**Chapter 8 Earthquakes**

8.1

A. Earthquake- vibration in Earth produced by rapid release of energy

 1. \*focus- the point within Earth where the earthquake starts

 2. \*epicenter- the location on the surface directly above focus

 3. \*fault- features in Earth where movement has occurred. eg. *San Andreas Fault* in California

B. Cause

 1. deformation- rocks bend, builds potential energy

 2. elastic rebound- rocks slip and move, releases kinetic energy

 3. foreshock- little earthquake before main quake

 4. \*aftershock- little earthquake after main quake

 a. weaker but can be really bad b/c damage buildings already damaged by main quake

8.2

Seismograph – an instrument that records earthquake waves

Seismogram – a record made by a seismograph

A. Seismic Waves- wave motions produced by quakes

 1. body waves- travel through earth’s interior

 a. \*S-waves- shake particles perpendicular to the direction the wave is traveling

 -**can go through solids only**

b. \*P-waves- fastest, push-pull

 - **can go through liquids and solids**

 2. surface waves- slowest, up-and-down, side-to-side \*most destructive

D. Measuring Quakes

 1. Richter scale- old one, highest peak on seismogram

 2. \*Moment magnitude- new one, estimates energy released

 3. Mercalli Scale- looks at destruction caused, XII steps

E. Locating Quakes

 1. time-travel graph- difference between first P and S wave

 2. \*triangulation- data from 3 stations needed

F. Quake Damage

 1. seismic shaking- ground shaking

 2. \*liquefaction- water in soil forced out, ground unstable

 3. landslides/mudflows

 4. \*tsunami- giant wave caused by quake

G. Quake Safety- seismic safe design, “drop-cover-hold”