

Carr Head Primary School - Knowledge Organiser

Science

Sound

Year 4

Spring 1

Key Knowledge

What is sound?	Sound is a type of energy.
How is a sound produced?	Sounds are created by vibrations . These vibrations can be made in a variety of ways. The vibration makes the air around the object vibrate and these vibrations enter your ear. They are called sound waves .
How do sounds travel?	Sounds can travel in all different directions. Sounds can travel through solids, liquids and gases.
How do sounds change?	You can change the pitch of a sound—this is how high or low the sound is. Faster vibrations lead to a higher pitch. The volume of a sound can be changed—this is how loud something is.
Can sound be measured?	Size of vibrations can be measured—this is called the amplitude . How loud a sound is can be measured in decibels . Sound wave cycles can also be measured.
Graham Alexander Bell	He became interested in sound because both his mother and wife were deaf. His experiments led to the in-

Key Vocabulary

amplitude	the size of a vibration—the larger the amplitude the louder the sound
decibel	a measure of how loud a sound is
frequency	a measure of how many times per second the sound waves cycle
pitch	how loud or high a sound is
sound wave	vibrations travelling from a sound source
source	where the sound comes from
vibration	a movement backwards and forwards
volume	loudness of sound

Diagrams

Pitch:

- **High pitch** sounds are created by **short sound waves**.
- **Low pitched** sounds are created by **long sound waves**.

Volume:

- The closer you are to the **source** of the sound, the **louder** the sound will be.
- The further away you are from the **source** of the sound, the **quieter** the sound will be.

Know how to...

Working Scientifically

- find patterns in the sounds that are made by different objects such as saucepan lids of different sizes
- investigate which materials provide the best insulation against sound
- make and play their own musical instruments using what they have learned about pitch and volume

