

Name: _____

Introduction to Oceanography 112 - M. Yasuda
Date: September 17, 2009
Week 4

Reading

1. **Earth structure and plate tectonics**
Chapter 4: All

Vocabulary list

- | | |
|----------------------|------------------------------|
| 1. Continental shelf | 9. Oceanic islands |
| 2. Continental slope | 10. Plateaus, guyots, atolls |
| 3. Continental rise | 11. Hotspot |
| 4. Abyssal plain | 12. Mantle plume |
| 5. Abyssal hills | 13. Paleomagnetism |
| 6. Submarine canyon | 14. Paleomagnetic anomaly |
| 7. Submarine fan | 15. Marine sediments |
| 8. Turbidite | |

Homework

1. **Prepare for a quiz next week. It will cover:**
 - a. Material through today's lecture
 - b. Reading
 - c. Topic areas – Origin of Earth and its oceans, plate tectonics, continental margins
2. **Turn in this Activity sheet. Type all essay answer on a separate sheet(s) of paper. Staple it to this sheet to turn in.**

Plate tectonics Part I – Review questions

1. What layers of the Earth make up a plate?
2. What are the two main processes of plate tectonics?
3. What layers of the Earth make up any single plate?
4. What is the difference between plate tectonics and continental drift?
5. What changes to accommodate the motion of plates – continents or oceans primarily?
6. What are three features found at a spreading center or place where seafloor spreading takes place?

Plate tectonics Part II – The details

7. What key process takes place - at or close to - each named location – **seafloor spreading** or **subduction**?
- a. Mid-Atlantic Ridge _____
 - b. Midocean ridge _____
 - c. Peru-Chile trench _____
 - d. Mariana trench _____
 - e. Hawaiian islands _____
 - f. Aleutian islands _____
 - g. East Pacific Rise _____
8. Name a real place that is an example of each kind of plate margin and particular pair of continental margins given:
- a. Convergent margins
 - 1. Continent-continent collision _____
 - 2. Continent-ocean collision _____
 - 3. Ocean-ocean collision _____
 - b. Divergent margins
 - 1. Ocean-ocean divergence _____
 - 2. Continent-continent divergence _____
 - c. Transform margins
 - 1. Ocean-ocean _____
 - 2. Continent-continent _____
9. Of the three major linear **volcanic** mountain range types associated with three major kinds of tectonic settings, what is different about the age pattern of volcanism between them?
10. Compare and contrast features found at passive vs. active continental margins.