**Soil and Biochar Mixture Lab Sheet**

**Predictions**

Might biochar affect each soil type’s ability to retain water? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

If so, would it increase or decrease water retention for each soil type?

Which type of soil/biochar mixture do you expect to retain the most water? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Data Collection Instructions**

* Record your water retention levels in the table below.
* Subtract the volume of the drained water in the graduated cylinder from the volume of water you started with (100 ml).
* Record the difference in the amount of water retained column.

**Part 1: Soil**

|  |  |  |
| --- | --- | --- |
| **Soil Type** | **Amount of Water Collected** | **Amount of Water Retained** |
| **Sand** |  |  |
| **Loam** |  |  |
| **Clay** |  |  |

**Analysis Questions**

Which soil type was best at retaining water? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Which soil type was worst at retaining water? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Part 2: Soil/Biochar Mixtures**

|  |  |  |
| --- | --- | --- |
| **Type of Soil and Biochar Mixture** | **Amount of Water Collected** | **Amount of Water Retained** |
| **Sand/Biochar Mixture** |  |  |
| **Loam/Biochar Mixture** |  |  |
| **Clay/Biochar Mixture** |  |  |

**Analysis Questions**

1. Did biochar affect each soil type’s ability to retain water? Explain.
2. Did biochar increase or decrease each type of soil water retention level? Explain.
3. Which type of soil/biochar mixture retained the most water?