

1. Watch your teachers demonstrate a **transverse wave pulse** on a spring and then draw what it looks like in the space below.



2. Does the matter in the spring move from one teacher to the other and back? If not, what moves?

No. Energy moves as a wave.

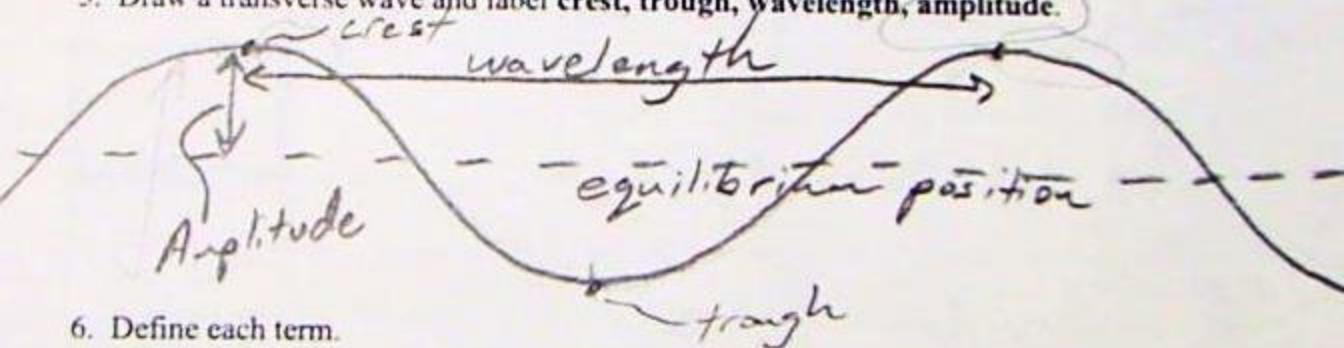
3. Define wave. *(back and forth movement)*

An oscillation that travels through matter or space, transferring energy.

4. Define transverse wave.

A wave that oscillates perpendicular to the direction of travel

5. Draw a transverse wave and label crest, trough, wavelength, amplitude.



6. Define each term.

a. crest top of wave

b. trough bottom of wave

c. wavelength distance from one crest to the next

d. amplitude distance from crest to equilibrium position

7. To calculate the speed of a transverse pulse you need to know the distance the pulse travels and the time it takes. Speed=distance/time. Observe your teachers do this, record the data, and calculate the speed of the pulse.

$$t = 1.2 \text{ s}$$

$$d = (3.65 \text{ m})2 = 7.3 \text{ m}$$

$$V = \frac{d}{t} = \frac{7.3 \text{ m}}{1.2 \text{ s}} = 6.1 \text{ m/s}$$