

Name \_\_\_\_\_

## Waving Hello to Differences: Transverse and Longitudinal Waves

### Short Answer

1. Explain how to create a transverse wave using a rope, and describe the motion of the rope and particles in the wave.
2. Provide an example of a real-life situation where understanding the difference between transverse and longitudinal waves is important.
3. Describe the motion of particles in a sound wave and explain why it is considered a longitudinal wave.
4. How does the propagation of a longitudinal wave differ when it travels through a solid compared to when it travels through a gas?
5. Can you think of an example of a wave that does not fit neatly into the categories of transverse or longitudinal? Explain why it might be unique.

