Soil can hold water

$$\text{Water} = \text{Wet and Dish} - \text{Dry and Dish}$$

$$\text{Dry Soil} = \text{Dry Dish} - \text{Empty Dish}$$

$$\text{Water Holding (\%)} = \frac{\text{Water}}{\text{Dry Soil}} \times 100$$

Imagine that you collected a soil sample from Cheldelin Middle School. You found the mass of an empty Petri dish (46.2 g). Then you put the soil sample into the Petri dish and found the mass of the dish plus the soil (141.2 g). Finally, you dry the soil sample for 48 hours and find the mass again (98.3 g). What is the water content of the soil?

Water = 141.2 − 98.3 = 42.9

Dry Soil = 98.3 − 46.2 = 52.1

$$\text{Water Holding (\%)} = \frac{42.9}{52.1} = 82.3\%$$

You have just finished collecting a soil sample from a nearby field and you want to find the water holding capacity. You find the mass of an empty Petri dish (30 g). You put some of the wet soil you collected into the Petri dish and find the mass (150 g). After letting your sample dry for two day you find the mass of the dry soil in the Petri dish (80 g). What is the water holding capacity of the soil sample?

Water = 150 - 80 = 70g

Soil = 80 - 30 = 50g

(70/50) x 100 = 140%

You decide to collect a soil sample near the river. You find the mass of an empty Petri dish (30 g). You put some of the wet soil you collected into the Petri dish and find the mass (100 g). After letting your sample dry for two day you find the mass of the dry soil in the Petri dish (90 g). What is the water holding capacity of the soil sample?

Water = 100 − 90 = 10g

Dry = 90 − 30 = 60g

$$\text{Water Holding} = \frac{10}{60} \times 100 \approx 17\%$$

Someone bring you an unknown soil sample. You find the mass of an empty Petri dish (30 g). You put some of the wet soil you collected into the Petri dish and find the mass (190 g). After letting your sample dry for two day you find the mass of the dry soil in the Petri dish (165 g). What is the water holding capacity of the soil sample?

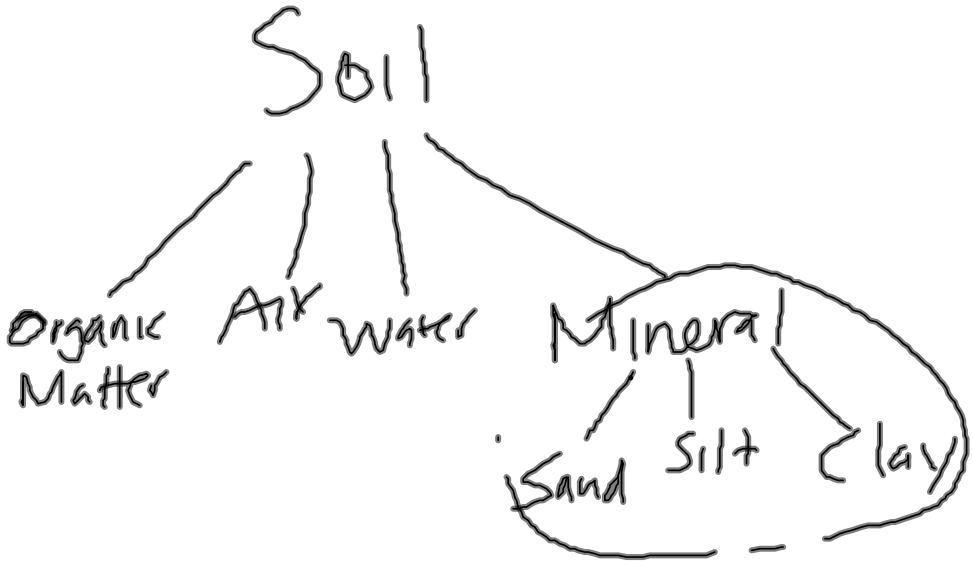
Soil

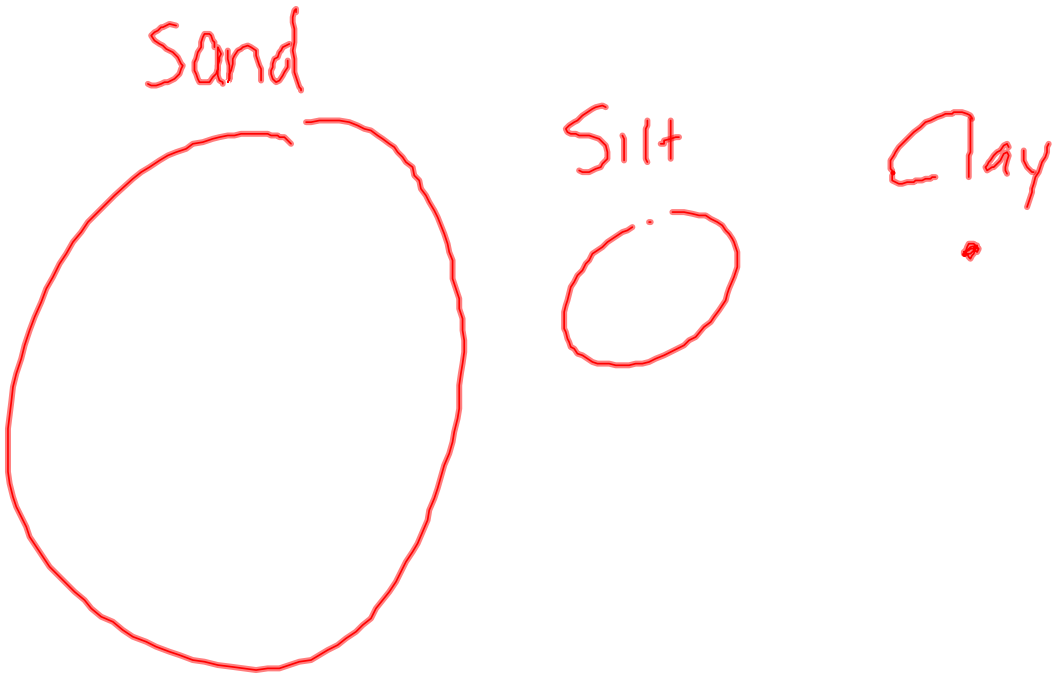
- ecosystem
- changing

5 Ecological Roles

What does it do?

1. Recycles = waste/debris → nutrients
2. Habitat - diverse ecosystem
3. Plants - supports plant roots
4. Water - hold water, purify water
5. Building/Structure - solid ground


Soil
Organic Matter
Air
Water
Mineral
Sand
Silt
Clay



Fine Texture (Silts + Clay)

- absorb water

Grainy Textured Soil (Sand)

- water flows through

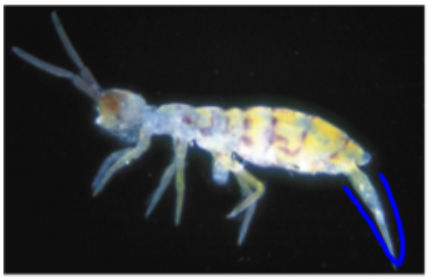
Loam - ideal mix sand, silt + clay

most soils

plants → orgs

A-100

- **QUESTION: What is the name of this soil organism?**



Answer Question

A-400

- QUESTION: What is the name of this soil organism?

-segmented
-2 legs/seg

Answer Question

A-500

- QUESTION: What is the name of this soil organism?

-external skeleton
-segmented
-4 less/seg

Answer | Question |