NOTES: Earthquake Origins

An **earthquake** is the vibration of earth, caused by a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

This energy radiates in all directions from its source, \_\_\_\_\_\_\_\_\_\_\_\_\_, in the form of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

The media usually only discusses the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of an earthquake, because it’s the place on the ground above the \_\_\_\_\_\_\_\_\_\_\_\_\_ that people can actually see.



***SEQUENCE OF FORCES INVOLVED IN AN EARTHQUAKE:***

1. Stress:
2. Strain:
3. Elastic Limit:
4. Elastic Rebound

Earthquakes are the result of movement along \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_,

But mostly at \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

(The fault we are closest to, which hosted a lot of Gold in the 1800’s is called the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.)

Earthquake energy travels through the ground in the form of \_\_\_\_\_\_\_\_\_\_\_\_\_\_.

A higher energy wave will have a higher \_\_\_\_\_\_\_\_\_\_\_\_\_\_, and a shorter \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

High-energy waves are more destructive than low-energy waves in most materials, but in the *crust of the earth* the SLOWEST ones are worst!

 

|  |  |  |
| --- | --- | --- |
| Type of Waves: | Description of Motion Behavior: | Other characteristics: |
| 1. PRIMARY (P)

Motion: |  |  |
| 1. SECONDARY (S)

Motion: |  |  |
| 1. SURFACE

Motion: |  |  |

***Ways to measure earthquakes:***

SEISMOGRAPH:

 Lag time:

RICHTER SCALE:

MERCALLI SCALE (also Rossi Forel):