# How Waves Travel Through Mediums

Name:

Use the video to help answer the questions below.

## Sound Waves

Sound is a form of _____. Sound needs a _____ for its propagation (to be heard). Sound waves can travel in three basic mediums. _____ such as air, _____ such as water, or _____ like wood or metal. During a thunderstorm, a person will see the lightning before they hear the thunder. This happens because _____ travels faster in air.

### Sound Through Liquids

Sound travels faster in water.

Explain in your own words why sound travels faster in water than air.

### Sound Through Solids

Sound waves travel even _____ or faster through solid things like wood or metal. Since the particle in a solid are _____ packed, sound waves travel the _____ in this medium.

During the sound experiment, the sound waves traveled better through the solid _____ that the student placed his ear on. This proved that sound waves travel faster in _____ objects than through _____ such as air.

Sound cannot travel in space because there is no _____ such as air or any other matter. The term _____ is used to describe a situation where no medium is present.

Fill In the Chart

| Medium | States of Matter | Speed (m/s) |
|---|---|---|
| | | |
| | | |
| | | |

## How Light Waves Travels

Refraction is when light _____when it travels from one _____ to another. Refraction is caused by a _____ in speed from one medium to another. When light hits a more dense medium the light will have a _____ speed. Light travels _____ in less dense materials.

Explain in your own words why the pencil looks bent when it is in water

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