Sound

Answers

KS3 science quick questions

This topic online

Activate 1: Sound | Exploring Science 7L

Q	Answer	Remember
1	vibration	Touch your throat while you hum - you can feel the vibrations.
2	vacuum	Sound needs particles to pass the vibration along, and a vacuum has none.
3	medium	A medium can be a solid, a liquid or a gas.
4	solid	Particles in a solid are packed closely, so they pass the vibration on quickly.
5	340 m/s	About 330 to 340 m/s - roughly a kilometre every 3 seconds.
6	hertz	1 hertz means one vibration every second.
7	higher	Fast vibrations give a squeaky, high-pitched note.
8	amplitude	Bigger amplitude, bigger vibration, louder sound.
9	echo	Hard, flat surfaces reflect sound well; soft surfaces absorb it.
10	shorter	Higher frequency, more waves squeezed in each second, so each wave is shorter.
11	absorption	Soft, fluffy materials absorb sound; hard, flat ones reflect it.
12	20000 Hz	Our hearing range shrinks as we get older, especially at the high end.
13	longitudinal	Longitudinal: the vibration runs along the length of the wave.
14	oscilloscope	A taller trace means a louder sound; more waves squeezed on the screen means a higher pitch.
15	parallel	Sound is a longitudinal wave: the particles move back and forth along the wave.
16	1020 m	Distance = speed × time = 340 × 3. The light reaches you almost instantly.
17	1500 m	The sound goes down and back, so halve the total: 1500 × 2 = 3000 m there and back, 1500 m deep.
18	340 m/s	Speed = distance ÷ time = 170 ÷ 0.5 = 340 m/s.
19	compressions	Squashed parts are compressions; stretched-out parts are rarefactions.
20	Space is a vacuum with no particles to carry sound, but radio waves can travel through a vacuum.	Sound needs a medium; radio waves, like light, do not.

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