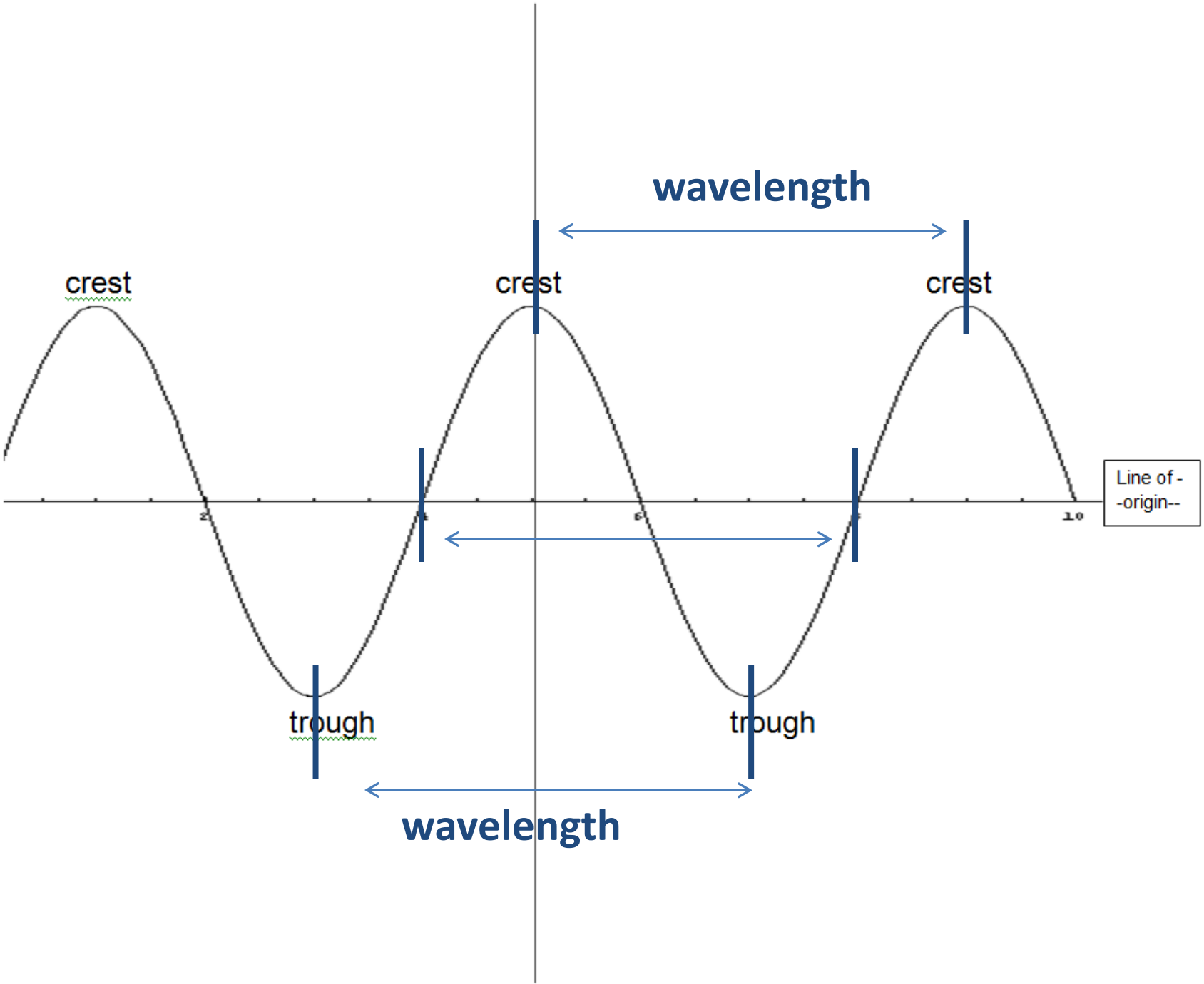
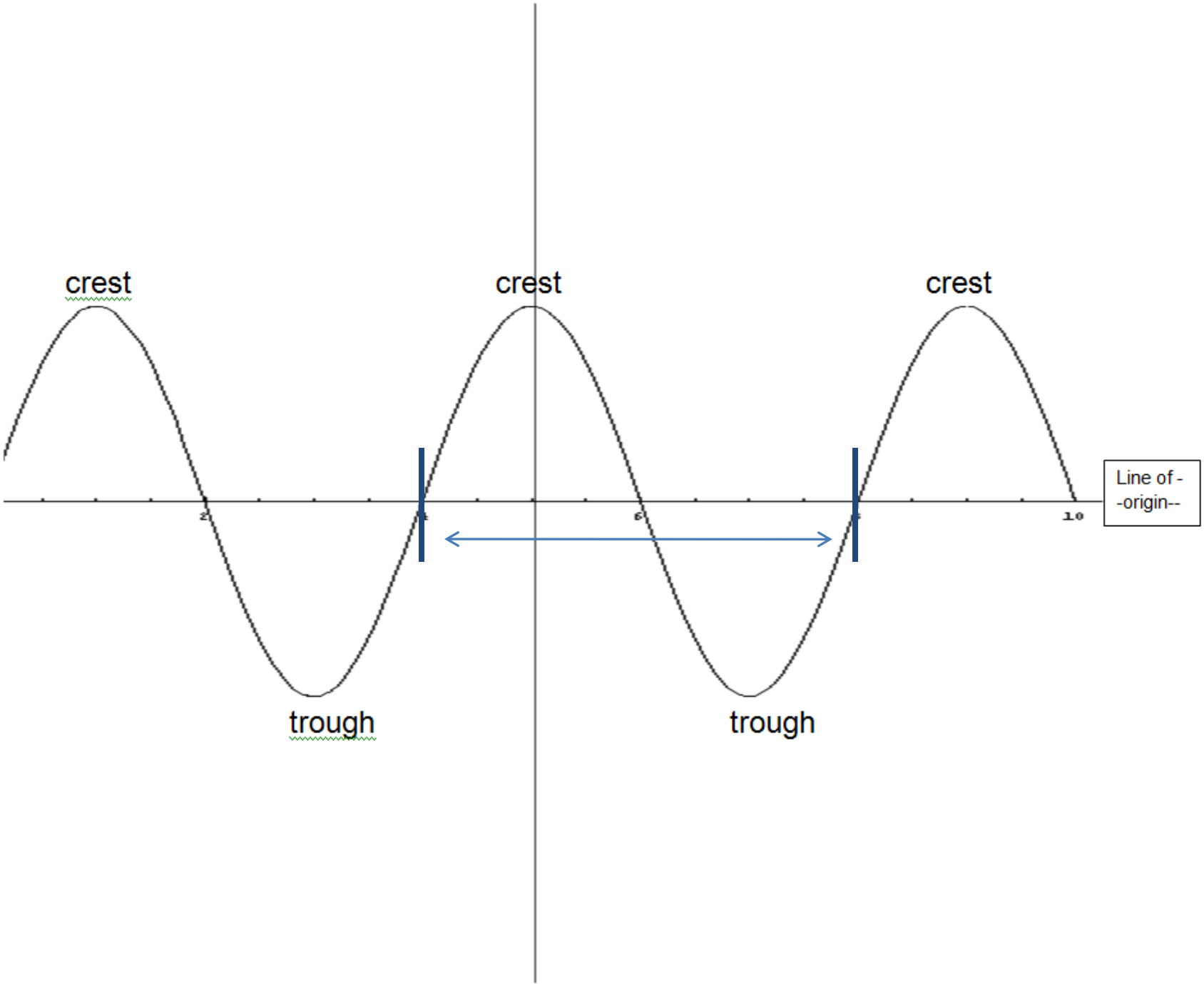
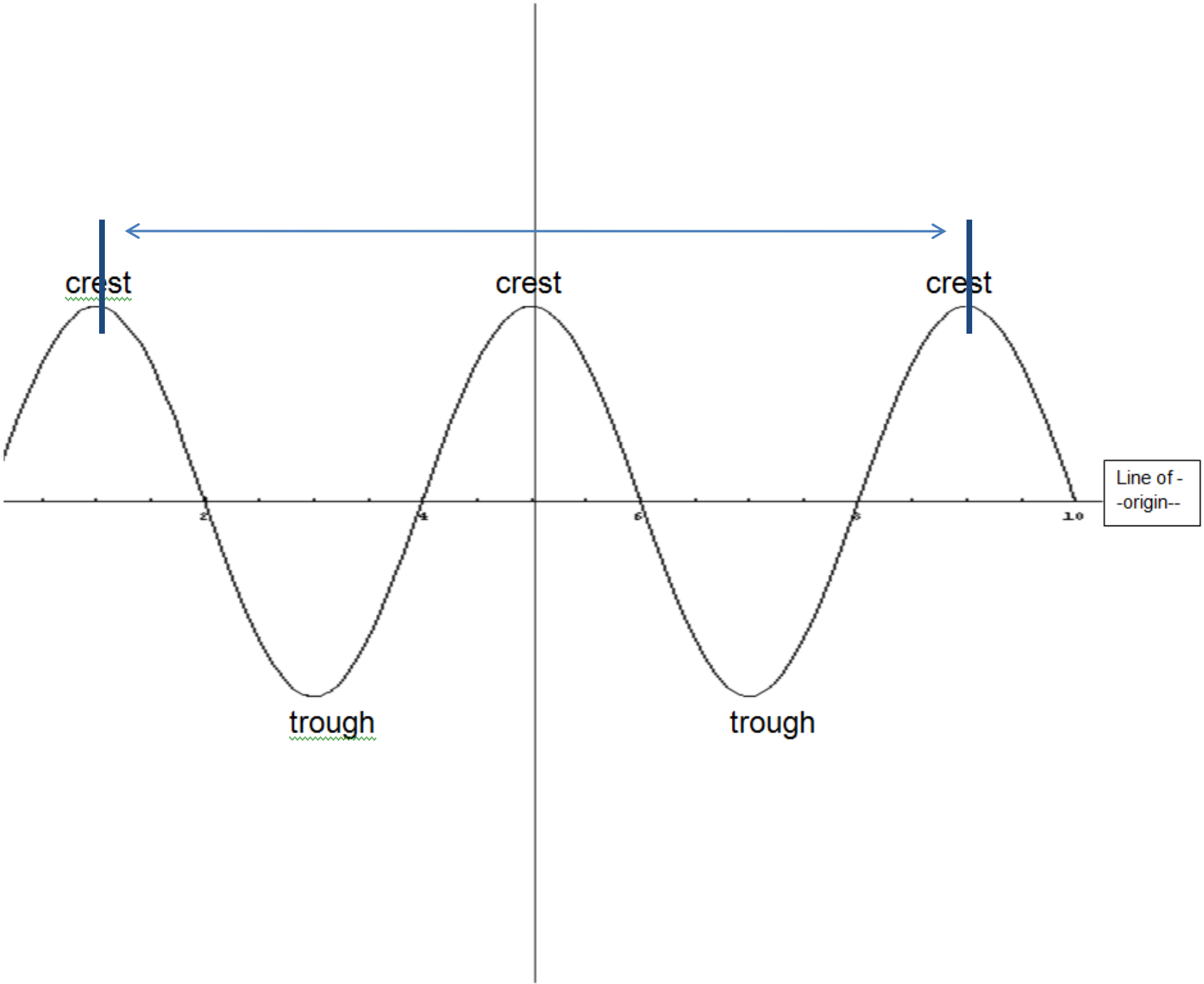
Partner activity

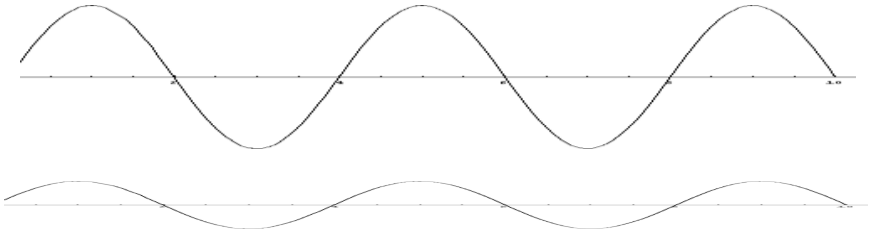

wavelength
crest
crest
crest
Line of -
-origin--
trough
trough
wavelength


crest
crest
crest
trough
trough
Line of -
-origin--

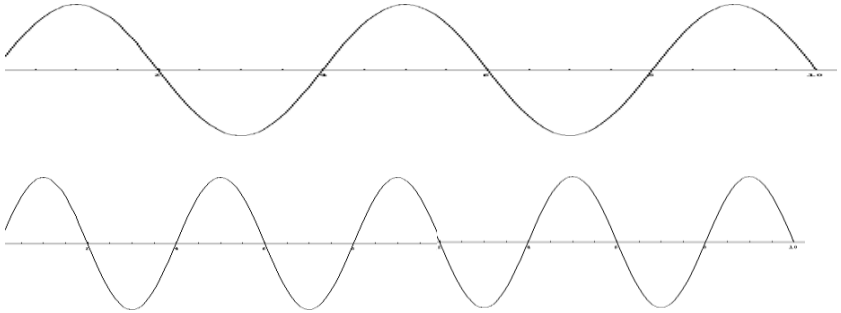

crest
crest
crest
trough
trough
Line of -
-origin--
2
4
6
8
10

What is

- Amplitude?
  - How high/low the crests/troughs are.



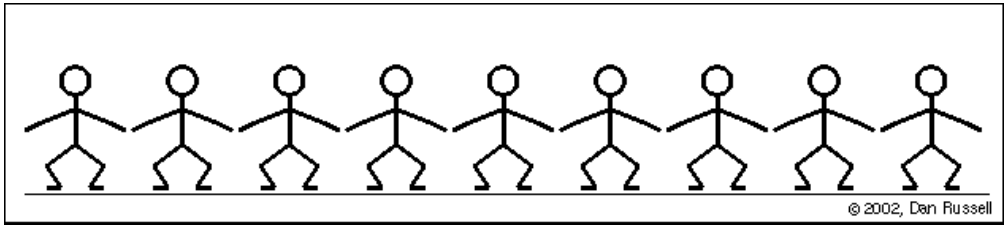
- Frequency?
  - Rate of the wiggle



Waves travel

Do the wave

- **Did the wave make it across the room?**
- **Did the people who started it move across the room?**

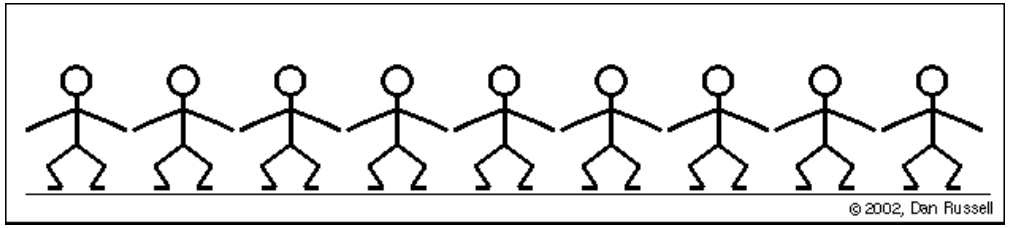


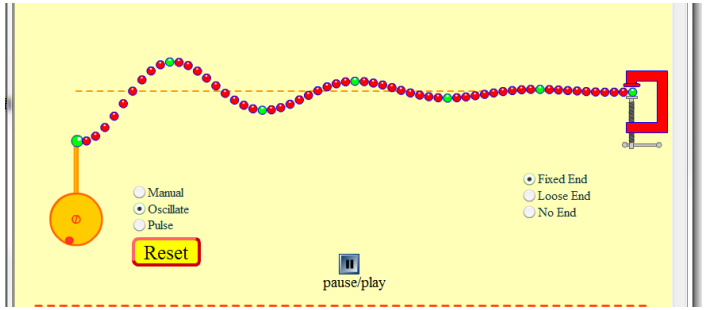
- **People move up and down as the wave's energy goes past.**

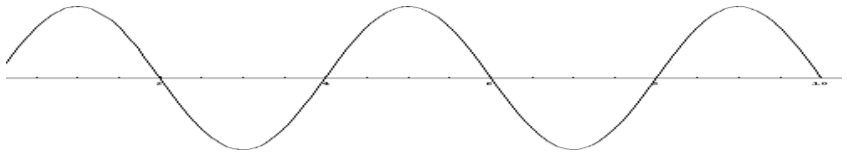
Waves are energy

Types of Waves

Transverse Waves







Longitudinal Waves

Transverse, Longitudinal, and Periodic Waves

Source, Receiver, Medium

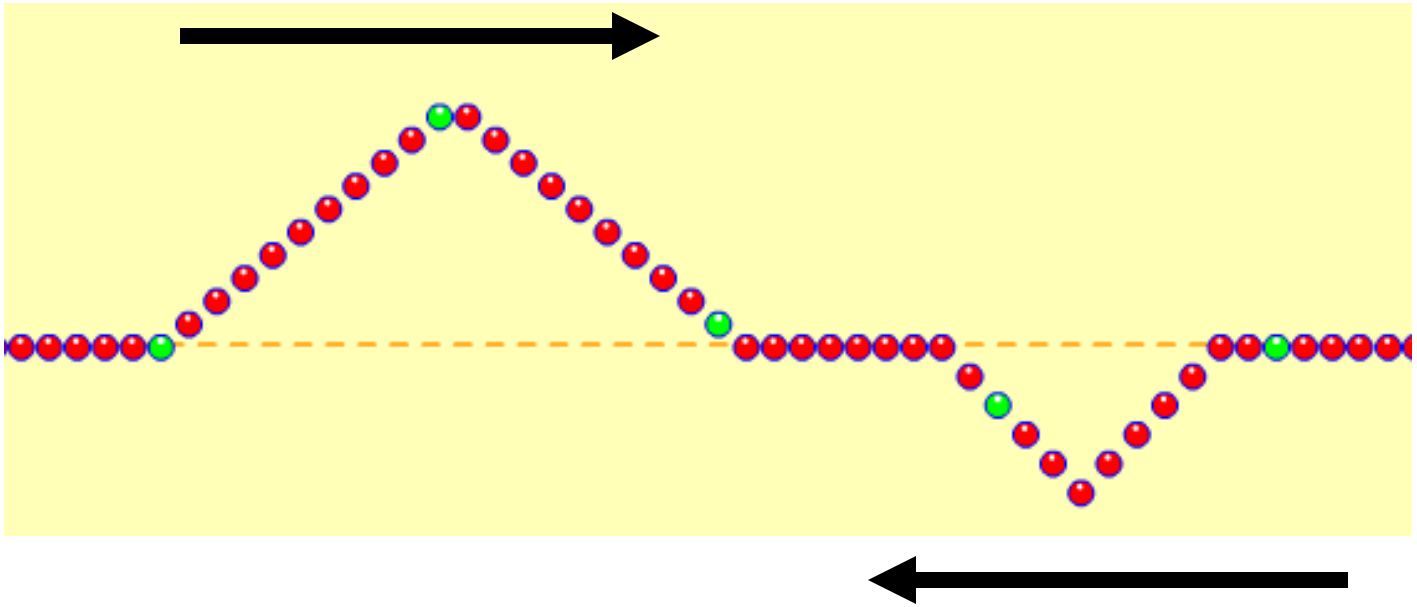
- People Wave
- Slinky
- Wave on a string
- Water -Wave Interference Sim
- Sound

Source

- http://www.iris.edu/hq/programs/education_and_outreach/videos#H

How do waves add?

Sketch what you think the pattern will look like



Resonance

The natural frequency of an object

Resonance

- Swing

http://www.youtube.com/watch?v=I4FPK1oKddQ

- Pasta/raisin demo

The frequency an object likes to vibrate at

Resonance

The frequency an object likes to vibrate at

- Wave on a String (A=3, f=50, Damp = 0, Tension = high)

- Tall vs. Short Building damage

http://www.iris.edu/hq/programs/education_and_outreach/videos#O