

Making Waves

You may work with a partner during this activity.

Part 1 Longitudinal Waves

1. Be **CAREFUL** with the springs and slinkies! Hold the ends securely and don't overstretch or tangle them! You may use them only along the floor!
2. Using one of the supplied springs or slinkies, demonstrate longitudinal waves. Draw the longitudinal waves.
3. Describe what happens when you and your partner try to generate longitudinal waves at the same time.

Part 2 Transverse Waves

4. Using one of the supplied springs or slinkies, demonstrate transverse waves. Draw the transverse waves.
5. Describe what happens when you and your partner try to generate transverse waves at the same time.

Part 3 Wave Characteristics

6. How is the wave velocity affected if you increase the tension on the spring or slinky? If you aren't sure, check in your text book. Explain.
7. How is the wave velocity affected if you were to increase the mass per unit length of the spring without changing the tension? Explain.