**6th Grade Final Exam Study Guide**

**Nature of Science**

1. DEFINE and GIVE AN EXAMPLE of each of the following terms:
	* Theory:
	* Law:
	* Hypothesis:
	* Inferences:
	* Data:
	* Prior Knowledge:

**Plate Tectonics (Chapter 6)**

1. Name and describe the three *COMPOSITIONAL* layers of the Earth. (know what it is made of, it’s thickness, and temperature)
	1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_
		1. Composition: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
		2. \_\_\_\_\_\_\_km thick
		3. Temperature:\_\_\_\_\_\_\_
	2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
		1. Composition:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
		2. \_\_\_\_\_\_\_km thick
		3. Temperature:\_\_\_\_\_\_\_
	3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
		1. Composition:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
		2. \_\_\_\_\_\_\_km thick
		3. Temperature:\_\_\_\_\_\_
2. What are the five *MECHANICAL* layers of the Earth, what are their compositions and how thick are they?
	1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_: composition: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_; \_\_\_\_km thick
	2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_: composition:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_; \_\_\_\_km thick
	3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_: composition:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_; \_\_\_\_km thick
	4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_: composition:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_; \_\_\_\_km thick
	5. \_\_\_\_\_\_\_\_\_\_\_\_\_\_: composition:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_; \_\_\_\_km thick
3. What is a ***tectonic plate***? Define it.
4. What type of crust(s) can a tectonic plate be made of?
5. Explain Wegner’s **Theory of Continental Drift**. What is some of the evidence for this theory?
6. What is a ***mid-ocean ridge***? Give an example of a well known mid-ocean ridge.
7. Explain ***sea-floor spreading,*** and HOW it happens***.*** DRAW A DIAGRAM.
8. What is a ***magnetic reversal***?
9. Explain what the following explanations of how tectonic plates move states:
	1. **Mantle Convection:**
	2. **Slab pull:**
	3. **Ridge Push:**

**Earthquakes**

1. DESCRIBE AND EXPLAIN each of the following types of plate boundaries. EXPLAIN WHAT LAND FEATURES TEND TO FORM AT THESE BOUNDARIES.
	1. **Convergent boundaries:**
	2. **Divergent boundaries:**
	3. **Transform boundaries:**
2. What are the two different types of *stress* that rocks can experience? Explain what each one is?
3. What is the difference between ***folding***  and ***faulting*** in a rock layer?
4. What are earthquakes? How do they form?
5. What are the two ways rocks can deform? Define/explain each way.
	1. Plastic:
	2. Elastic:
6. What are the different types of seismic waves? Describe their differences including: which ones arrive first, which ones are the strongest, how they move, and through what they can move.
	1. P Waves (Primary waves):
	2. S Waves (Secondary waves):
	3. L Waves (Surface waves):

1. Define and explain the following terms. Find examples if you need to.
	1. Focus:
	2. Epicenter:
	3. Aftershock:
	4. Elastic rebound:
	5. Seismic waves:
2. What are different scales used to measure earthquake magnitudes? What are the benefits and disadvantages to each?Which one is used now?
	1. Mercalli Scale:
	2. Richter Scale:

**Volcanoes (Chapter 8)**

1. What is a volcano?
2. What is the difference between an ***explosive*** and a ***nonexplosive*** eruption?
3. Describe the characteristics for each of the following *types* of volcanoes:
	1. Composite (stratovolcano):
	2. Shield Volcano:
	3. Cinder cones:
4. Distinguish (explain) the following classifications of volcanoes:
	1. Extinct:
	2. Dormant:
	3. Active:
5. What is a hot spot?

**Erosion, Rivers and Deposition (Chapter 10 and 11)**

1. What is **erosion?**
2. What are the FIVE agents of erosion?
3. What is **run-off?**
4. What is **deposition**?
5. What are conditions are ideal for **deposition** to occur (speed of river, type of load, etc.) and EXPLAIN how those conditions make it ideal for deposition to occur?
6. How does **weathering/erosion** AND **deposition** change or shape the land/surface of the Earth? GIVE EXAMPLES!
7. Explain IN DETAIL how rivers form. Explain it in stages (USE THE FLOW CHART WE MADE IN CLASS!).
8. What is **ground water**?
9. Explain why ground water is important?
10. What are the two ZONES of ground water, and explain/describe each?
	1. **Zone of aeration:**
	2. **Zone of saturation:**
11. What is an **AQUIFER?**
12. What are the TWO qualities which an aquifer has?
13. Explain how the surf can be a powerful agent of erosion and deposition?
14. Define:
	1. **Shoreline:**
	2. **Beach:**
	3. **Longshore current:**
	4. **Alluvial fan:**
	5. **Delta:**
	6. **Alluvium:**