Name: _____ Class: _____

Grade 8 SCIENCE – GUIDED NOTES

Chapter 3 Earth's Dynamic Surface **Lesson: 1– Earth's Moving Surface** **Pages: 91 - 95**

Page Number	Title/Sub-Title	Guided Questions
91	**Plate Tectonics**	When did scientist develop a theory to explain many of the features on the Earth's surface? What is the theory of plate tectonics?
92	**What is a Tectonic Plate?**	**Draw a model** of the 4 main layers of the Earth below. **Label your model** with the following terms. ***Crust, mantle, liquid outer core, solid inner core*** (Use Figure 2 for guidance) What is the outermost layer of the Earth called? What makes up the lithosphere? Is the lithosphere rigid or malleable? Do the rock in the lithosphere bend easily? What is the athenosphgere? Can this region (athenosphere) bend easily?

Describe *the parts of Earth's layered surface.*

Part	Description
Crust	
Lithosphere	
Tectonic plates	
Asthenosphere	

92 **Major Tectonic Plates**

How many large tectonic plates have scientist identified?

What is the name of the largest tectonic plate?

Give an example from the reading of a tectonic plate this is completely covered by the ocean.

Locate *the seven largest tectonic plates.*

1. _____ **5.** _____

2. _____ **6.** _____

3. _____ **7.** _____

4. _____

93 **Plate Boundaries**

How do scientist describe the movement of a tectonic plate?

Describe the motion of the North American Plate below.

The type of boundary plates form, depends on what?

		Examine *types of plate boundaries. Circle the boundary type where* subduction *occurs.* **Type of Boundary** | **Description** _____ | _____ _____ | _____ _____ | _____
93	**Divergent Boundaries**	What is a divergent boundary? Give an example from the reading of a divergent boundary. Look at Figure 4. Draw a model of a ***divergent boundary*** below. **Label your drawing** and use arrows to show the motion of the plates.
93	**Convergent Boundaries**	What is a convergent boundary? What is subduction? Give an example from the reading of a plate that is being "subducted" at a convergent boundary.

		Look at Figure 4. Draw a model of a ***convergent boundary*** below. **Label your drawing** and use arrows to show the motion of the plates.
93	**Transform Boundaries**	What are transform boundaries? Give an example of a transform boundary fromt the reading. Look at Figure 4. Draw a model of a ***transform boundary*** below. **Label your drawing** and use arrows to show the motion of the plates.
94	**Measuring Plate Movement**	During what time period did scientist and engineers develop technologies to measure how fat the plates on the Earth were moving? How fast is North America separating from Europe? What is GPS (Global Positioning System)? How had GPS helped scientist track tectonic plate movement? North America and Europe were once a part of a larger continent called what?

95	**Why do Tectonic Plates Move?**	What are the three types of boundaries that can form from plate movement? 1 2 3 What causes these plates to move?
95	**Convection**	What is density? What happens to a fluids molecules when you heat it? What happens to a fluids density when it is heated? What is convection? Where does convection occur in the Earth? Draw Figure 7 below. Label your drawing with the following terms (Mantle, Outer Core, Inner Core, and Convection Currents. **Be sure to include arrows** to show the motion of the convection currents in the Mantle.