

Lab Exercise 1

1. What type of rocks were represented in the lab video (igneous, sedimentary, or metamorphic)? How did you decide which type of rock each was? What clues did you use to help you decide?

Rock type A?

Rock type B?

Rock type C?

2. Looking at the completed data table below for Part 1A explain (based on the characteristics of each rock sample) the results. Review the video to remind yourself of each rock's characteristics.

DATA TABLE

	Sample A	Sample B	Sample C
Dry weight (grams)	51.56	87.48	63.92
Wet weight (grams)	51.93	88.47	67.93
Change in weight (%)	0.7	1.1	6.3

3. Looking at the video for Part 1B explain the effect of "acid rain" on each of the rock samples. Be specific.

4. Looking at the video for Part 1C explain the effect of "freezing and thawing" on each of the rock samples. Be specific.

5. From Part 2 of the lab exercise, explain why a soil sample needs to be run through a sieve with 2 mm openings (also called a No. 10 sieve)?

6. Looking at the 5 pictures of soil and gravel samples (labeled Samples 1 - 5) in the lab exercise handout, estimate the percentage of gravel in each sample. Use the example graphic in the handout.

Sample 1 gravel %?

Sample 2 gravel %?

Sample 3 gravel %?

Sample 4 gravel %?

Sample 5 gravel %?

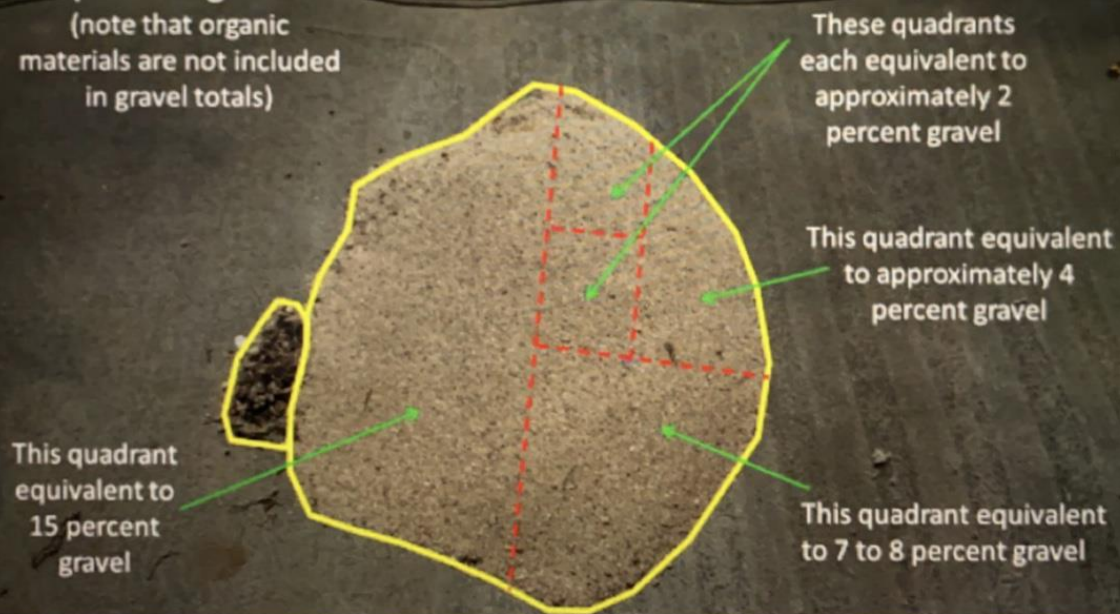
7. Why would it be useful to know what the rock fragment content of your soil is?

8. Why would we want to exclude organic materials and rock fragments from our soil analyses?

- Rock fragments $\frac{1}{4}$ of soil sample – 7 percent rock fragments
- Rock fragments $\frac{1}{2}$ of soil sample – 15 percent rock fragments
- Rock fragments = to soil sample – 35 percent rock fragments
- Rock fragments 1.5x soil sample – 47 percent rock fragments
- Rock fragments 2x soil sample – 60 percent rock fragments

1 percent gravel:

(note that organic materials are not included in gravel totals)



Sample 1



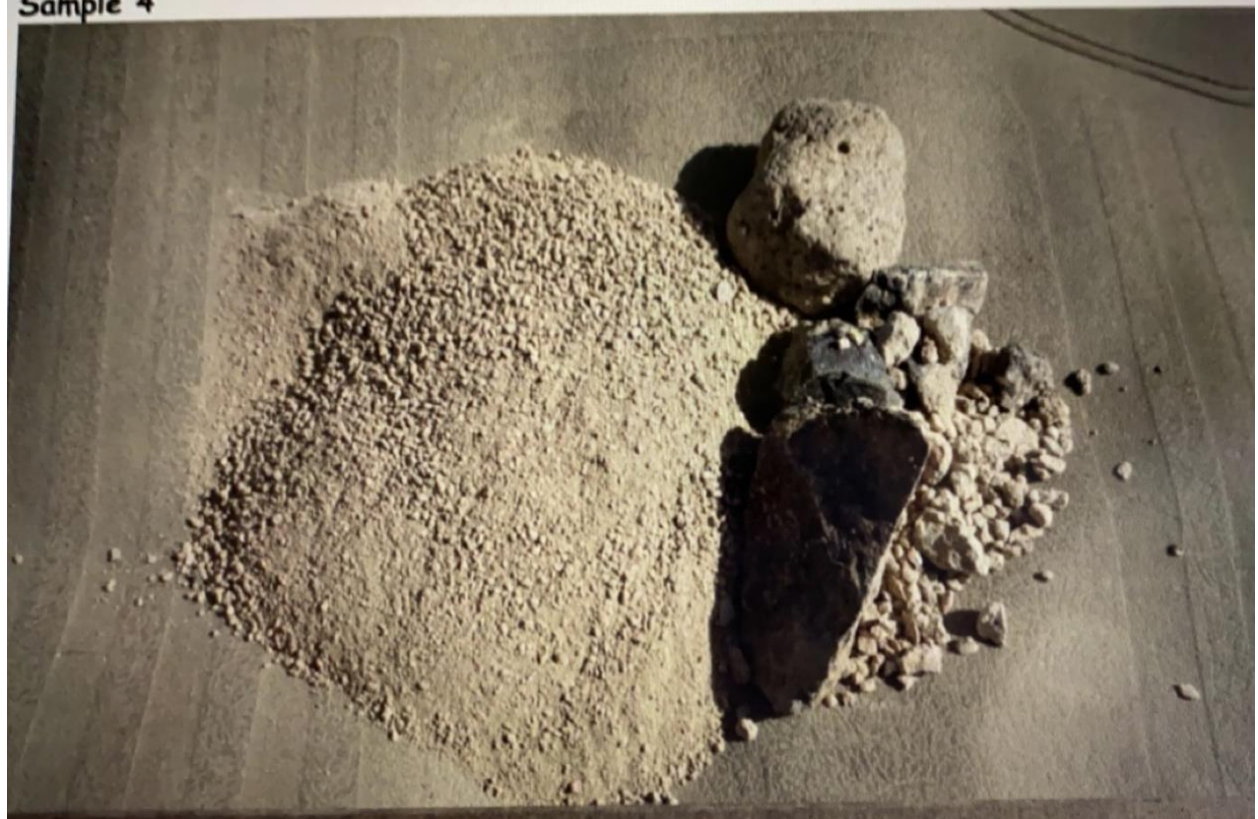
Sample 2



Sample 3



Sample 4



Sample 5



