

Unit 2 Handout _____

Lessons 4-8 Study Guide

Purpose: To provide you with a framework for reviewing the key concepts and terms from lessons 4-8 of the XPT unit

Instructions: Your quiz is scheduled for **Wednesday, March 19th**. Use this study guide to help you prepare for the quiz. Use this guide to help you identify areas of strength and weakness so you know what to study.

Assigned Readings

The following are the pages of readings that were either assigned to you as homework, read together as a class, or used as reference in class: 56-59, 70-71, 72-73, 84-85*, 94-97, 108-111. *Was not assigned but it is helpful to review.

Important concepts

The following are important concepts that we learned during lessons 1-3 of XPT.

- **L4:** Major geological events, such as earthquakes, volcanic eruptions, and mountain building, are clustered in particular locations on earth that correspond to plate boundaries.
- **L5:** Patterns of earthquakes and their waves provide information about plate boundaries and the interior structure of the earth.
- **L5:** Scientists have divided earth's interior to several layers based on the characteristics of those layers.
- **L6:** The (now rejected) theory of continental drift explained how we know the continents used to be together.
- **L6:** The theory of plate tectonics explains why certain geologic features exist on our planet and why the plates move.
- **L6:** Landforms---mid-ocean ridges, trenches, mountains, etc.---form as a result of plate movement.
- **L7:** Rock responds to the forces caused by movement by either folding (bending) or fracturing (breaking).
- **L7:** Faults are fractures in the earth's crust and upper mantle along which measurable movement of rock has occurred.
- **L7:** Earthquakes occur along faults and are common along plate boundaries.
- **L8:** Thermal convection currents in the earth's mantle create convection currents that make tectonic plates collide and split apart.
- **L8:** Interactions between the rigid lithosphere and the convective mantle cause plate movement, which in turn generates most earthquakes and volcanoes.

Important Vocabulary

Lesson 4: Magnitude, intensity, amplitude, Richter Scale, Mercalli Scale,

Lesson 5: Inner core, outer core, mantle, crust, asthenosphere, lithosphere, continental crust, oceanic crust

Lesson 6: Boundaries (convergent, divergent, transform), plates, Continental Drift Theory, Trenches, mid-ocean ridges, linear seas

Lesson 7: Brittle, ductile, fault

Lesson 8: Convection (thermal convection), convection cell

Self Check

Go through the following questions. If you can answer “yes” to the question, mark it off and move on to the next question. If you answer “no” to a question, review the topic by referencing the handouts and readings indicated.

Do I know...	Helpful Resources
Where earthquakes are most likely to happen?	H96
The difference between magnitude and intensity?	Reading pp. 56-59
The different layers of earth and their characteristics?	H99, H100, Reading pp. 70-71
How we know what is inside earth?	H98, Reading pp. 72-73
The basics of continental drift theory?	H103, (See also readings pp. 86-89)
The evidence for continental drift?	H103, (See also readings pp. 86-89)
The different types of plate boundaries?	H104, H105 (Reading pp. 84-85)
Which plate boundaries are constructive and destructive?	H104, H105 (Reading pp. 84-85)
What happens at plate boundaries?	H104, H105 (Reading pp. 84-85)
How rocks are affected by plate movement?	H107
What conditions cause rocks to bend (ductile) or break (brittle)?	H107
How plate movement are affected by force?	H108, H109
What convection is?	Lesson 8 handouts, Reading pp. 108-111
What causes plate movement?	Lesson 8 handouts, Reading pp. 108-111

Readings in parentheses were not assigned or read in class, but offer information to help you answer the question.

Also, review your reflections! They cover much of the key information from the lessons.