# Science • Sound



## Crucial Knowledge

- A sound source produces vibrations which travel through a medium from the source to our ears.
- Mediums such as solids, liquids and gases can carry sound as the particles vibrate.
- Sound cannot travel through a vacuum as there are no particles.
- Soundwaves are detected in the ear and cause parts of the ear to vibrate, then the brain interprets this as the sound we hear.
- The loudness of the sound depends on the strength (size) of vibrations, which decrease as they travel through the medium.
- The volume of a sound is quieter if the listener is further away from the object.
- Pitch is how high or low a sound and is affected by the features of the object producing the sound.
- Pitch is determined by how many vibrations per second are being made by the vibrating object; the number of vibrations per second is called frequency



### **Key Vocabulary**



**Sound source**: Anything that makes a sound by creating vibrations.



**Vibration**: means moving up and down or side to side – it may make the air vibrate and create a musical note.



**Pitch (high, low)**: the pitch of a sound is how high or low the sound is.

**Faint:** a sound that cannot be heard very loudly.



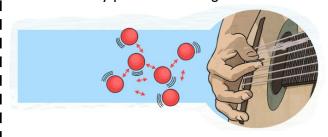
**Insulation:** material that can prevent sound travelling.

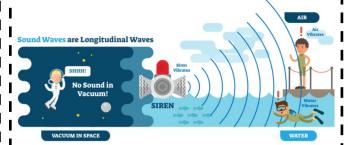
We Are Building Our Knowledge From Materials (Y2)

This will help when we learn about Electricity (Y6)

### Diagrams / Images

Sound is made by particles vibrating:





Depending on wave frequency we hear either high or low sounds.



Higher wave frequency = high pitch.

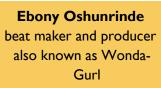
Lower wave frequency = low pitch.



### Important People



Emile Berliner invented the gramophone, the first device for listening to recordings at home







Mandy Parnell
A leading sound engineer in the recording industry