

Roby Park Primary School Year 4
Physics
Sound



What we already know:

- ✓ Hearing is one of our five senses.
- ✓ Sounds can be combined using musical instruments.
- ✓ What the word vibration means.

We are learning to:

- Identify how sounds are made, associating some of them with something vibrating
- Recognise that vibrations from sounds travel through a medium to the ear
- Find patterns between the pitch of a sound and features of the object that produced it
- Find patterns between the volume of a sound and the strength of the vibrations that produced it
- Recognise that sounds get fainter as the distance from the sound source increases.



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Key Vocabulary

Vibration - makes the air around vibrate, and the air vibrations enter your ear.

Pitch - The quality of a sound governed by the rate of vibrations producing it; the degree of highness or lowness of a tone.

Volume - Quantity or power of sound; degree of loudness.

Amplitude - The amplitude of a wave is a measure of the displacement of the wave from its rest position.

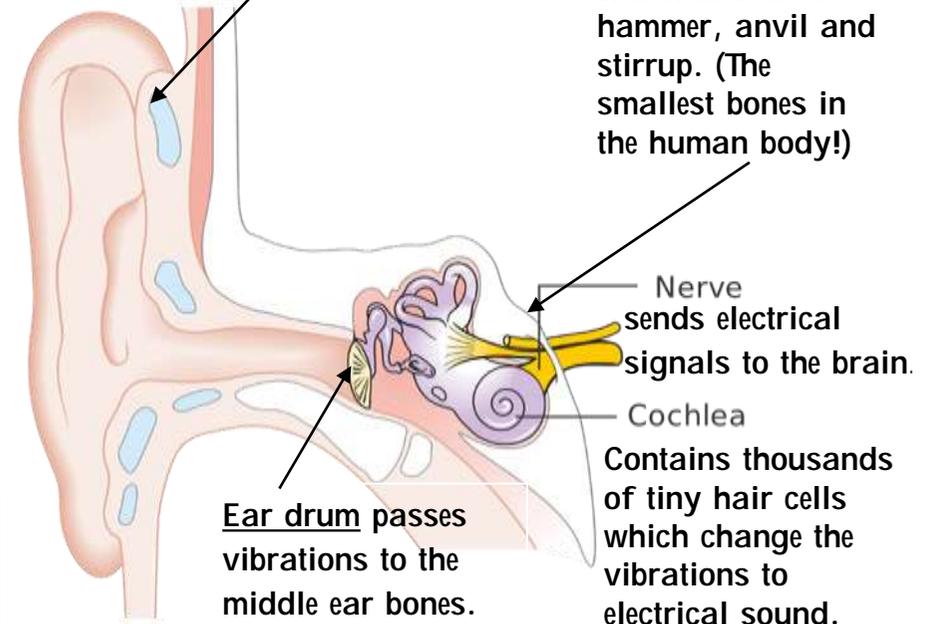
DID YOU KNOW?

Soundproofing is when a material is used to absorb loud sounds. Recording studios or night clubs might use them to stop sound escaping the room! Soft, spongy or pliable material is often best for this.

Sounds get fainter (quieter) as the distance from the sound source increases

The Power of Five

Outer Ear



Ear drum passes vibrations to the middle ear bones.

Middle ear bones which include the hammer, anvil and stirrup. (The smallest bones in the human body!)

Nerve sends electrical signals to the brain.

Cochlea Contains thousands of tiny hair cells which change the vibrations to electrical sound.

Investigate!

Play a sound bingo game, matching sounds with images.

Investigate what happens when a piece of paper is placed between the tines of a vibrating tuning fork. Explore ways of changing sounds through a variety of instruments. Test changing. Sounds on a straw oboe and by making a bottle orchestra. Use data loggers to measure the volume. of their voices. Create a sound track for a film.





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4Ws

Where do soundwaves vibrate inside the ear?

What does sound travel very well through?

What sends electrical signals to the brain?

Why do sounds become quieter over distance?

3 2 1

List 3 ways we can change sound

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.....
.....

Recall 2 facts about how sound travels

.....
.....

Recall 1 fact about hearing

.....



Name 5 body parts of the ear



VOCABULARY UNSCRAMBLE

r a e m u d r

Part of the ear that has a layer which vibrates

e v m o l u

Degree of loudness.

h c t i p

Measure how high or low a sound is.

Speedy Pencil. Write as much as you can remember in 5 minutes



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