**Name:**

**Date:**

**School:**

**Facilitator:**

8.01 Soil Erosion Lab

**Part One: Answer these questions based on the virtual lab linked in the task page of lesson 8.01.**

1. State your prediction about which one of the three variables/factors (soil treatment, amount of water, incline) will have the greatest effect on soil erosion by water. [Your prediction needs to be written in a complete sentence.] Hypothesis:

2. State your hypothesis/prediction about which *combination* of the three variables will have the greatest effect on soil erosion by water. [Your prediction needs to be written in a complete sentence.] Hypothesis:

Lab Procedure:

1. Read the Introduction completely.
2. Click on the Introduction tab and enter you first and last name.
3. Choose Level 1. You only need to complete Level 1.
4. Read the directions. Then, close the directions.
5. Begin with the following settings:
   1. Soil Treatment: None
   2. Amount of Water: Low
   3. Incline: Medium
6. Click “Go.”
7. Note the number of liters of soil erosion and enter it in the chart below.
8. Click X to close the results box.
9. Repeat steps 5-8 for the other combinations in the chart below. Enter all your results in the chart.
   1. When you have finished, you can click on the Results tab to see all your results listed in one place.

|  |  |  |  |
| --- | --- | --- | --- |
| **Soil Treatment** | **Amount of Water** | **Incline** | **Results: Liters of Soil Erosion** |
| None | Low | Medium |  |
| None | High | Steep |  |
| Plant | Low | Medium |  |
| Plant | High | Steep |  |
| Plant | Medium | Steep |  |
| Trenches | Low | Medium |  |
| Trenches | High | Steep |  |
| Trenches | Medium | Steep |  |

**Part Two Directions: Answer the following questions using the information you gathered from the lab and the lesson.**

1. Name two other agents besides water that can cause erosion.
2. What other variables/factors can affect the severity of soil erosion by water besides soil treatment, amount of water, and incline?
3. Which combination of the variables that you tested caused the most soil erosion from water?
4. In Lesson 8.01, it mentioned 3 types of water erosion—rill, gulley, and sheet. What is another type of water erosion that you learned about in Lesson 8.01? Define it/explain how it causes erosion.
5. Looking at the data from your chart above, which factor/variable seems to have the greatest effect on soil erosion by water? Use data from your chart to justify your answer.
6. List and explain the 3 ways that wind can move soil particles and cause erosion.
7. Name the 2 types of glaciers that you learned about in Lesson 8.01. What causes glaciers to move across the land?
8. Using what you learned in lesson 8.01 and in this Soil Lab, explain how gravity can cause or increase the severity of soil erosion.
9. What is it called when forest is permanently destroyed to make land available for other uses? What is it called when this permanent destruction of forest lands leads to the development of desert-like conditions, yet are not desert climates? What negative impact can these two processes have on soil?      .