

**Marine Science**

**NOVA: Wave That Shook the World**

Name \_\_\_\_\_

1: What is a *tsunami*?

2: **When** did this tsunami happen? (date)

3: *How many people died, in how many countries?*

4: What is the **name of the warning center** in Hawaii?

5: An area where **one tectonic plate is pushing under** another is called?

6: **What magnitude** was this earthquake? What is a seismograph?

Each unit in magnitude is a factor of \_\_\_\_\_ of radiant energy of an earthquake.

*Earthquake scientists get paged when an earthquake of a factor of \_\_\_\_\_ or larger occurs.*

7: How do tsunami sensor buoys work? **Explain.**

How many warning sensors/buoys are there *in the Pacific?*

*In the Indian Ocean?*

8: This earthquake was shallow. How many **kilometers deep** was it?

9: What is "**tsunami initiation**"? Explain.

11: **How fast** does the tsunami wave travel? Why is this different than a "*surfer's wave*"?

12: What does a boat in the open ocean feel during a tsunami wave?

13: **What warning sign** often occurs at the beach during a tsunami? What is **Amplification**?

*If the waves on the beach suddenly suck out and expose the ocean floor for a large distance out, **WHY** should you not run out to check it out? What should you do instead?*

14: Is there usually only one wave in a tsunami?  
Is there a pattern to the waves? **Explain.**

15: Where is greater damage likely, on a gently sloping beach or a steeply sloping beach?  
**Explain why.**

16: **True or false**, you are safe as the tsunami wave is passing back out?

17: How did the quake affect the earth's day?

18: What area of the United States is at risk for the same type of earthquake?

19: What are the four causes of a tsunami?  
*How many people* on Earth are at risk of a tsunami?

20: What is happening in the **Cascadia Subduction Zone**? *What could happen?*

21: What is being done to help prepare for future tsunamis?

22: How many more buoys did the United States add to the Pacific Warning system?  
*What else is part of the Tsunami warning system?*

**Assignment:** Using the information given in this video, **create a newspaper article** that describes the tsunami event on December 26, 2004. (*make sure to include who, what, where, why, when, how*).

Article at least **1 page in length** and must **include a diagram and a photo.**