

Name: _____

Soil Analysis Lab Handout

In this lab, you will be comparing soil samples that a known with those gathered from suspects as well as the crime scene. Follow the directions listed and complete the chart on this page. Once you have completed the lab, answer the lab questions.

Directions:

1. Gather all materials for this lab.
2. Place the fluid into the density-gradient tube, placing the most dense solution in first and ending with the least dense solution.
3. Describe the physical characteristics of the soil samples. Note your observations in the chart below.
4. Examine the soil samples under a microscope. Note any observations you make in the chart below.
5. Place one soil sample into each density-gradient tube. Allow time for the soil to "settle." Once the soil is no longer moving in the tube, you can read your results. Place your results in the chart below. You can use comparisons such as "Suspect One matches Known 2 but is more dense than the Crime Scene."
6. Answer all lab questions in complete sentences.

Lab Data:

	Physical Properties	Microscopic Exam.	Density-Gradient Tube
Known #1			
Known #2			
Known #3			
Suspect #1			
Suspect #2			
Crime Scene			

Lab Questions:

1. Define "physical property."
2. Define "density" and write the equation.
3. List three "contaminates" that can be found in soil samples. (3 pts.)
4. Explain why density is an accurate, constant measurement regardless of the sample's mass. (2 pts.)
5. Why did the soil need to be heated before the experiment began? (2 pts.)
6. What information, besides physical properties and density, could be obtained from soil? List at least three examples.