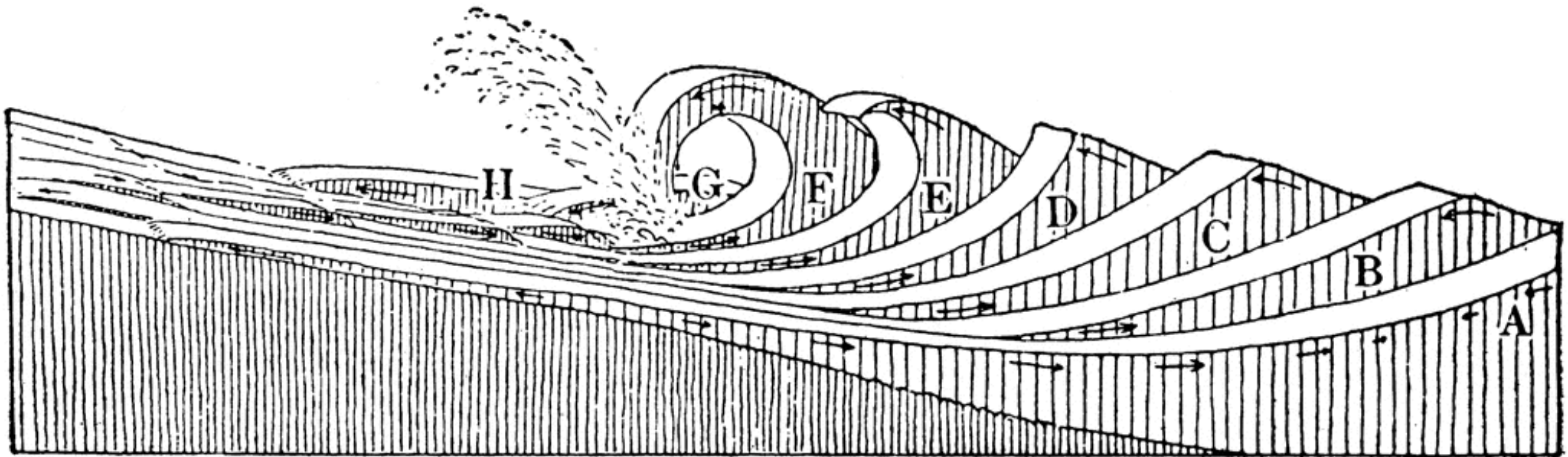
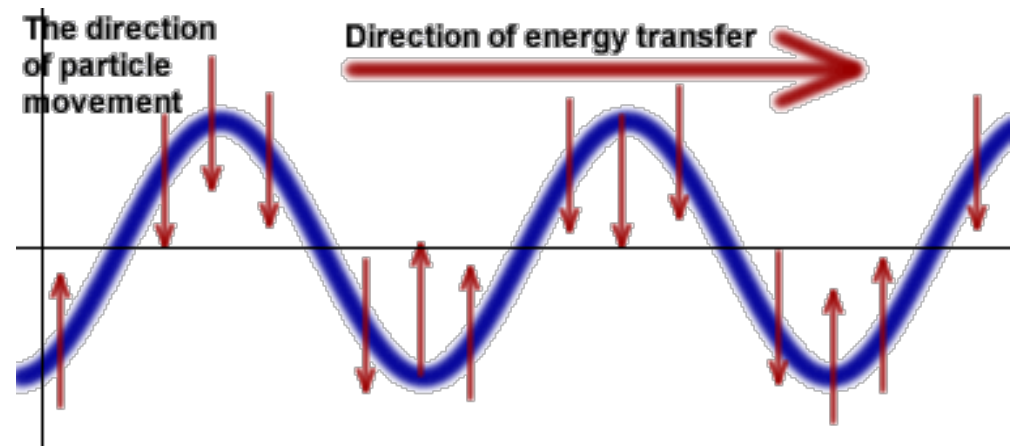
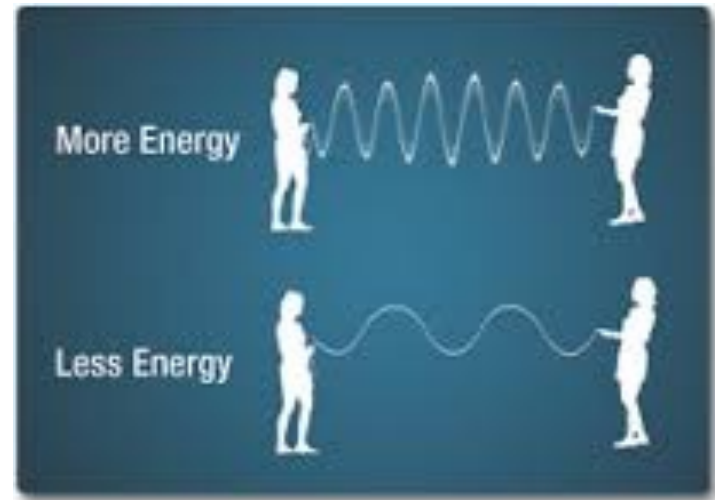
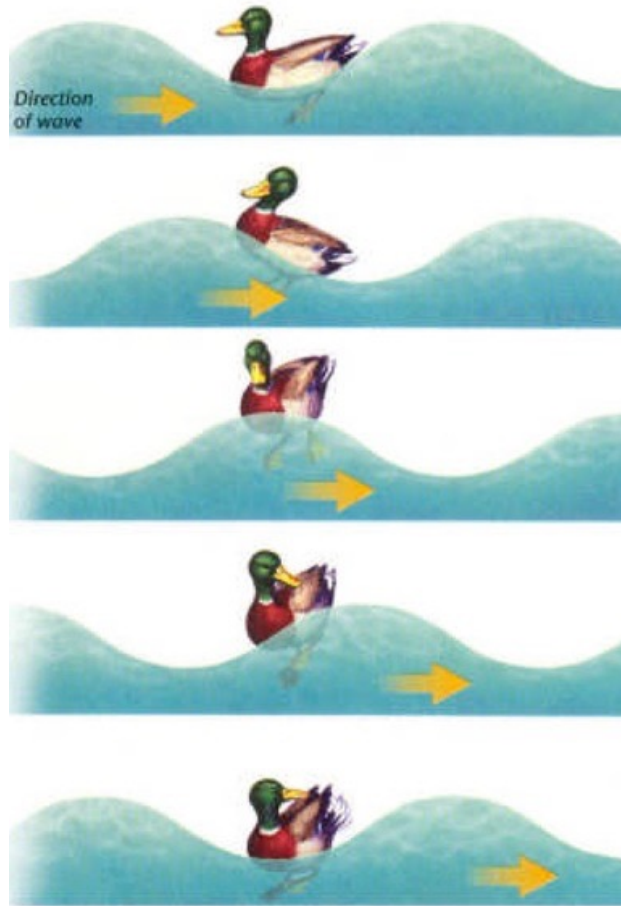


Waves, Sound & Light

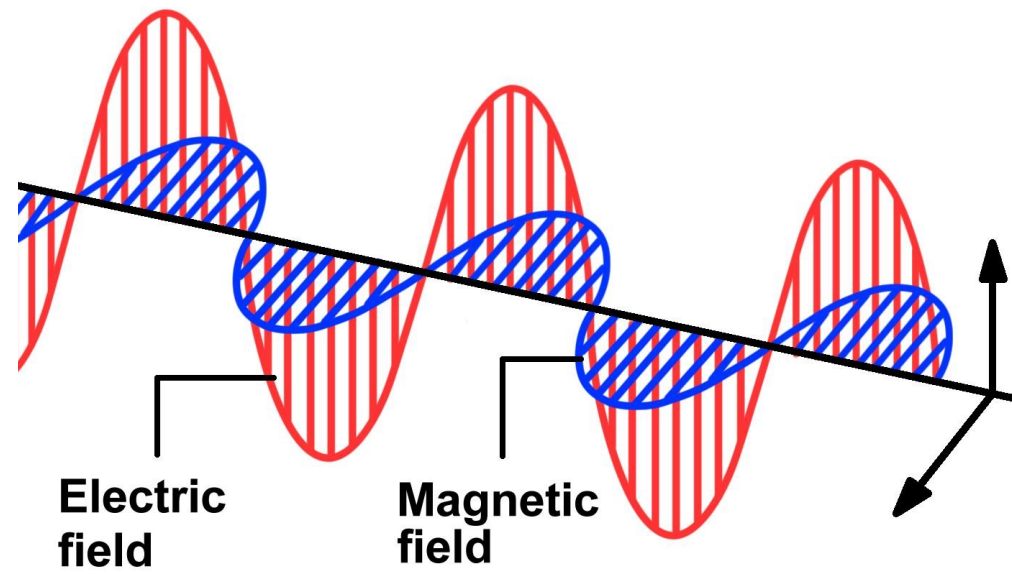
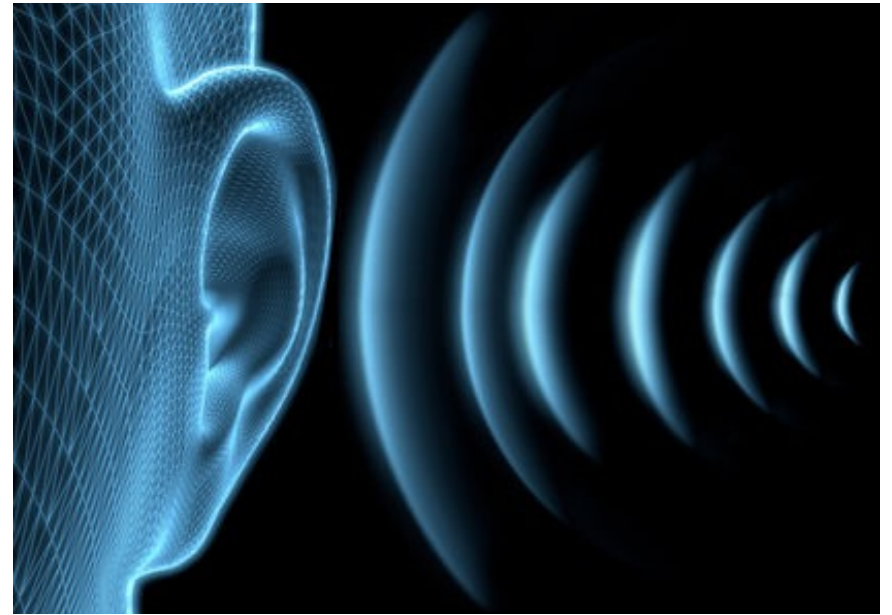


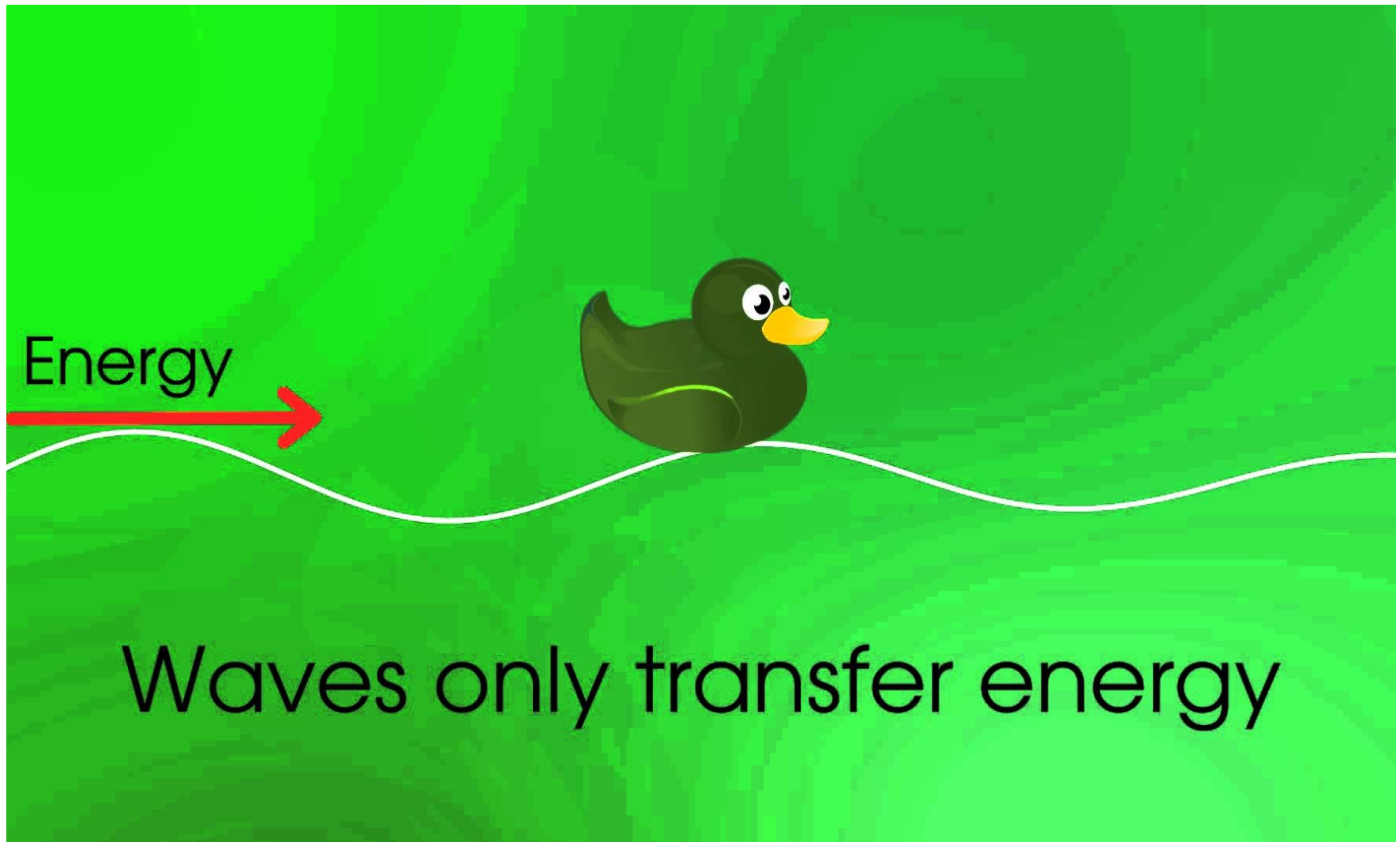
How would you
describe waves?



Wave- the transfer of energy from place to place

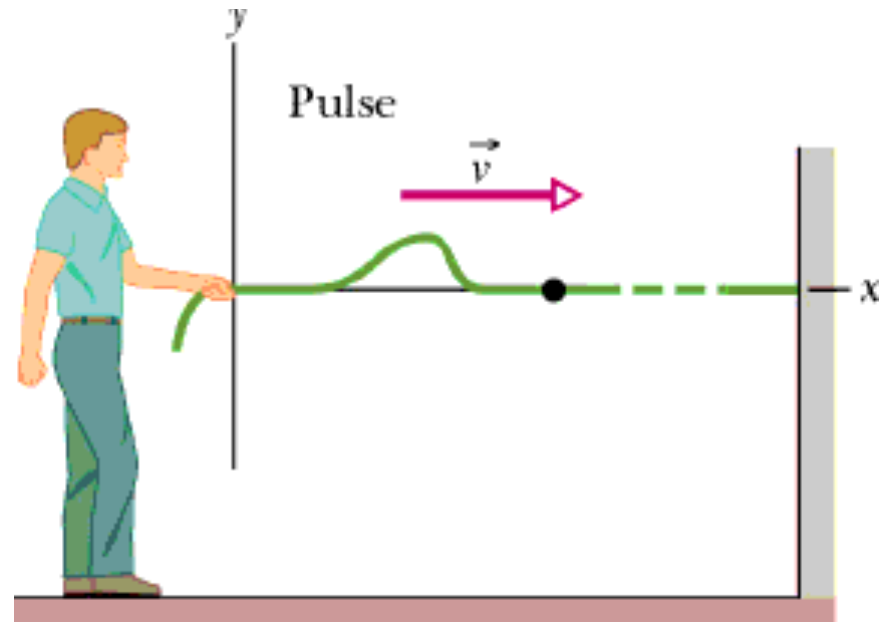
-a disturbance that travels through space or matter

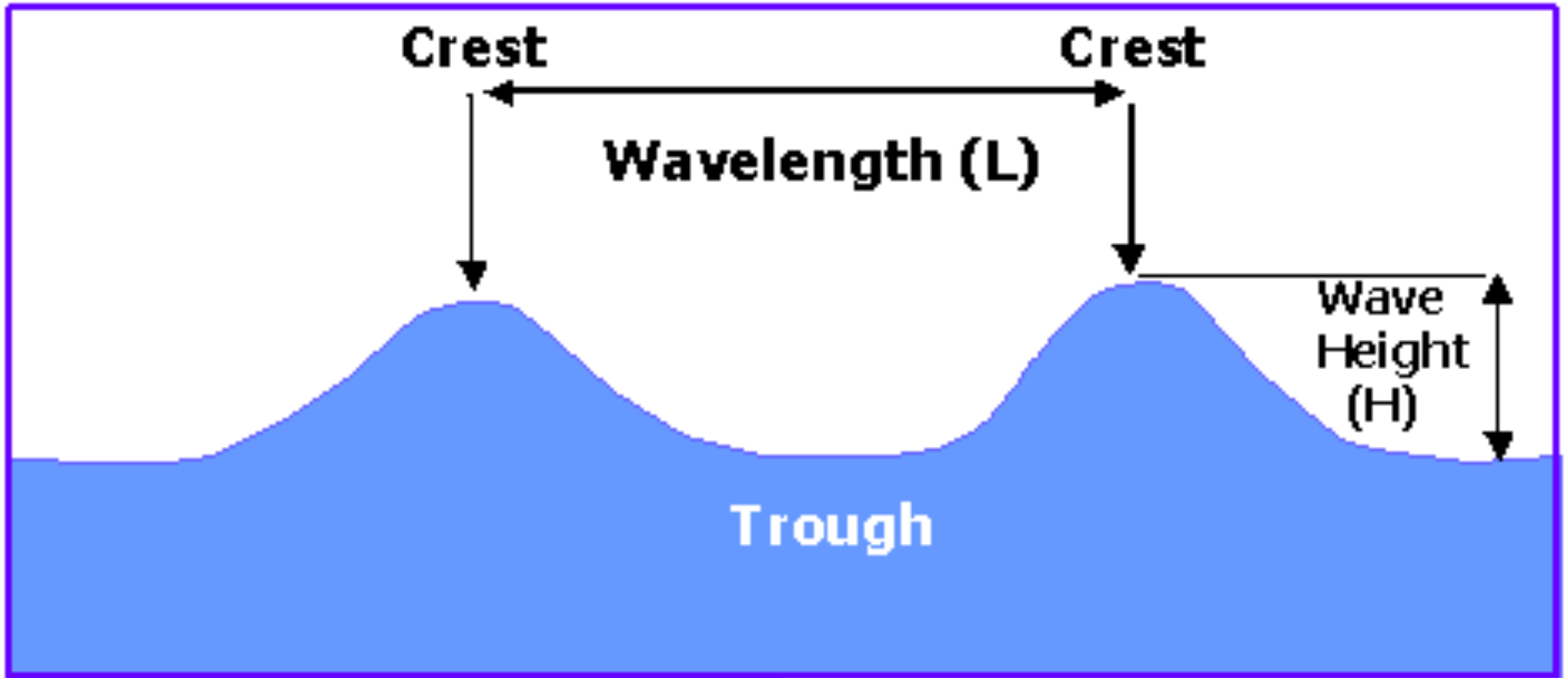




Wave- the transfer of energy from place to place
-a disturbance that travels through space or matter

Pulse vs Waves

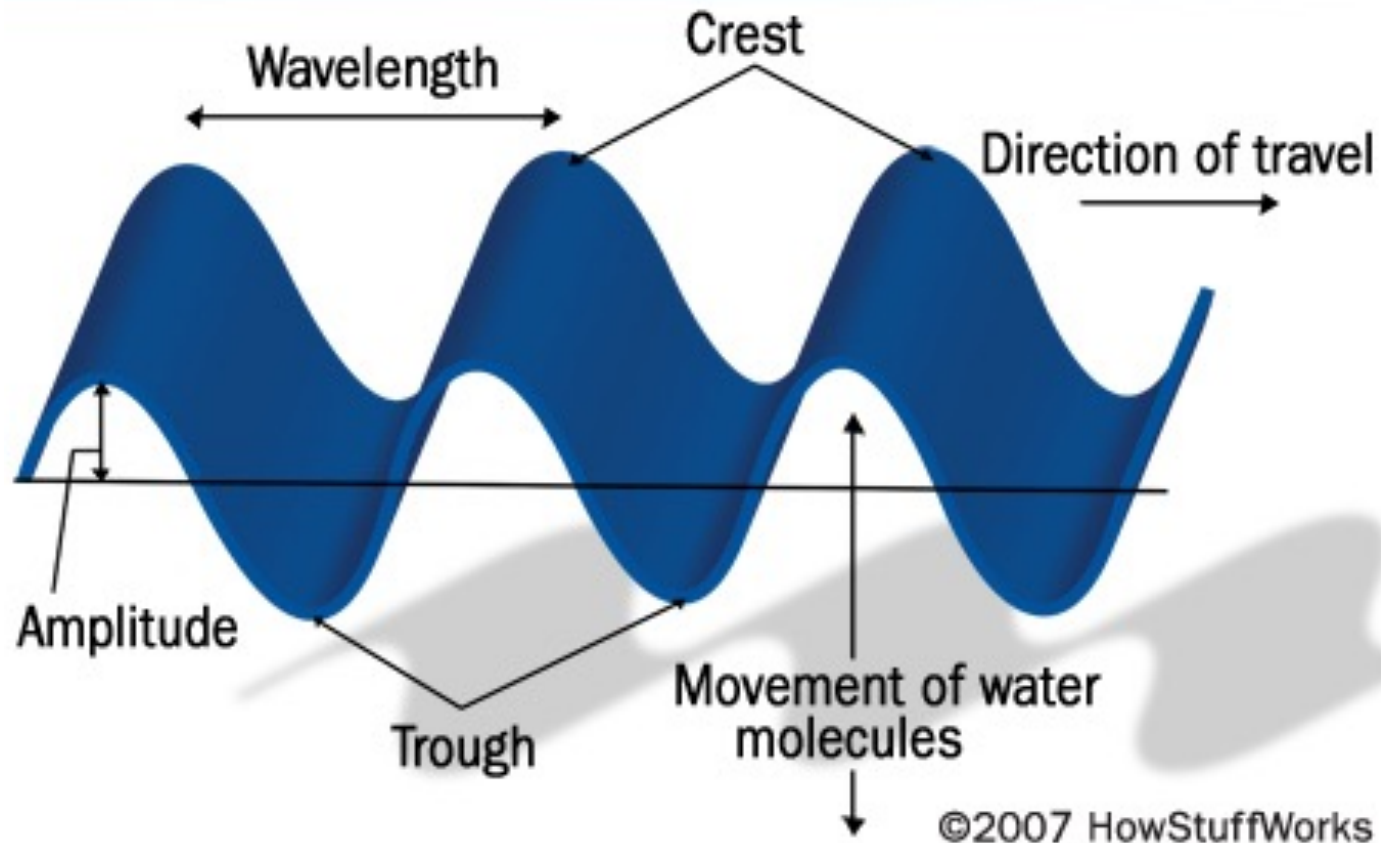




Wave Diagram

wavelength, amplitude

Transverse Wave



Wave Diagram

crest, trough, wavelength, amplitude, frequency

Wave Simulator

pulse

wave

wavelength

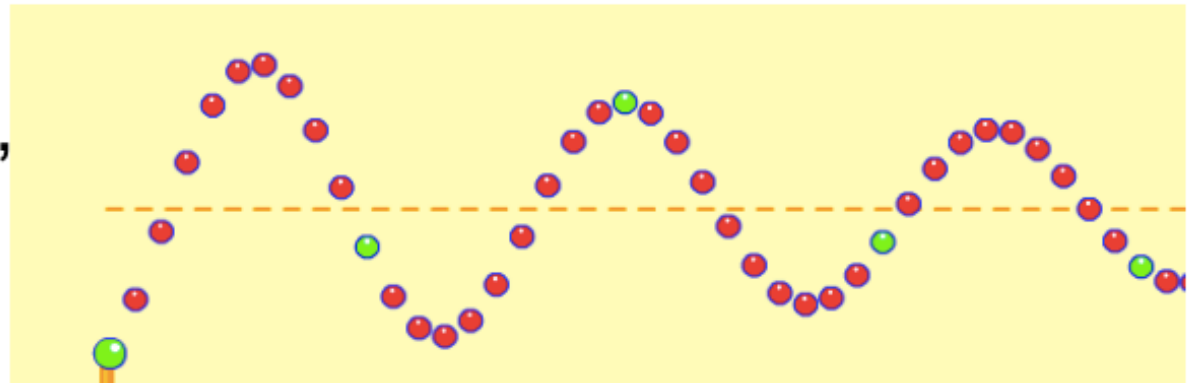
amplitude

frequency

damping

5 In the simulation, how would you describe the movement of the green beads in the rope as it was waving?

A As the wave moved, the green beads moved forward towards the end of the rope.



B As the wave moved, the green beads bounced up and down but did not move forward or backward.

C The green beads moved forward with the wave.

D The green beads moved backward as the wave moved forward.

What do you need to
have a wave?

In a wave, what is
actually 'waving'?

Waves

Waves require a medium

- medium- the material through which a wave travels
 - gas, liquid or solid

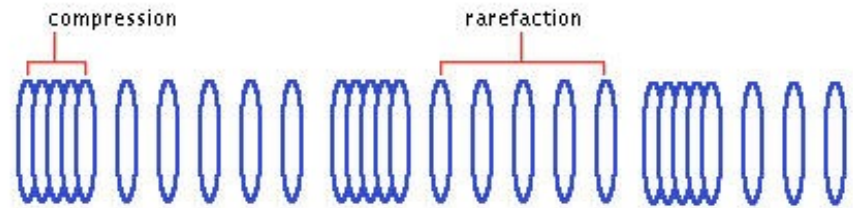


Figure 1: Longitudinal Wave

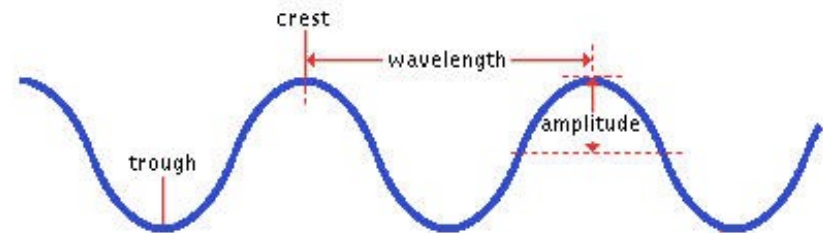
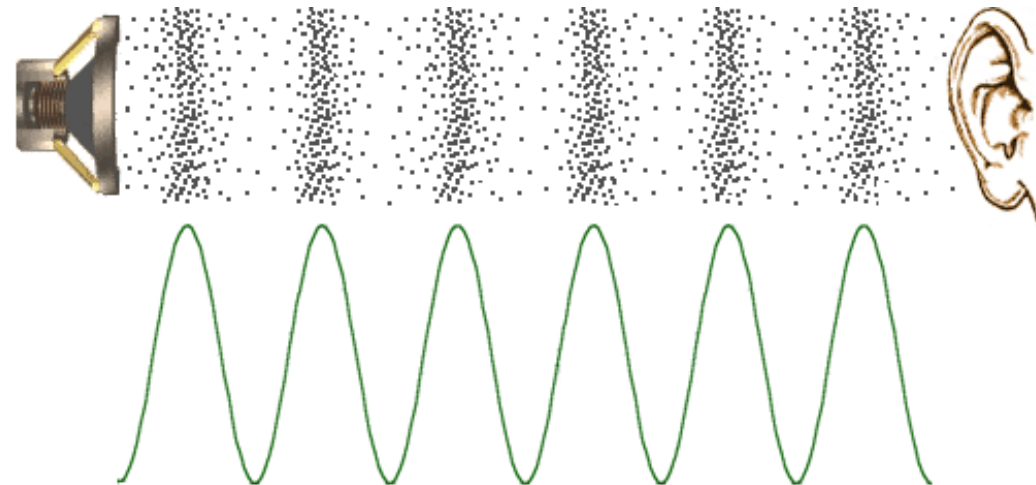


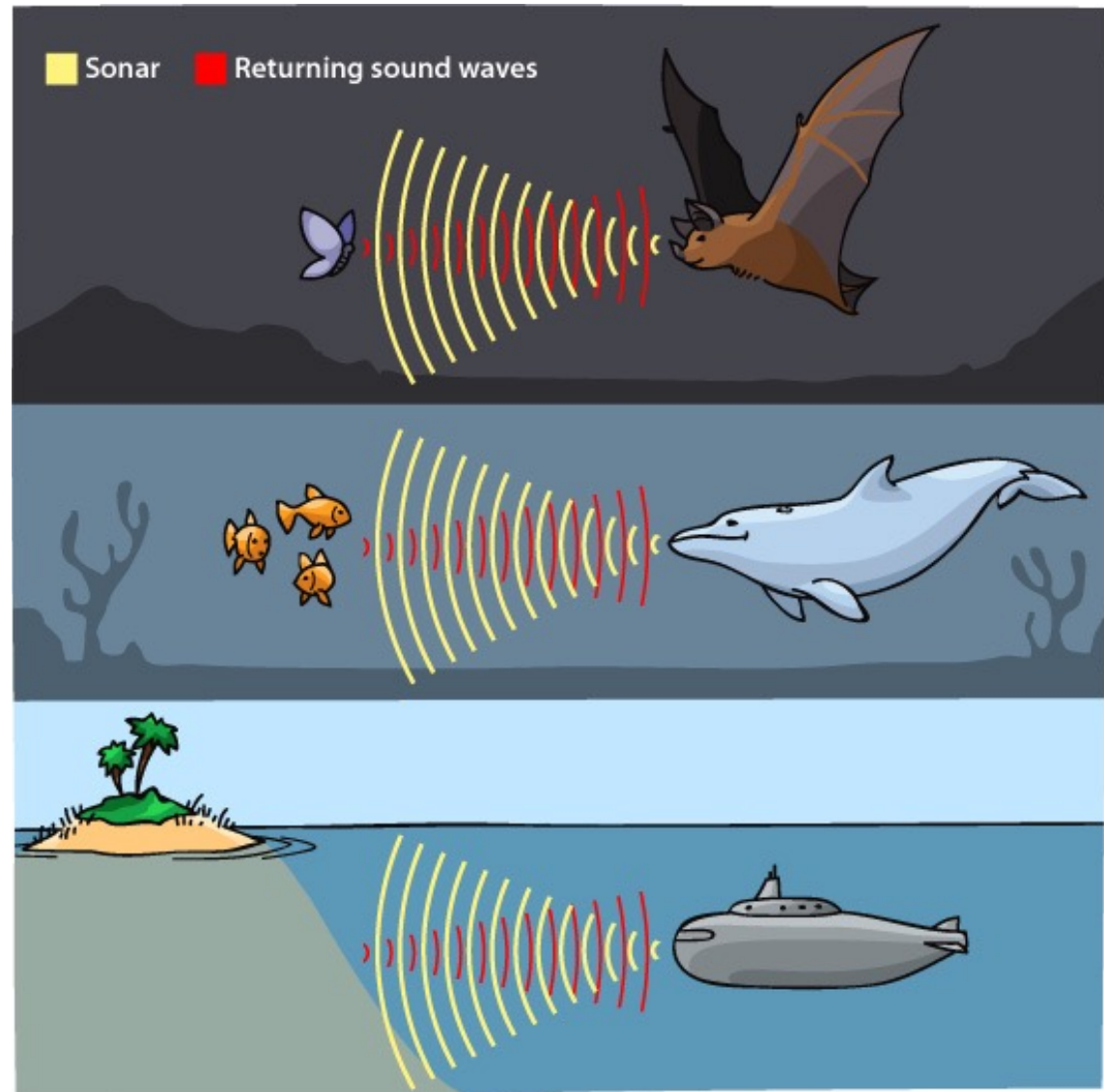
Figure 2: Transverse Wave



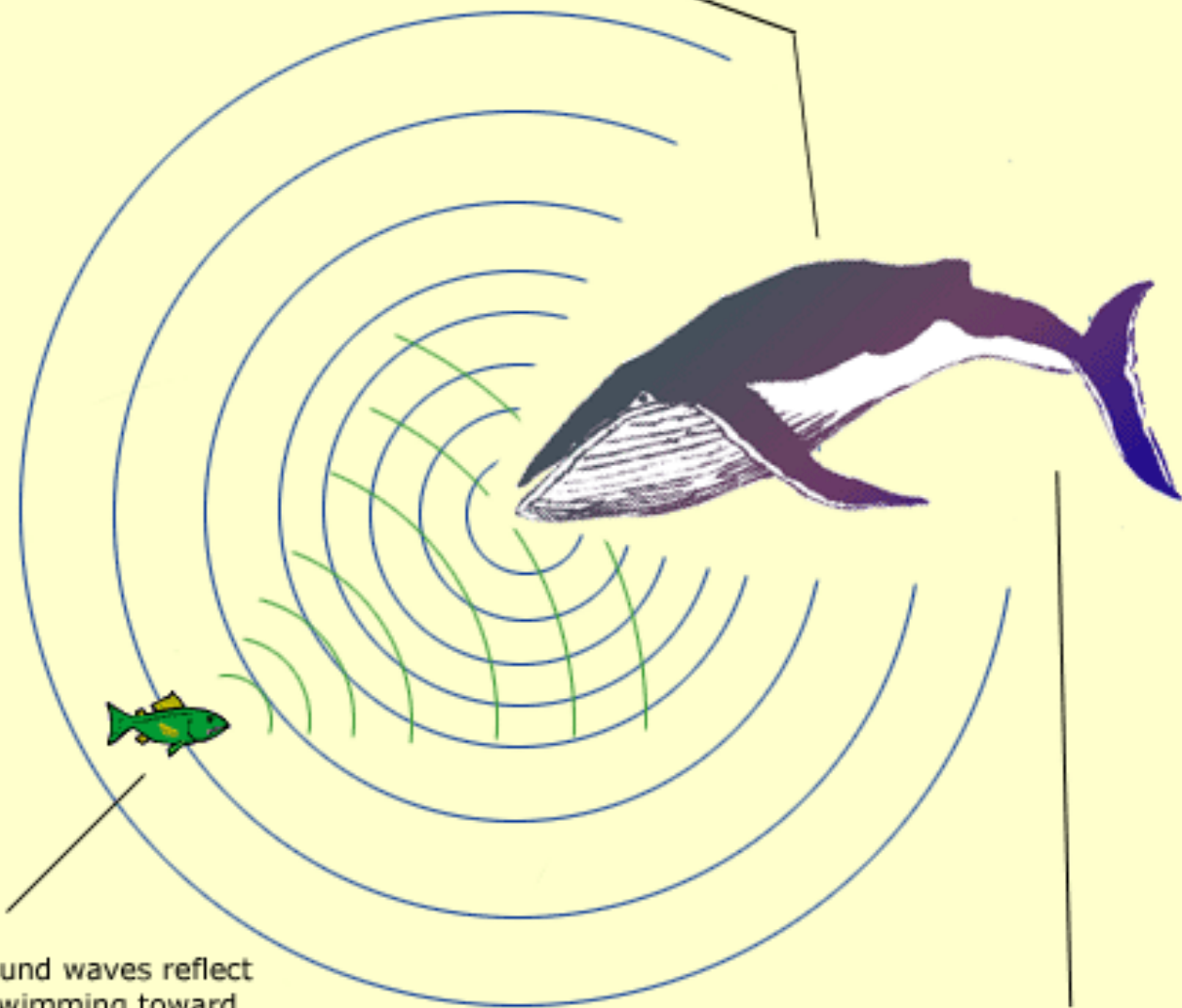
Waves

Waves require a medium

- medium- the material through which a wave travels
 - gas, liquid or solid



A whale sends out its sounds and songs...



...those sound waves reflect off a fish swimming toward the whale...

...and the whale uses those reflected sound waves to determine where the fish is and what direction it is swimming.

1 In the PhET simulation, what medium was the wave traveling through?

A Empty space

B Air

C A rope made up of green and red beads

D Water

2 A pulse is a single disturbance that travels through a medium.

True

False

Classwork/Homework