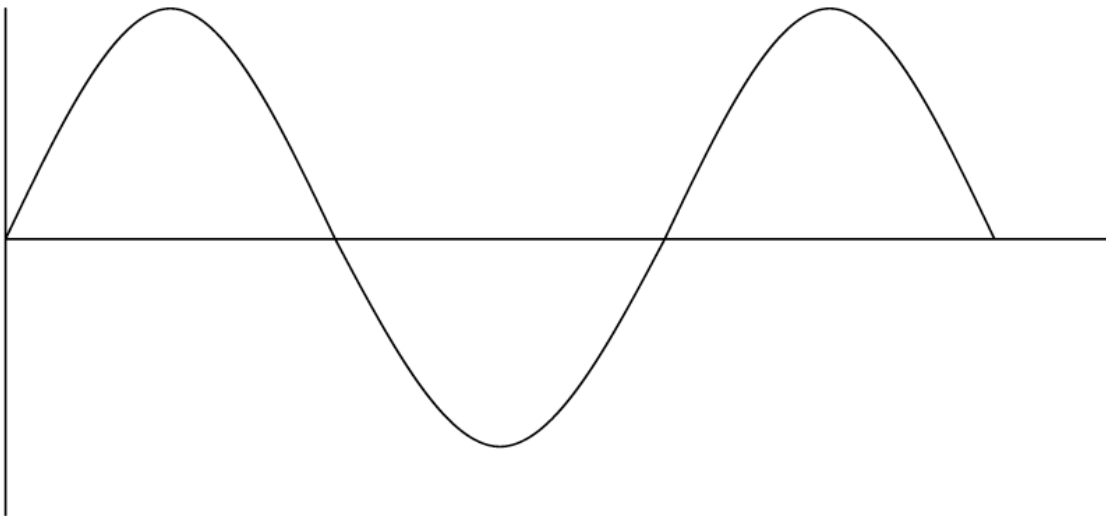


# Ocean Waves

Name: \_\_\_\_\_ Class \_\_\_\_\_

Go to: <http://www.montereyinstitute.org/noaa/lesson09.html> for an explanation of the cause of most ocean waves. Go here for wave simulator: <http://www.nationalgeographic.com/volvoceanrace/interactives/waves/index.html>

1. Label the parts of the wave, including: **trough**, **crest**, **wavelength**, and **wave height**.



2. What happens to the wave when you decrease the wave height? Explain

Increase the wave height? Explain.

3. What happens to the wave when you decrease the wavelength? Explain.

Increase the wavelength? Explain.

4. What happens to the wave when you decrease the wave period? Explain.

Increase the wave period? Explain.

5. What do you have to do to the wave height, wavelength and wave period to make the flattest wave?

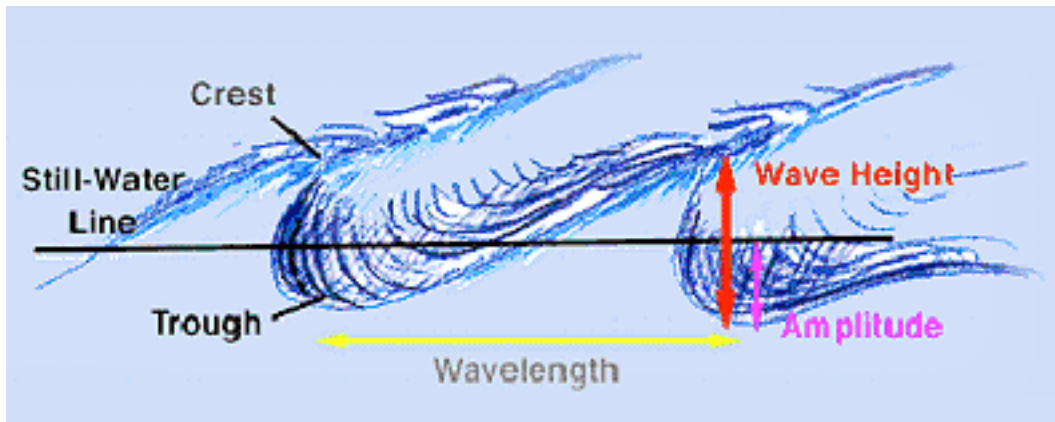
6. What do you have to do to the wave height, wavelength and wave period to make the most bumpy wave?

# Teacher Notes:

## Anatomy of a Normal Wave

<http://library.thinkquest.org/04oct/01797/dynamics/birth.html>

The picture below shows a picture of a normal wave.



The distance between the **crest** (highest point of the wave) and the **trough** (lowest point of the wave) is called the **wave height**. The distance (horizontal) between two consecutive wave crests is called **wave length**.

The time it takes for two consecutive waves to cross the same point is used to calculate the frequency of waves. This is called **wave period**.

**Normal waves** are usually caused by wind, although they can be generated by gravitational pull, atmospheric pressure and unusual activity under water.

The size and speed of wind waves depend on the strength of the wind.

**Normal waves** usually have a wave speed of 5-60 mph (8 -100 kph), a wave period of 5-20 seconds apart and a wave length of 300-600 feet apart (100 - 200 meters apart).