

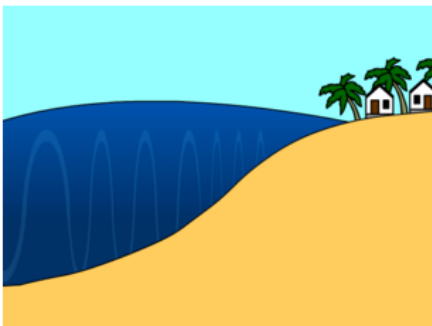
## Brainpop—Tsunami

Name:

Period:

Watch the Brainpop on Tsunami, then answer the questions below.

- \_\_\_\_\_ 1. Calling a tsunami a 'tidal wave' is a misnomer, since tsunamis have nothing to do with tides. In the previous sentence, what does ***misnomer*** mean?
- a misleading name
  - a Japanese word
  - an outright lie
  - a spelling error
- \_\_\_\_\_ 2. Which of the following would NOT produce a tsunami?
- an underwater volcanic eruption
  - an underwater current
  - an underwater earthquake
  - an underwater landslide
- \_\_\_\_\_ 3. What are the plates that meet in subduction zones made of?
- collections of debris from the ocean floor
  - huge slabs of concrete
  - chunks of lava from volcanoes
  - pieces of Earth's crust
- \_\_\_\_\_ 4. What usually happens when an oceanic plate and a continental plate collide?
- both plates go deeper
  - both plates push up and make mountains
  - the oceanic plate goes under the continental plate
  - the continental plate goes under the oceanic plate
- \_\_\_\_\_ 5. Place the following events in the correct sequence:
- X - a tsunami occurs  
Y - a segment of the ocean floor is lifted upwards  
Z - pressure begins building in a subductive zone
- X, Z, Y
  - Z, Y, X
  - Y, Z, X
  - Y, X, Z
- \_\_\_\_\_ 6. How do tsunami waves compare to regular ocean surface waves?
- tsunami waves are much flatter
  - tsunami waves are much wider
  - tsunami waves go much deeper
  - tsunami waves contain much more debris
- \_\_\_\_\_ 7. Tsunamis can be detected early by devices that measure...
- the height of ocean waves
  - the destructiveness of natural disasters
  - underwater energy
  - seismic activity
- \_\_\_\_\_ 8. Which of the following statements is an *opinion* about tsunamis?
- The 2004 tsunami caused millions of dollars in damages
  - The 2004 tsunami was the worst natural disaster of this century
  - The 2004 tsunami was caused by a very large earthquake
  - The 2004 tsunami destroyed several coastal areas on the Indian Ocean



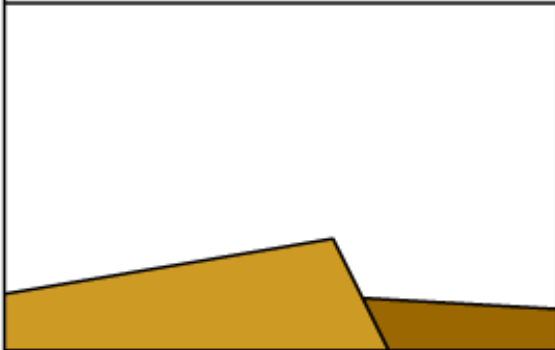
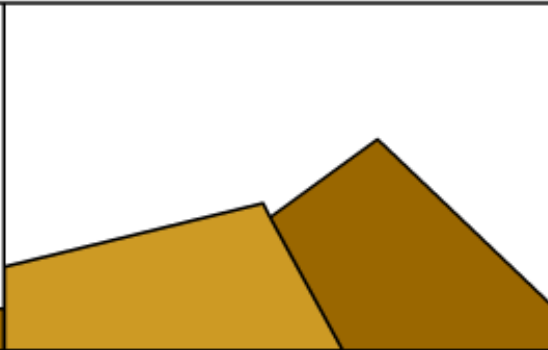
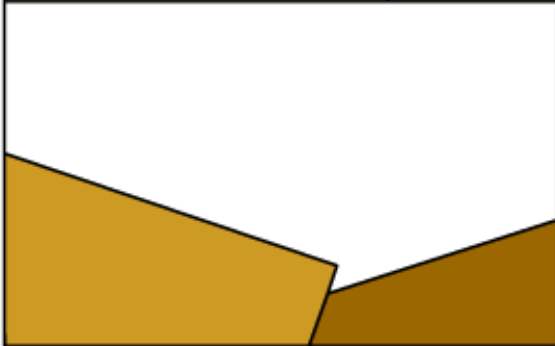
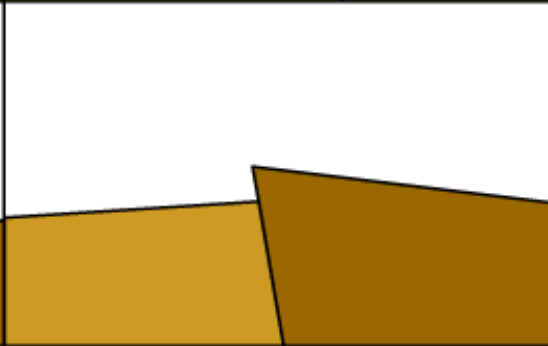
Look at the image to the left from the cartoon. Why do tsunami waves have so much energy close to shore? *Hint: think about how deep the ocean is compared to water at a beach.*

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*A hint for the exercise below: water will stay the same depth (thickness) from the ocean surface to the seafloor below if the seafloor is lifted up (displaced).*

For each displacement of the ocean floor, draw how the water above will react to it.	
	
	

Why is it that tsunamis can cause destruction to areas that are far away from the earthquake that created the tsunami?