

Waves, Beaches, and Coasts

<http://www.learner.org/resources/series78.html>

1. How is an ocean wave like a human wave at a football game?
2. What is the relationship between the depth at which a wave is felt (wave base) and the wavelength? (Doesn't apply to tsunamis.)
3. What causes breakers (surf) to form?
4. How do waves change as they approach the shore at an angle?
5. Explain how irregular shorelines are affected by waves.
6. You are swimming 20 meters out in the ocean directly out from your family on the beach. After about 15 minutes of swimming, it looks like your family has packed up all their towels, food, and tents and moved up the beach, putting everything in exactly the same place as before. What really happened? (Hint: They didn't move.)
7. List three benefits provided by dams.
 - a
 - b
 - c
8. How are beaches affected by building dams?
9. So are seawalls a good idea in the long run or a bad idea? Explain your reasoning.

Note - The Sandy storm that hit the east coast of the US in 2012 occurred during a spring tide.

10. Is building permanent structures along a shoreline ever a good idea, especially in areas where dams have been built upstream? Again, explain your reasoning. (Wait until the end of the video to answer this question.)