

## Earth Science: Semester Final Study Guide

\*\* You may bring ONE 3 x 5 index card with notes on it (both sides). Your name MUST be written on the card because it MUST be HANDED IN when you hand in your final. You must also hand in ALL of your old tests. Part of your semester final grade will be based on handing in the old tests. \*\*

On the semester final, you will find:

- Multiple choice
- True/False
- Matching
- Labeling
- Short Answer

Most of the questions will come directly from previous test questions. You should definitely study:

- Past tests
- Notes
- Rereading sections from the textbook should you need to refresh your memory
- Homework
- Quizzes

Detailed study guides from each chapter can be found on my website. Below is a concise list of the information from each chapter that is important to know for the semester final.

### **Chapter 1 – Introduction to Earth Science**

- Vocabulary
- Scientific method
- Ideas in Earth science
- Branches in Earth science
- Laboratory safety

### **Chapter 2 – Mapping Earth's Surface**

- Vocabulary
- Topography of Earth's surface
- Types of landforms
- Items found on maps
- Using latitude and longitude to find a location and vice versa
- Map projections
- Topographic maps

### **Chapter 3 - Minerals**

- Vocabulary
- Mineral characteristics
- Identifying characteristics of minerals
- Minerals that form different ways
- Uses of minerals
- Process by which metal is produced from minerals

### **Chapter 4 - Rocks**

- Vocabulary
- Classification of rocks
- Formation of rocks
- Classification of igneous rocks
- Uses of igneous rocks
- Series of processes that produce sedimentary rock
- Types of sedimentary rock
- Uses of sedimentary rock
- Types of metamorphic rock
- Uses of metamorphic rock

- Rock cycle

### **Chapter 5 – Plate Tectonics**

- How we know about Earth's interior
- Temperature and pressure inside Earth
- Earth's interior
- Types of heat transfer
- Convection currents
- Continental drift including evidence of
  - Mid-ocean ridges
  - Sea-floor spreading including evidence of
  - Subduction at trenches
  - Plate tectonics
  - Forces that move plates
  - Plate boundaries

### **Chapter 6 - Earthquakes**

- Types of stress
- Kinds of faults
- Changing Earth's surface
- Earthquakes
- Types of seismic waves
- Scales for measuring earthquakes
- Locating an epicenter
- Seismograph
  - Instruments that monitor faults
  - What seismograph data can be used for
  - Determining earthquake risk
  - Damage caused by earthquakes
  - Earthquake safety
  - Earthquake-safe buildings

### **Chapter 7 - Volcanoes**

- Volcanoes and plate boundaries
- Hot spot volcanoes
- Physical and chemical properties
- Viscosity of liquids
- Factors that viscosity of magma depends on
- Structure of a volcano
  - Kinds of volcanic eruptions
  - Life cycle of a volcano
  - Volcanic landforms including from lava and ash, collapse of volcanic mountains, and magma
  - Geothermal activity

### **Chapter 10 – A Trip Through Geologic Time**

- Vocabulary
- Types of fossils
- Paleontologists
- What the fossil record shows
- Ages of rocks and how they are determined
- How rocks are dated
  - Radioactive dating and decay
  - Geologic time scale
  - Early Earth and how it formed
  - Changes on early Earth's surface
  - Major events in the history of Earth
  - Eras and periods of the geologic time scale