

Nova's Science Journal: How Sound Travels

Learning objective: To explain how sound is created by vibrations and how it travels through a medium to reach our ears.

Use this scaffold to write a scientific explanation of sound. Imagine you are helping Nova the owl explain these concepts to the rest of the forest animals. Use the word bank to help your writing flow.

Sound is all around us, from the gentle rustle of leaves in the trees to the loud hoot of an owl in the night sky.

Word bank: vibrations · medium · particles · sound waves · ear canal · eardrum · travels · therefore · consequently · in addition · as a result

1. How is sound initially produced? Start by describing what happens to an object when it makes a noise. (2 marks)

2. How do sound waves move through a medium like air? Explain how the particles interact with one another. (3 marks)

3. Why can we not hear sound in a vacuum (space)? Use the word 'medium' in your explanation. (2 marks)

4. What happens when the sound waves reach our ears? Describe the journey from the outer ear to the eardrum. (3 marks)

5. Summarise your findings: If you hit a drum harder, what happens to the vibrations and the sound produced? (2 marks)

Extension challenge: Research how sound travels through different materials, such as water or solid wood. Write a short paragraph explaining which material you think sound would travel through the fastest and why.