

Sound

Chapter 6: Sound · Topic 1

Key Concept

Sound is produced when an object vibrates, creating waves that travel through a medium like air to reach our ears.

Sound cannot travel through a vacuum (empty space) since it needs a medium (solid, liquid, or gas) to travel through.

The pitch of a sound depends on frequency (higher frequency means higher pitch), while loudness depends on amplitude.

Understanding sound helps us explain how musical instruments work, how we hear, and phenomena like echoes.

Quick Revision Notes

- Sound is produced by vibrations.
- Sound waves travel through a medium.
- Sound cannot travel through a vacuum.
- It needs air, water or solids to travel.
- Pitch depends on frequency.
- Higher frequency means higher pitch.
- Loudness depends on amplitude.
- Sound explains instruments, hearing and echoes.

Practice Questions

- 1 Discuss how a musical instrument produces sound.
- 2 Explain why sound can't travel in a vacuum.
- 3 Discuss the difference between pitch and loudness.
- 4 Research how an echo forms.
- 5 Make a simple vibration (like a ruler on a desk) and observe sound.
- 6 Explain how our ears detect sound.