

Study the Soil Composition in your backyard

June22, 2005

Part of Lab 3a: Jar test

You can arrange to have 2 jars per group.

Items needed:

1 spaghetti or mason jar, preferably quart size

Shovel for digging hole

Water (will fill in lab)

Step by step:

1. Dig a hole somewhere outside of a vegetable garden, or landscaped area to represent native soil cover of area. Dig the hole 12 inches deep and discard everything. You need to go lower than frostline and in Portland that is 12 inches. (Why? Because freezing and contracting can have unnatural heaving and not be true representation of soil)
2. Dig enough soil below the 12" depth to fill the jar upto 3/4th its capacity with soil.
3. Seal jar with just soil and bring to lab on 27th June, 2005.

In lab:

4. Fill jar to neck with water.
5. Shake thoroughly allowing all clumps to break down and set it on a shelf.
6. Over time the materials in the jar will settle. Allow at least a week to settle. The Jar test will be studied and discussed on the 5th of July:
7. When well stratified you will measure the total height in inches from bottom of jar to top of organics. Then you will measure depth of each material within.
8. Then you will determine percent of material in the soil: for example If the total soil in the jar is 12 inches, and the aggregate is 2 inches, then $2/12 = 1/6$ or 17%; sand 6 inches/12 = 50% etc. etc.

The following settling pattern is expected:

Aggregate is heaviest and will sink to the bottom

Next will be sand

Above that will be silt

Next will be clay, grey, or red in this area

With organic soil on top