Lab: Compression and Transverse Waves

Target:

Students will know differences and similarities between transverse and longitudinal waves by modeling these waves using a slinky.

Pre-Lab Questions:

- 1. How can we prove that waves transfer energy?
- 2. How can we show that waves do not transfer particles?
- 3. What sort of measurements do we need to record to determine the speed of a wave?

Data:

Transverse (pulse)	Compressional (push)
Length (distance) = ft	Length (distance) = ft
Trials	Irials
1	1
2	2
3	3
4	4
5	5
6	6
7	7
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Calculations:

1. What is the average time (all 7 trials) it took your wave to travel the length of your slinky? (Show Work for both wave types)

2. At what speed did your wave travel? (Hint: Speed of the wave = distance / avg. time)