Science - Year 4 - Physics

Sound

Key Vocabulary

vibration

sound wave

volume

amplitude

pitch

ear

particles

distance

soundproof

absorb

vacuum

eardrum

Science GOLDEN WORDS:

prediction

measurements

conclusion

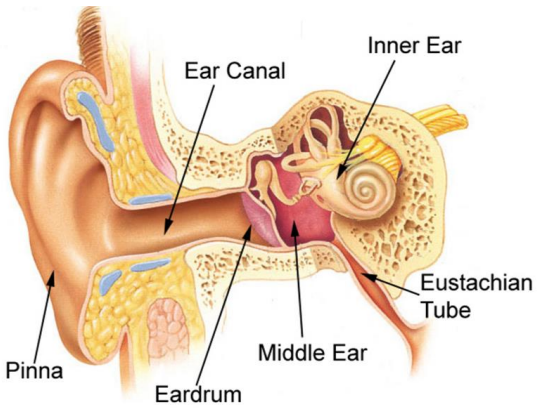
explain

classify

Key Facts

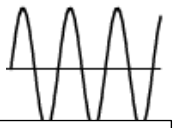
- Sound is a type of energy. Sounds are created by vibrations. The louder the sound, the bigger the vibration.
- Pitch is a measure of how high or low a sound is. A whistle being blown creates a high-pitched sound. A rumble of thunder is an example of a low-pitched sound.
- The size of the vibration is called the amplitude. Louder sounds have a larger amplitude, and quieter sounds have a smaller amplitude.

Inside the Ear

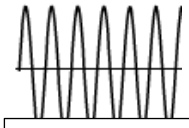


Inside your ear, vibrations hit the eardrum and are then passed to the middle and then the inner ear. They are then changed into electrical signals sent to your brain. Your brain tells you that you are hearing a sound.

Pitch



Slower vibrations = **lower pitch**



Faster vibrations = **higher pitch**

The **pitch** of a sound is how **high** or **low** the sound is. A high sound has a **high pitch** and a low sound has a **low pitch**.

Sound energy

Sound can travel through solids, liquids and gases. Sound travels as a wave, vibrating the particles in the medium it is travelling in. Sound cannot travel through a vacuum.

Sound energy can travel from particle to particle far easier in a solid because the vibrating particles are closer together than in other states of matter.

Our 'Sound' knowledge journey:

**This is the first time children will meet this topic.*

Working Scientifically:

- making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers
- gathering, recording, classifying and presenting data in a variety of ways to help in answering questions