

## What's in the soil?

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# What's in the Soil?

Soils in different places have different properties: they could be **sandy**, **salty**, **waterlogged** or **full of nutrients**.

Lots of **microbes** live in the soil. Microbes are really important because they keep the soil healthy. We can see what these microbes are doing by detecting the **metabolites** that they produce. Metabolites are small chemicals, like **sugars** and **fats**.

Microbes in soils all do the same basic things to stay alive, like **eating** and **respiring**. But some have to deal with extra stress, like being too **wet**, **acidic** or **salty**. When this happens, metabolites tend to build up.

**The types of metabolites that soil microbes produce are different depending on the properties of the soil.**

## Nutrient Rich Soils

Farmed soils at the bottom of the hill are **warm**, full of **nutrients** and have a **neutral pH**. Microbes here are not stressed, so metabolites do not build up.

## Stressful Conditions

**Peaty** soils on top of the hill are **cold** and exposed. They are also very **acidic**. Lots of metabolites build up in these soils as it is hard for microbes to survive.

