Science Final Exam Study Guide– 1st Semester

Directions: Use your book, notes, and old tests to find the answers to the following information. Your final exam WILL include information from all semester.

Unit 1: Natural Resources

1. What makes a good scientific observation?

   A complete and accurate description
2. A newspaper is made from a **renewable** resource.
3. An aluminum baseball bat is made from a **nonrenewable** resource.
4. A **tree** is an example of a renewable resource. A **fossil fuel** is an example of a nonrenewable resource.
5. Hydroelectric energy is created from falling water. Dams harness the energy.
6. Geothermal energy is created using heat from inside the earth.

Unit 2: Soil

7. Organic matter is composed of dead plants and animals.
8. Beginning at the surface of Earth, list the 4 layers of soil.

   Topsoil (A), Subsoil (B), Parent material, Bedrock
9. Soil is composed of **weathered** rocks and organic matter.
10. Discuss 1 HUMAN factor that contributed to the Dust Bowl of the 1930s. farming
11. **Terracing** is one method used to stop soil erosion on **steep** slopes.
12. **Humus** gives topsoil horizon its dark color.
13. **Leaching** is the process where water carries nutrients from the A horizon to the B horizon.
14. List the three types of weathered rock found in soil from largest particle size to smallest particle size.

    Sand, silt, clay

Unit 3: Rocks and Minerals

15. Magma forms within the mantle as a result of **high** temperature and **low** pressure.
16. All rocks are made of **minerals**.
17. The properties of a mineral depend on the **type** of mineral being examined.
18. One example of a property of a mineral is **luster** or **hardness**.
19. The rock cycle describes how rocks are **formed**, **destroyed** and **changed** over time.
20. **Igneous**, **sedimentary**, or **metamorphic** can be used to classify rocks based on how they form.
21. Igneous rocks form from **cooling magma or cooling lava**.
22. Sedimentary rocks form from **compaction and cementation of cedimants**.
23. Metamorphic rocks form from **heat and pressure that change a rock**.
24. Moh's scale is used to test a mineral's **hardness**.
25. **Marble** is an example of a metamorphic rock.
26. **Sedimentary** rocks form when weathered and eroded material settles on the ocean floor.

Unit 4: Weathering, Erosion & Deposition

27. Define weathering.

The process of cracking or breaking down the Earth's surface

28. Why would you expect to find very fertile soil at the mouth of a river?

River deposit both sediments and nutrients as the water slows down

29. **Wind** is the agent of erosion that moves sand dunes from one place to another.
30. Windbreaks help conserve **soil**.
31. Slump, creep, rockslides, & mudflows are all types of erosion caused by **gravity**.
32. Glaciers leave behind **U**-shaped valleys.
33. Describe one feature of Earth created by deposition. **sand dunes**, **beaches**, etc.

Unit 5: Earth Layers / Continental Drift / Plate Tectonics

34. The **Moho** is the boundary between the crust and the mantle. Seismic wave speeds change in this area.
35. Explain how scientists study the inside of Earth if they are unable to travel there.
    Seismic waves travel
36. The theory of **plate tectonics** helps explain the cause of earthquakes and volcanoes.
37. List the layers of Earth from lowest temperature to highest temperature.
    Crust, mantle, outer core, inner core
38. Describe what happens to density as you travel deeper into the Earth.
39. **Granite** rock is found mostly in continental crust. **Basalt** rock is found mostly in oceanic crust.
40. The thickest layer of Earth is the **mantle**.
41. Alfred Wegener's theory, **continental drift,** helps to explain the movement of Earth's continents over time.
42. The two main elements found in Earth's crust are **silicon** and **oxygen**.
43. The two main elements found in Earth's mantle are **iron** & **magnesium**.
44. The two main elements found in Earth's core are **iron** and **nickel**.
45. What evidence supports the theory of continental drift? Give 2 pieces of evidence.
    a. **Continents fit like puzzle pieces**
    b. **Fossils of various plants and animals have been found on multiple continents.**