**Forces Inside Earth**

1. When rocks break, they move along \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
2. Faults occur because forces inside the Earth cause Earth’s \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to move placing stress on or near the plate edge.
3. Rocks will bend, compress, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, and possibly break.
4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ - vibrations produced by breaking rock
5. Rocks break, move along the fault, return to original \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
6. Rock on one side of a fault can move over, under, or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ each other along fault lines.
7. Three types of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ act on rocks – tension, compression, and shear.
8. Tension forces; \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **fault** – caused by rock above the fault moving downward in relation to the rock below the fault.
9. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **fault** – compression forces squeeze rock above the fault up and over the rock below the fault.
10. Created by sheer forces; \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **fault** – rocks on either side of the fault move past each other without much upward or downward motion.

**Features of Earthquakes**

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ - waves generated by an earthquake can move the ground forward or backward, up and down, and side to side.
2. **Focus** – an earthquake’s point of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. ****\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **waves** (P-waves) – cause particles in rocks to move back and forth in the same direction that the wave is traveling
4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **waves** (S-waves) – cause particles in rock to move at right angles to the direction of travel
5. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **waves** – move rock particles in a backward, rolling motion and a sideways swaying motion
6. The point of the Earth’s surface directly above the earthquake’s focus is called the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
7. The different \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of seismic waves allow scientists to determine the epicenter.
8. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ waves move fastest.
9. Secondary waves follow.
10. Surface waves move \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and arrive at the seismograph station last.
11. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ - measures seismic waves
12. Consists of as rotation drum of paper and a pendulum with an attached \_\_\_\_\_\_\_\_\_\_\_\_\_.
13. The paper record of a seismic event is called a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
14. Earth’s structure
15. A seismic wave’s speed and direction change as the wave moves through different layers with \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
16. Density generally \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ with depth as pressures increase.
17. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ do not receive seismic waves because the waves are bent or stopped by materials of different density.
18. Changes in seismic wave \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ allowed detection of boundaries between Earth’s layers.

**People and Earthquakes**

1. Although earthquakes are natural geological events, they kill many people and cause a lot of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ - scientists who study earthquakes
3. **Magnitude** – measure of energy released by an earthquake; determined by the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and based on the height of the lines on a seismogram
4. The Richter scale has no \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ limit.
5. Most earthquakes have magnitudes too \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to be felt by humans – 3.0 to 4.9 on the Richter scale.
6. ****The modified \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ intensity scale describes earthquake intensity based on structural and geologic damage.
7. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ - shaking from an earthquake can make wet soil act like a liquid.
8. Ocean waves caused by earthquakes are called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
9. Caused by sudden movement of the ocean floor \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ against the water
10. Can travel thousands of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in all directions
11. Earthquakes cannot be reliably \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
12. Knowing how and where to \_\_\_\_\_\_\_\_\_\_\_\_\_\_ for earthquakes can help prevent death and damage.
13. Buildings can be \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to withstand seismic vibrations.
14. Flexible, circular, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ are being placed under buildings; made of alternating layers of rubber and steel.
15. The rubber acts like a cushion to absorb earthquake’s waves.
16. Homes can be protected by careful placement of heavy objects and securing \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ appliances.
17. During an earthquake, crawl under a sturdy table or desk; outdoors, stay away from \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and power lines.
18. After an earthquake, check for water or gas line damage; leave \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ if a gas smell is present.