

Waves

Everyone has seen waves on a lake or oceans. But what are they? Waves are actually energy. Energy, not water, moves across the ocean's surface. Water particles only travel in a small circle as a wave passes.

How Are Waves Energy?

The best way to understand waves as energy is to think of a long rope laid on the ground. If you pick up one end and give it a good snap -- there's a ripple effect all the way to the other end -- just like the waves on the ocean! That means that energy is applied at one end and it moves to the other end. The energy is released at the other end of the rope, just as the energy of waves is released on shores.

What Provides the Wave's Energy?

In the case of ocean waves, wind provides the energy. Wind causes waves that travel in the ocean. The energy is released on shorelines.

What Determines the Size of a Wave?

The size of a wave depends on:

- 1) the distance the wind blows (over open water) which is known as the "fetch",
- 2) the length of time the wind blows, and
- 3) the speed of the wind.

The greater these three, the larger the wave.

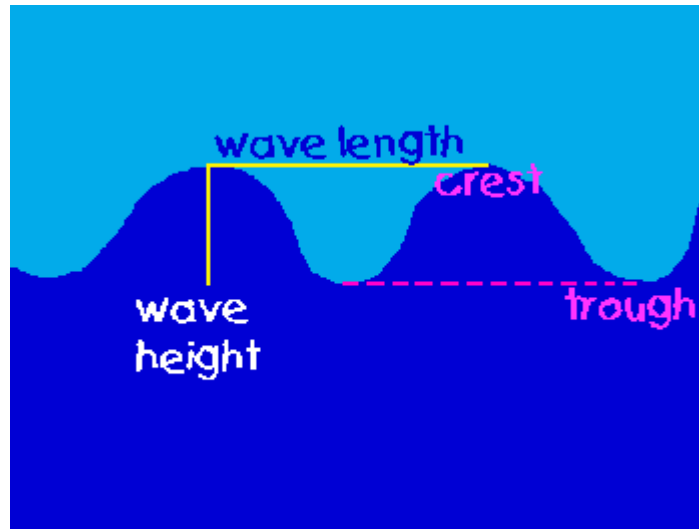


Where Are the Largest Waves Found?

The largest waves are found in the open ocean. Waves continue to get larger as they move and absorb energy from the wind. When the wave height becomes one seventh the size of the wave length, the wave will fall over, making white caps. As they get closer and closer to shore, most big waves have broken down in size and speed.

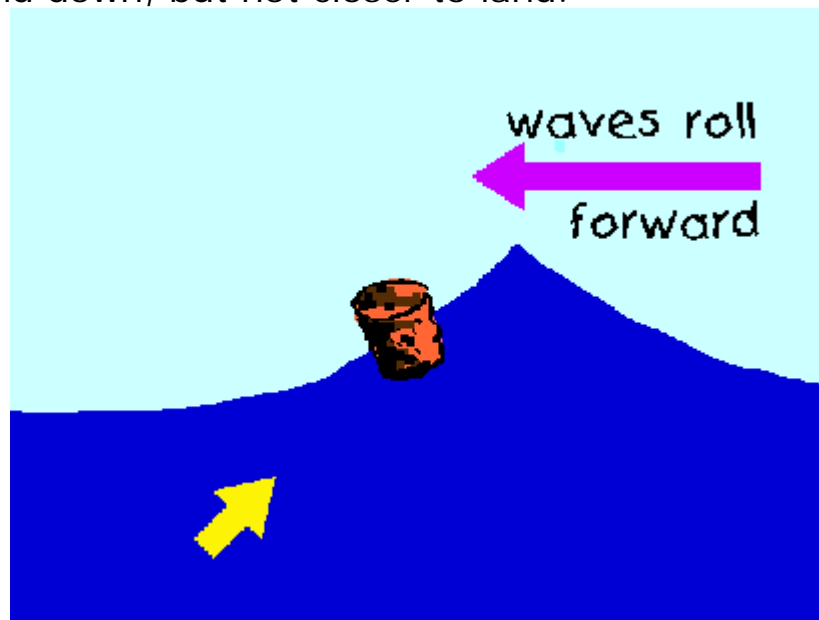
What Are the Parts of a Wave

The crest is the highest part of the wave and the trough is the lowest. The distance between the crest and the trough is the wave height. The distance from crest to crest is the wave length. The period of a wave is the time it takes for each crest to pass a certain point.



Can a Wave Move Things?

One would think that a wave could move an item in the open seas towards shore. In reality, a cork in the middle of the ocean would move up and down, but not closer to land.



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