

Sediment Jar – Activity

Supplies Needed

- **Clear jar or bottle that has a lid**
Make sure the jar/bottle has a wide enough opening that you can easily pour a soil sample in it. Such as a mason/jam jar, Gatorade bottle, or peanut butter jar that has been cleaned and the labels have been removed.
- **Spoon or garden trowel**
- **Water**
- **Soil sample from outside**
Make sure you have permission from the property owner before grabbing your soil sample. Don't take a soil sample from a garden as the amendments often added to gardens to create ideal growth conditions for plants will skew the results of this activity.
- **Ruler**

Instructions

1. Fill your clear jar/bottle $\frac{3}{4}$ of the way with water.
2. Using your spoon/trowel grab a soil sample from outside.
3. Add your soil sample to your jar/bottle (add enough soil that your jar/bottle is almost full).
4. Put the lid on and shake your jar/bottle.
5. Leave the jar sit for 1+ hour until all your soil has settled into distinct layers.

Observation Questions

- Have any layers formed?
- Is there anything floating up top?
- How many layers do you have and which is the thickest?

Measurements

Make sure to include your units of measure!

Total Height = _____

Clay Layer Height = _____

Silt Layer Height = _____

Sand Layer Height = _____

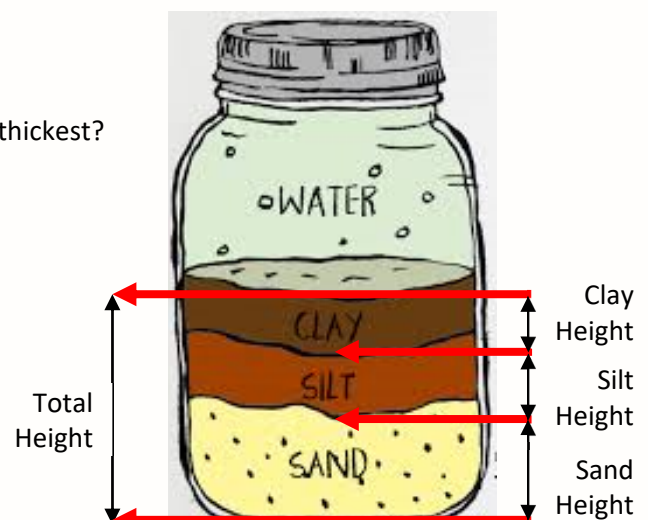


Image Source: <https://www.flowful.org/permaculture-community-resilience-course/s6-soil-basics>

Sediment Jar – Calculations and the Soil Texture Triangle

Calculations

$$\text{Clay\%} = \text{Clay Height} / \text{Total Height} * 100$$

$$\text{Silt\%} = \text{Silt Height} / \text{Total Height} * 100$$

$$\text{Sand\%} = \text{Sand Height} / \text{Total Height} * 100$$

$$\text{Clay\%} = \underline{\hspace{2cm}} / \underline{\hspace{2cm}} * 100 = \underline{\hspace{2cm}}$$


$$\text{Silt\%} = \underline{\hspace{2cm}} / \underline{\hspace{2cm}} * 100 = \underline{\hspace{2cm}}$$


$$\text{Sand\%} = \underline{\hspace{2cm}} / \underline{\hspace{2cm}} * 100 = \underline{\hspace{2cm}}$$


+

$$\text{Check that the Percentages Total 100\%} = \underline{\hspace{2cm}}$$

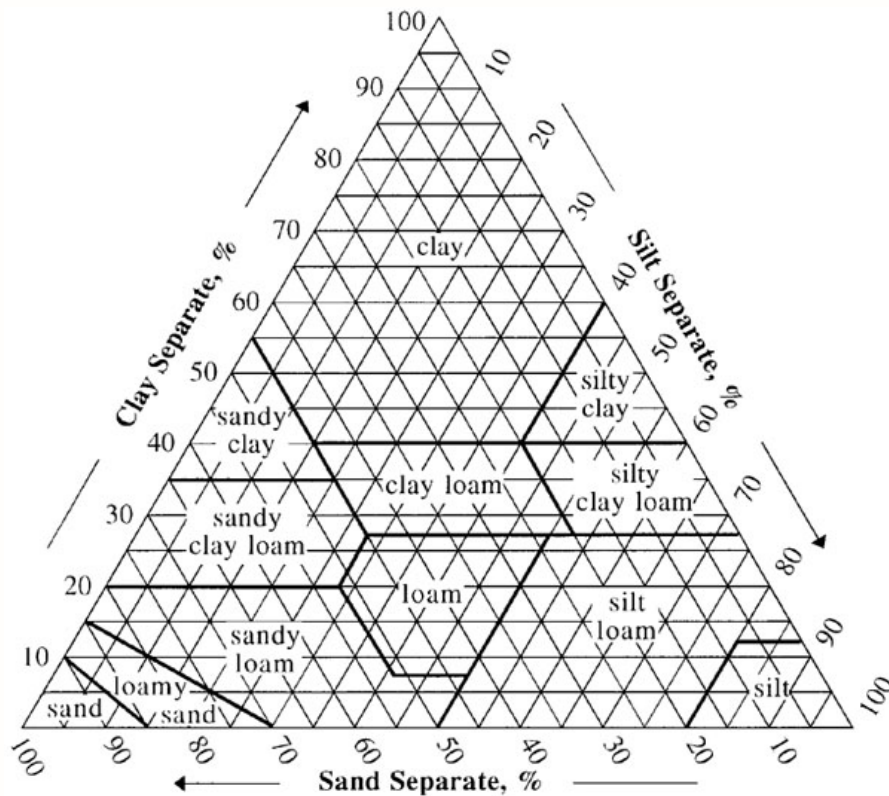
How to Use the Soil Texture Triangle

Trace the  line for the % clay.

Trace the  line for the % silt.

Trace the  line for the % sand.

The intersection is your soil texture type!



Check your soil texture triangle results at:

https://www.nrcs.usda.gov/wps/portal/nrcs/detailfull/soils/research/guide/?cid=NRCS142P2_054167

