Name _____ Per _____ Date _____

INTRO TO WAVES

www.montereyinstitute.org/noaa/lesson09.html

INSTRUCTIONS: Complete the following notes bases on the Ocean Waves Lesson & Global Impact Presentations.

Ocean Waves Lesson

1. Waves are a complex mix of _____ & _____.

2. Within a wave, individual water molecules move in circles that get _____ with depth and eventually stop.

3. This causes objects at the surface to _____.

4. **Wave Anatomy** – Draw and label a diagram of a wave.

5. Most ocean waves are generated by _____.

6. Observe the map showing a **global view of wave height.**

_____ waves characterize areas where _____ interrupt the flow of wind & water. The _____ waves form where strong winds blow steadily across miles of open sea. The average wave height in the area between Antarctica & the Indian Ocean is _____ meters.

7. A series of waves is called a wave _____.

8. A freakishly large wave, up to 100 feet, is called a _____ wave.

9. **Shallow Water**

   At a depth of _____ wavelength the wave starts to _____ the bottom.

   Friction slows the wave down, the _____ decreases, and the _____ increases

10. Foaming sheets of water that roll up & down the beach are called _____.

11.

	Tsunami Wave	**vs.**	**Wind Wave**
Speed	_____ mph		_____ mph
Height	_____ feet		_____ feet
Wavelength	_____ miles		_____ feet

12. **Causes of Tsunamis** Circle below anything that can cause a tsunami

- volcanic eruptions
- underwater landslides
- earthquakes
- asteroids falling into the sea

13. **True / False.** Water motion in a tsunami involves the entire water column, not just a thin layer at the top of the sea.

14. Tsunamis can reach _____ feet in height.

15. For the following statements indicate **T (true)** or **F (false)**

_____ The ocean may pull away from the shore as a tsunami approaches.

_____ Water from a tsunami sweeps far inland.

_____ Tsunamis are usually not a single wave, but a series of waves.

_____ It can take several minutes to several hours for a tsunami wave to arrive.

_____ Tsunamis are rare.

16. Why are reefs, marshes, and mangroves important in tsunami damage control?
_____

Global Impact

1. The _____ of waves can be used to spin turbines to produce _____.

2. Wave power is free & _____.

3. Wave power could supply _____ x's the electricity the world currently consumes!

4. Waves turn _____ coastlines into smooth stretches of _____.

5. The most deadly tsunami struck in _____ killing more than _____ people from Indonesia to _____.