Lab 1: Introduction to Geology: Using Web Sources

The Digital Atlas of Idaho

Purpose: The purpose of this lab is to both get you started on thinking about geology and to introduce you to an invaluable resource on the World Wide Web, the Digital Atlas of Idaho. In this lab, you will navigate around the Digital Atlas to find answers to some questions. Feel free to investigate other areas of the Atlas as there is a wealth of information available to you at this site.

Instructions: Fill in the following outline. In some places, a short answer will suffice but in other places, please write 2 to 3 sentences to answer the questions. While you may not understand every answer, (such as you may not know what a rhyolite is), this lab will introduce you to some of the interesting geology around the state and some basic concepts. You may type the answers on a separate sheet or fill in the answers on this sheet as long as they are legible.

Step 1: Using computer with access to the World Wide Web, go to:

http://imnh.isu.edu/digitalatlas

Step 2: Follow the outline and answer the questions below. Main Headings (in bold) are links from the “home page” of the Digital Atlas of Idaho. Italicized subheadings are links off of these pages.

Geology > Geology Basics:

1. What is the definition of Geology?

2. Briefly describe a rock

3. What are the three different types of rocks?
4. Briefly describe a mineral.

5. What is the difference between a rock and a mineral?

6. Click on “What is the rock cycle”. Look at the Rock Cycle diagram. How does the rock cycle work?

7. Draw a schematic of the rock cycle below.

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**Geology > Rocks of Idaho:**

Scroll down the page to find the information you are looking for.

8. What is a sedimentary rock?

9. Name four sedimentary rocks.

10. What is an igneous rock?
11. Where can igneous rocks be formed?

12. What is a metamorphic rock?

13. Name four metamorphic rocks.

14. Return to the map of Idaho at the top of the page. Name three rock types found in Bannock County (located in SE Idaho, just south of Bingham County—the word “Bannock” is covered by rock sites).

**Geology > Fossils > What is a Fossil?**:  

15. What is a Fossil? Be sure to include the differences between a body and a trace fossil.

16. What are the three requirements for an object to become a fossil?

17. What kinds of rocks generally contain fossils?

18. What kinds of fossils are found at the Hagerman fossil beds?

**Geology > Earthquakes**:
19. Locate the earthquake at #17 on the map. Click and read about it. Describe this earthquake: its name, size, location, and the damage associated with it. What physical evidence was left from this earthquake?

20. Scroll down the page to the section called “Earthquakes in Idaho”. A) What causes earthquakes? and B) Why are there so many earthquakes in Idaho?

**Geology > Snake River Plain**

21. What is the Snake River Plain and what is its extent?

22. What rock types dominate the areas of the Snake River Plain?

**Geology > Caves:**

23. List the three types of caves and how each one is formed.

24. Name three caves in Idaho.

**Geology > Glaciers**

25. What is a glacier?
26. How do glaciers form?

27. What two kinds of glaciation have effected Idaho?

28. Where in Idaho have glaciers formed?

Now to Geography > Geography Basics:

29. What is the definition of geography?

30. Explain latitude and longitude. (click on “Maps and Globes”)

31. What is the degree of latitude at the equator?

32. What is the degree of longitude at the prime meridian?

33. What major city does the prime meridian pass through?

Now click on “Understanding Topographic Maps” on Geography Basics page

34. What is a topographic map?
35. What are contour lines?

36. What are the three characteristics of contour lines?

Now to **Hydrology** > *Hydrology Basics*:

37. What is the definition of hydrology?

38. Draw a schematic of the hydrologic cycle.

39. What percentage of water is contained in each part of the cycle?