**Shaping the Land (Erosion, River Systems**

**Underground Water, Beaches)—Chapter 10 & 11**

**Study Guide**

1. What is **erosion?**
2. What are the FIVE agents of erosion?
3. What is **run-off?**
4. What are the FOUR factors which affect run-off?
5. Explain IN DETAIL how rivers form. Explain it in stages (USE THE FLOW CHART WE MADE IN CLASS!).
6. Define the following terms:
   * ***Drainage System:***
   * ***Drainage Basin:***
   * ***Tributaries:***
   * ***Divides:***
   * ***Channel:***
7. What is the flow of run-off progression? i.e. what is the general pattern in which run-off “Rills” turn into “Rivers”?
8. What is stream erosion?
9. Know and EXPLAIN how the following factors affect the rate of STREAM EROSION?
   * Speed (of stream):
     1. Gradient:
   * Discharge:
   * Load:
10. KNOW, DESCRIBE and EXPLAIN HOW THE FORMATION of the following stages/classifications of rivers:
    * Youthful:
    * Mature:
    * Old:
    * Rejuvenated:
11. Explain how rivers can carry rocks, sediment and other materials from one place to another place that’s several miles away.
12. What is **deposition**?
13. 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?
14. How does **weathering/erosion** AND **deposition** change or shape the land/surface of the Earth? GIVE EXAMPLES!
15. What is **alluvium**?
16. What are **alluvial fans?** Give an example.
17. What is a **delta?** Give an example.
18. What is a **flood?**
    * What is a **floodplain?**
19. What are some positive and negative effects of flooding?
20. What percent of the following types of water covers the Earth’s surface?
    * Ocean water:
    * Fresh water:
      1. Ground water:
      2. Glaciers and ice caps:
21. What is **ground water**?
22. Explain why ground water is important?
23. What are the two ZONES of ground water, and explain/describe each?
    * **Zone of aeration:**
    * **Zone of saturation:**

1. What is a **WATER TABLE**?
2. What is an **AQUIFER?**
3. What are the TWO qualities which an aquifer has?
4. Define and explain the following:
   * **Spring:**
     1. **Artesian formation:**
        1. **Artesian spring:**
   * **Well:**
5. Explain how underground erosion and deposition can still shape the land. Define the following:
   * Stalagmites:
   * Stalactites:
6. What is a **shoreline?**
7. What is a **wave?**
8. What does the size of a wave depend on?
9. What is a *wave train*?
10. What is a *wave period*? How long are most *wave periods*?
11. What is the **surf**?
12. Explain how the surf can be a powerful agent of erosion and deposition?
13. What is a **beach?**
14. What does a beach’s texture and color depend on?
15. Describe how waves move along the shoreline.
16. What is a **longshore current**?
17. Explain what the following features formed by *long shore currents* are.
    * Sand bar:
    * Barrier Split:
    * Tombolo:

1. Explain what some of the following features are and how wave erosion creates them:
   * Sea cliffs:
   * Sea caves:
   * Sea arches:
   * Sea stacks:
   * Headland:
   * Wave-cut terrace: