

## Earth Science Chapter 6: Study Guide

### Section 1

- Definitions

Stress	Normal Fault	Strike-slip Fault
Tension	Hanging Wall	Anticline
Compression	Footwall	Syncline
Shearing	Reverse Fault	Plateau

- Know the three kinds of stress, what happens to the rocks under that stress and at what plate boundary they usually occur
- Know the three kinds of faults, what kind of stress occurs at the fault, what happens to the rocks at that fault and at what plate boundary they usually occur
- Know what folds are and what their structure is
- Know what fault-block mountains are and be able to describe how they are formed
- Know what a plateau is and be able to describe how it can form

### Section 2

- Definitions

Earthquake	Mercalli Scale
Focus	Magnitude
Epicenter	Richter Scale
P Wave	Seismograph
S Wave	Moment Magnitude Scale
Surface Wave	

- Know what causes earthquakes
- Know where earthquakes begin
- Know what seismic waves are
- Know the three main categories of seismic waves, where they originate from, what damage they can do, and the speeds at which they travel
- Know what “P” and “S” stand for in P waves and S waves, respectively
- Know the three commonly used methods of measuring earthquakes, what each measures and how it measures things
- Know what magnitude tells a geologist and what effects increase with magnitude
- Know how a geologist calculates the epicenter of an earthquake

### Section 3

- Definitions

Seismogram	Friction
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- Be able to describe how a seismograph works
- Be able to differentiate the S, P and surface waves on a seismogram
- Know the four types of instruments that monitor faults, what they measure, how they are constructed (if applicable) and how they work
- Be able to describe how faults are detected using seismographs and seismic waves

- Know the relationship between the amount of friction at a fault and the likelihood of an earthquake
- Know if earthquakes can be predicted
- Be able to describe some of the problems associated with predicting earthquakes

#### **Section 4**

- Definitions

Liquefaction

Tsunami

Aftershock

Base-isolated Building

- Know how geologists can determine earthquake risk
- Know where the risk of earthquakes is highest in the United States and why
- Know where the risk of earthquakes is lowest in the United States and why
- Be able to describe why the eastern United States has experienced some of the most powerful quakes in the nation's history
- Know the four types of earthquake damage, how they occur and what damage they can produce
- Know what the main danger from earthquakes is
- Know what the best way is to protect yourself from an earthquake
- Know what causes more earthquake-related death and injuries
- Know what is being done to reduce earthquake-related damage
- Be able to list at least two ways in which construction of buildings and highways have been modified to reduce the amount of earthquake-related damage

#### **Seismic-Safe Buildings page 192-193**

- Be able to describe some of the features in a building that reduce earthquake damage, strengthen the building or allow the building to move or shield the building from the seismic waves
- Be able to describe how these features work
- Know what some of the disadvantages of these features are