

# Sound

## 3.1 Sound waves and how they travel

1. Use the words from the box to complete the sentences below.

Use each word once, more than once, or not at all.

air compressions waves solids vibrating rarefactions moving vacuum radio

a. All sound is produced by something that is vibrating. Sound can travel through solids, liquids, and gases but not through a vacuum.

b. Sound waves consist of compressions (where the particles are close together) and rarefactions (where the particles are further apart).

2. Here is a bar chart showing the speed of sound in different materials, A, B, and C. One is a solid, one is a liquid, and one is a gas.

a. Give the letter of the material that is a solid. B

b. Is material A a solid, a liquid, or a gas? gas

c. How much faster, approximately, does sound travel in solids than in gases? Circle one of the answers below.

1000 times faster

100 times faster

**10 times faster**

