

What does soil need?

Snooping into your soil

Colour match?

black brown grey

orange red white yellow

🌱 *Why did the tree think soil was a tree?* 🌱

🌱 *Because it had bark on its surface* 🌱

Close-up?

⋯ Grains one colour / more than one

☞ Clods

👁 👁 Bits of living things (plants/animals)

🐛🐛 Living things (eg worms)

🌱 *Why did the cat want to eat the soil?* 🌱

🌱 *Because the soil had 'blood and bone' put in it.* 🌱

Water love?

- ◆ Droplets soak in soil
- ◆ Droplets sit on top of soil
- ◆ Droplets slip off soil
- ◆ Soil grains ride on top of droplet!

Soil Shake!

Thanks to gravity we can see the :

	Air
🌿	Organic matter lying on the top
■	Clay as murky water
≈≈	Silt as a dark layer on top of
☞	Sand with the biggest grains.

pH colours?

Yellow Green Purple

Colour mainly comes from

rock underground AND

rotted living things (about 5%)

Darker soils are healthier. They have more organic matter - rotted from living things.

Close-up bits matter

Different sized grains and clods make spaces for air and water to get in.

A healthy soil has about ½ grains and clods, ¼ air, ¼ water and 1/20th organic matter (compost including manure)

How water gets in

Water pushes air out of soil as it soaks into its spaces.

Plant roots seek water and the nutrients in it to grow (and feed us) .

Some soils won't let water in easily – add more compost or a soil wetting agent.

Soil grain sizes!

Soils are named by their mix of grain sizes. If a sand grain was made as wide as you can stretch your arms, silt would be thumb-sized and clay only a pinprick!

Different plants like different mixtures, but the best for many food plants is a 'loam' – a mix of them all 40% sand, 40% silt, 20% clay.

pH matters

Soils have different pH's. These are shown by yellow (acidic, pH <6), green (neutral) and purple (alkaline, pH >8).

Different plants like different pH's, but many food plants like the neutral (green, pH 7)

Flowers and foods from soil

Soils give us many things for a healthy life, e.g. food, habitat, recreational places, building materials and supports.

Plant vegetable or flower seeds in your soil, care for them and help them grow.