**

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|  | A train in the distance sounds quieter. |

**Insulating sound**

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|  | We can wear ear defenders to protect our ears from very loud sounds. |