Key Vocabulary

Amplitude – a measure of the strength of a soundwave.

Decibel – a measure of how loud a sound is.

Pitch – how high or low a sound is.

Sound Waves – invisible waves that travel through air, water and solid objects as vibrations.

Vibrations – invisible waves that move quickly.

Volume – how loud or quiet a sound is.

SOUND

Year 4 Term 4

How do we record sound?

How does Sound travel to the ear?

Sounds are made when objects **vibrate**. The vibration makes the air around vibrate, and the air vibrations enter your ear. Our brain hears the vibrations and turns this into a sound.

-Sounds are made when objects vibrate.

-Vibrations travel from objects in waves to our ears, allowing us to hear sound.

-Weak vibrations make a gentle soundwave which do not travel as far as strong vibrations. This is why sounds have different volumes.

-Sounds can be high pitched or low pitched. Tight, short frequency waves make a high-pitched sound, while more loose waves make low-pitched sounds.

Volume

The volume of a sound is how loud or quiet it is.
Quieter sounds have a smaller amplitude and less energy (smaller vibrations) and louder sounds have a bigger amplitude and more energy.

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

A train arriving at a station sounds loud

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

A train in the distance sounds quieter

How is Sound made?

- Sound travels through the air in waves.
- When you clap your hands, the air around your hands shakes. This is the air molecules vibrating.

- When air molecules inside the ear vibrate, they shake tiny hairs on the insides of the ears. The hairs are connected to nerves under the skin.

- These nerves send messages to your brain to tell you that you heard a noise.

Pitch

The pitch of a sound is how high or low it is.
A squeak of mouse has a high pitch
A roar of a lion has a low pitch.

A high pitch sound is made because it has a high frequency. The sound source vibrates many times a second.

Why do some vibrations make sound and others do not?

Whistle
High pitch sound

Drum
Low pitch sound