Guided Notes: Tsunami

* Formed when a large \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of water is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* When offshore, one set of waves moves onshore and another offshore
* Waves arrive in a series in a shorter amount of time closer to the epicenter
* Waves increase \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ with \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of ocean
* As wave approaches the shoreline:
  + the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ orbital collapses,
  + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ increases along the ocean bottom,
  + wave slows but energy is the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and drives the water onshore
  + Topography of shoreline influences \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of surge

Why did [the earthquake](http://www.youtube.com/noaapmel) [cause](http://www.msnbc.msn.com/id/26315908/vp/42142794) a [tsunami](http://www.youtube.com/watch?v=w3AdFjklR50)?

* Shallow \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ earthquake
* Large volume of oceanic \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ displaced
* The movement of the crust also \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ a large volume of [water](http://ffden-2.phys.uaf.edu/645fall2003_web.dir/elena_suleimani/generation_small.mov)
* On the ocean’s surface, the wave is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ detectable (3 feet high)

Wind versus tsunami wave

* **Wind waves**
  + Single wave is entire water mass
  + Velocity depends on period of wave
    - 17 mph for 5-second wave; 70 mph for 20-second wave
* **Tsunami**
  + Huge mass of water with tremendous \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_