

WHALES GIANTS OF THE OCEAN

Lesson 8.1 Sound Waves

Student Sheet

Activity 1

Sounds are made by vibrations. Sound needs matter to travel through, like air, water, or bones.

1. Touch the side of your throat and say 'aah'.

What do you feel as you say 'aah'? What do you hear?

I feel _____

I hear _____

2. Swing the metal hanger into the table (or have a fellow student tap on it).

What do you hear?

I hear _____

3. Put your index fingers (with the string attached) in your ears.

Tap the hanger again. Now what do you hear?

I hear _____

Think About It

4. Do you think sound would travel faster in a liquid (like water), a gas (like air), or a solid (like putting your ear on your desk and having someone tap on the surface)?

5. Why do you think sounds are louder in a classroom with a tile floor than in a library that is carpeted?

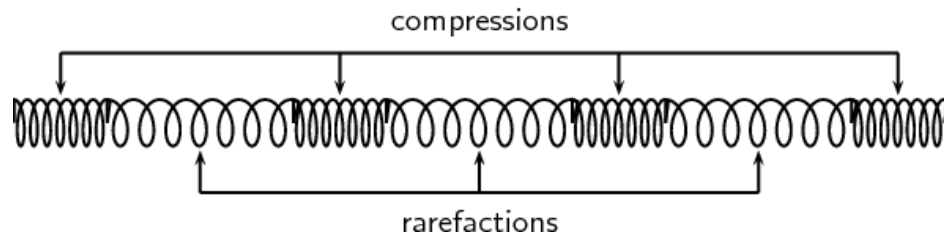
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Activity 2

Sound waves are hard to see but we can use a Slinky® to see what a compressional wave looks like.



1. Stretch out the Slinky halfway, and then give one end a hard push forward.
2. A compression should form at that end of the slinky and move up the coil.
3. Then, if it hits the other end hard enough, the motion will ripple back down the coil to the end that the movement started from.

Draw what the Slinky looked like when you pushed it back and forth:

Sound waves are formed in a way that might surprise you: when air is pushed, the particles of air are squeezed together or compressed. When the air stops being pushed, there's a 'dead space' or decompressed area where there is less air. If air is pushed at regular intervals, a compressional wave is formed.

Draw what a sound wave might make the air particles look like if you could see them: