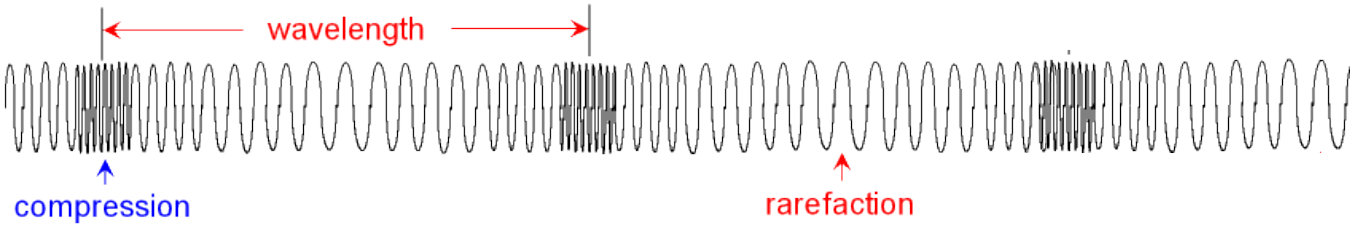
1. Draw a longitudinal wave with three compressions and three rarefactions. Label each. Label one wavelength.



2. How does frequency of a longitudinal wave affects the pitch of the sound?

The higher the frequency, the higher the pitch.

3. Unlike EM waves, sound waves require a medium to travel.

4. Solids, liquids and gases – through which form of matter do sound waves travel the fastest and why?

Sound wave vibrations generally travel faster through a solid than through a gas or liquid. The reason for this is that the particles making up a solid are closer together so the vibrations are passed from one particle to another more quickly due to the short distance between them.

5. Use the words vibration, sound and particles in a complete sentence that shows your understanding of these words.

This is up to you to figure out using your notes and glossary words.

6. How does the temperature of a medium affect how fast sound waves move through it?

The higher the temperature of a medium the faster the sound waves will move through it. This happens because the particles are moving faster than they are at lower temperatures.

7. Why did the person feel the explosion before the other person heard it?

In the video, the feeling person sensed the explosion before the hearing person because the vibrations created by the explosion traveled faster through the ground (a solid) than they did through the air (a gas).