Name: _____ Date: _____ Period: _____

Modeling Waves

Using the slinky, you will be modeling both Transverse and Longitudinal (Compressional) waves. (Please take care of the slinky and make sure you return it in good condition.)

Transverse Waves

1. How are you able to model a Transverse wave using the slinky? (Describe how you manipulated the slinky)

2. Make a transverse wave with the slinky and mark with chalk where the crests and troughs are located. Measure the wavelength and amplitude of the wave. Draw a picture of your wave.

3. Now, create a transverse wave that has more crests. Mark with chalk where the crests and troughs are located and measure the wavelength and amplitude of the wave. Draw a picture of your wave.

4. What did you do differently with the slinky to create a wave with more crests?

5. What do the number of crests (wavelength) tell you about a wave?

6. Now, create a transverse wave that has a higher amplitude. Mark with chalk where the crests and troughs are located and measure the wavelength and amplitude of the wave. Draw a picture of your wave.

7. What did you do differently with the slinky to create a wave with a higher amplitude?

8. What does the height of the amplitude tell you about a wave?

Longitudinal/Compressional Waves

9. How are you able to model a Longitudinal/Compressional wave using the slinky? (Describe how you manipulated the slinky)

10. Which wave type was easier to model with the slinky? Explain.