Sound

Waves 3.4.1 | Part 1, usually Year 7 | 20 quick questions

KS3 science quick questions

Answer online, marked instantly

Activate 1: Sound | Exploring Science 7L

Name: _____ **Date:** _____ **Score:** _____ **/ 20**

1 Every sound starts with something moving quickly back and forth. What is this movement called? Answer in one word.

2 Sound cannot travel through a space with no particles in it at all. What is such a space called?

3 What is the science word for the material that a sound travels through, such as air or water?

4 Does sound travel fastest through a solid, a liquid or a gas?

5 Which is closest to the speed of sound in air: 34 m/s, 340 m/s or 3400 m/s?

6 What is the unit of frequency?

7 A sound has a higher frequency. Does it have a higher or a lower pitch?

8 Which property of a sound wave decides how loud the sound is?

9 You shout towards a cliff and hear your voice come back a moment later. What is the reflected sound called?

10 A whistle plays a higher note, so its sound waves have a higher frequency. Is their wavelength longer or shorter?

11 Thick curtains and carpets make a room less echoey. They take in the energy of sound instead of reflecting it. What is this called? Answer in one word.

12 Young people can hear sounds from about 20 Hz up to about how many Hz?

13 There are two main types of wave. Which type is sound: transverse or longitudinal?

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14 Which device shows a sound as a wavy line on a screen, so you can see its amplitude and frequency?

15 In a sound wave, do the particles vibrate parallel to the direction the wave travels or at right angles to it?

Year 9 stretch

16 During a storm you hear thunder 3 s after you see the lightning. Sound travels at 340 m/s. How far away is the storm? Give your answer in m.

17 A ship sends a sound pulse down to the sea bed. The echo returns after 2 s. Sound travels at 1500 m/s in sea water. How deep is the sea? Give your answer in m.

18 The sound of a school bell takes 0.5 s to reach you from 170 m away. What is the speed of sound? Give your answer in m/s.

19 In a sound wave, what are the regions called where the air particles are squashed close together?

20 Explain why astronauts on a spacewalk talk to each other by radio instead of just shouting.

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