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| |  | | --- | | **Determining Soil Texture and Permeability** | |

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| CATEGORY | | **4** | | **3** | **2** | **1** |  | |  |
| **1-Station Cleanup (after the lab is completed bring rubric to be signed)** | |  | | | | | 4 | |  |
| **2-Question/Purpose**  **What is the purpose of this lab** | | The purpose of the lab or the question to be answered during the lab is clearly identified and stated. | | The purpose of the lab or the question to be answered during the lab is identified, but is stated in a somewhat unclear manner. | The purpose of the lab or the question to be answered during the lab is partially identified, and is stated in a somewhat unclear manner. | The purpose of the lab or the question to be answered during the lab is erroneous or irrelevant. | 4 | |  |
| **Procedures** | | None required for this lab report | | | | | | |  |
| **3-Activity 1: Describing Clay, Sand, and Silt for**   1. **Color** 2. **Smoothness** 3. **Grittiness** 4. **Ability to form ribbon** 5. **Ribbon length** | | Report illustrates an accurate and thorough understanding of scientific concepts underlying the lab. | | Report illustrates an accurate understanding of most scientific concepts underlying the lab. | Report illustrates a limited understanding of scientific concepts underlying the lab. | Report illustrates inaccurate understanding of scientific concepts underlying the lab. | 4 | |  |
| **4-Table 2**  **Identifications 1 and 2** | | Three lines intersect and soil texture identified | | 1 component missing | 2 components missing | 3 or more components missing | 4 | |  |
| **5-Table 2**  **Identifications 3,4, 5** | | Three lines intersect and soil texture identified | | 1 component missing | 2 components missing | 3 or more components missing | 4 | |  |
| **6-Data Collection Part 1:**  **Soil Texture by Sedimentation**  **Class Averages** | | Complete the first data collection chart – your Group number will be assigned to you, indicate your group number by placing an asterisk next to your group number. Calculate the average of the samples A, B, and C for the class and record data. | | | | | 4 | |  |
| **7-Calculations – Individual Samples**  **A, B, and C** | | Complete all calculations – once completed you will enter your data on the board | | | | | | 4 |  | |
| **8-Soil Determination by Sedimentation**  **Individual Identification**  **A, B, C** | | Three lines intersect and soil texture identified | | | 1 component missing | 2 components missing | 3 or more components missing | 4 |  | |
| **9-Class Average and Identifications**  **A, B, C** | | Three lines intersect and soil texture identified | | | 1 component missing | 2 components missing | 3 or more components missing | 4 |  | |
| **10-Hypothesis** | | Prediction uses the data collected to formulate a hypothesis to prediction which samples will be the most and least permeable along with an educated guess to why these predictions were made | | | | | | 4 |  | |
| **11-Data Collection Part 2:**  **Soil Permeability** | | Complete the second data collection chart – your Group number will be the same as Data Collection Part I, indicate your group number by placing an asterisk next to your group number. | | | | | | 4 |  | |
| **12-Safety** | | Lab is carried out with full attention to relevant safety procedures. The set-up, experiment, and tear-down posed no safety threat to any individual. | | Lab is generally carried out with attention to relevant safety procedures. The set-up, experiment, and tear-down posed no safety threat to any individual, but one safety procedure needs to be reviewed. | | Lab is carried out with some attention to relevant safety procedures. The set-up, experiment, and tear-down posed no safety threat to any individual, but several safety procedures need to be reviewed. | Safety procedures were ignored and/or some aspect of the experiment posed a threat to the safety of the student or others. | 4 |  | |
| **13-Conclusion**  **Questions** | | Report illustrates an accurate and thorough understanding of scientific concepts underlying the lab | | Report illustrates a limited understanding of scientific concepts underlying the lab. | | Report illustrates inaccurate understanding of scientific concepts underlying the lab. | The purpose of the lab or the question to be answered during the lab is erroneous or irrelevant | 4 |  | |
| **14-Conclusion**  **Questions** | | Report illustrates an accurate and thorough understanding of scientific concepts underlying the lab | | Report illustrates a limited understanding of scientific concepts underlying the lab. | | Report illustrates inaccurate understanding of scientific concepts underlying the lab. | The purpose of the lab or the question to be answered during the lab is erroneous or irrelevant | 4 |  | |
| **15--Conclusion**  **Questions** | | Report illustrates an accurate and thorough understanding of scientific concepts underlying the lab | | Report illustrates a limited understanding of scientific concepts underlying the lab. | | Report illustrates inaccurate understanding of scientific concepts underlying the lab. | The purpose of the lab or the question to be answered during the lab is erroneous or irrelevant | 4 |  | |