**Earthquakes- Magnitude and Intensity** Name:

**Magnitude**- the measurement of the amount of released during an earthquake

**The Richter Scale**- a scale based on the size of the seismic waves generated by a quake that is used to describe its .

* Each successive number in the scale represents an increase in seismic-wave size, or , of a factor of 10.
* Each increase in magnitude corresponds to about a 32-fold in seismic energy.

**How are the size and strength of an earthquake measured?**

* Magnitude is determined using the , which measures the total amount of energy released by an earthquake; independent of .
* Amplitude of the wave produced by an event is corrected for

and assigned a value on an open-ended logarithmic .

**Modified Mercalli Scale**- measure the amount of done to the structures involved, is used to determine the of an earthquake. This scale uses the
numerals I to XII to designate the degree of intensity. Specific effects or correspond to specific numerals, the higher the numeral, the worse the damage. Describe the damage for each numeral:

1.

VI.

XII.

**Deep Focus**

* Earthquake is related to earthquake .
* The depth of the quake’s is another factor that determines the intensity.
* An earthquake can be classified as , , or
 , depending on the location of the quake’s focus.

**Earthquake Destruction**

* Amplitude, duration, and damage increases in poorly consolidated rocks
* How is the frequency different in bedrock compared to bay mud (water saturated)?

**Earthquake Destruction** (define each below)

* Liquefaction
* Seiches
* Landslides and ground subsidence
* Fire
* Ground shaking versus material type
* Ground rupture
* Tsunami- is a large ocean wave generated by motions of the seafloor during an earthquake. These motions displace the entire column of water overlying a fault, creating
 and in the water. These waves can travel at speeds over km/h (500 mph). When the waves enter shallow water they may form huge breakers with heights exceeding 30 m ( ft.).

**Can Earthquakes be predicted?**

Earthquake Precursors

* Changes in or tilting of land surface, fluctuations in levels, magnetic field, and electrical resistance of the ground
* Seismic dilatancy model
* Seismic gaps

Earthquake Prediction Programs

* Include and studies of rocks before, during, and after .
* Monitor activity along major .
* Produce risk .