

## Wave Properties Exercise

1. Short-wavelength waves have \_\_\_\_\_ energy than long-wavelength waves.  
(more/less/same)
2. High-frequency waves have \_\_\_\_\_ energy than low-frequency waves.  
(more/less/same)
3. Wave speed is equal to wavelength multiplied by \_\_\_\_\_.
4. The highest parts of a transverse wave are called \_\_\_\_\_.
5. The parts of a longitudinal wave where particles of the medium are closest together are called \_\_\_\_\_.
6. A disturbance in matter that transfers energy from place to place is called \_\_\_\_\_.
7. The part of a longitudinal wave where particles of the medium are spread farthest apart is the \_\_\_\_\_.
8. A wave in which particles of the medium vibrate at right angles to the direction that the wave travels is called \_\_\_\_\_.
9. The part of a transverse wave where particles of the medium are lowest is the \_\_\_\_\_.
10. A wave in which particles of the medium vibrate in the same direction that the wave travels is called \_\_\_\_\_.
11. The term for matter through which a mechanical wave travels: \_\_\_\_\_.
12. What is the speed of a wave that has a wavelength of 0.5 meters and a frequency of 2 waves per second? \_\_\_\_\_.
13. Assume that a wave has a fixed speed. If the frequency of the wave increases, its wavelength \_\_\_\_\_ (increases/decreases/stays the same).
14. When one wave passes a point every second, the frequency of the waves is \_\_\_\_\_ Hz.
15. The \_\_\_\_\_ of a transverse wave is the distance between a crest and the resting position.