

## Soil



# Why is soil important?

Soil is an essential part of the ecosystem:

- separating the Earth's crust from the living environment
- supporting the growth of plants
- recycling nutrients from dead organisms
- providing a habitat for organisms such as bacteria and worms.

There are different types of soil, depending on its composition. These support different types of plants and influence the ecosystem that develops.



# What is soil?

Soil is made up of 5 components:

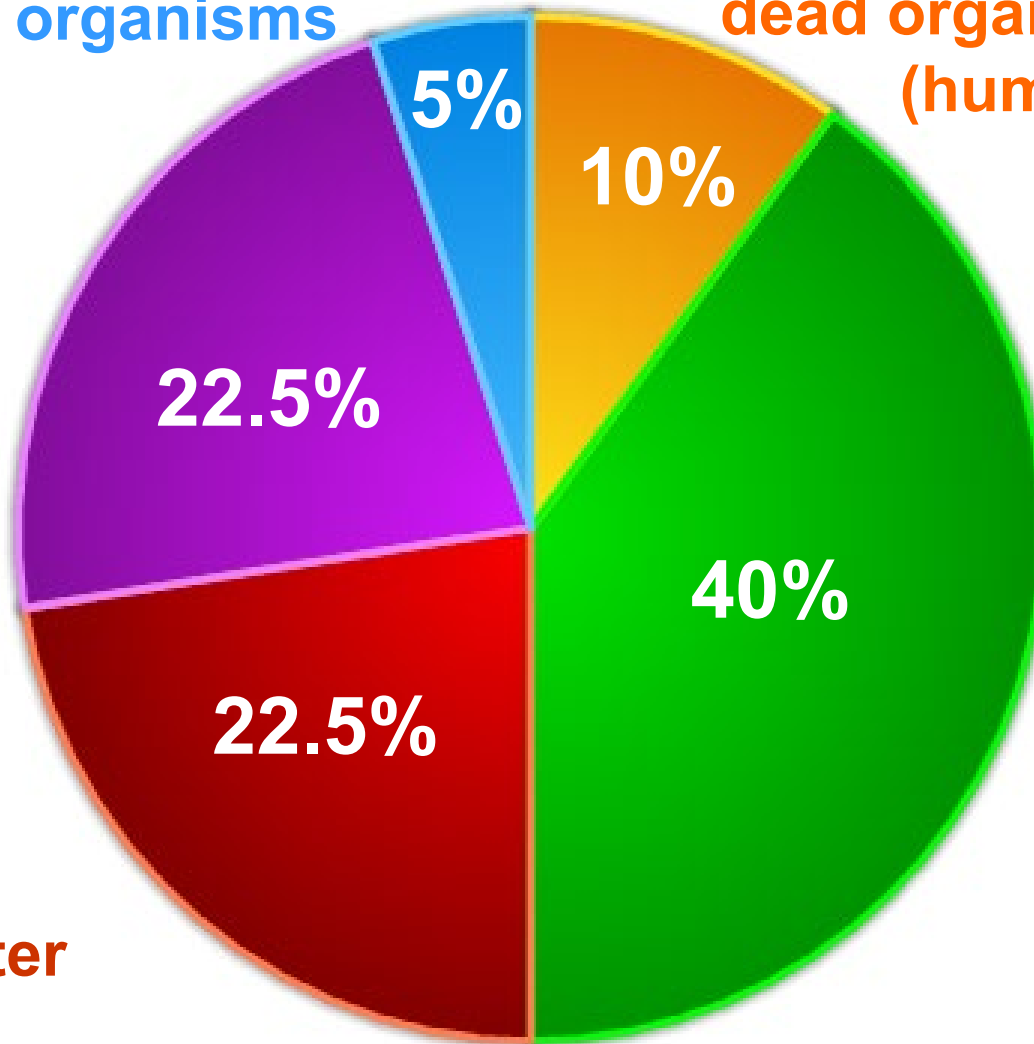
living organisms

dead organic matter  
(humus)

air

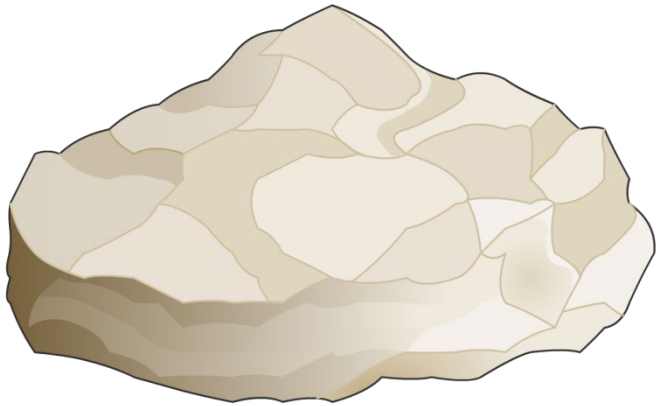
eroded rock  
fragments

water



Soil is created in two main stages:

## 1. Erosion of the underlying parent rock



Fragments of rock accumulate at the site of erosion. These are the source of minerals in the soil. The mineral composition of the soil therefore depends on the type of parent rock.

## 2. Production of **topsoil**

This is where the other components are added.

The accumulation of organic matter is affected by the climate and topology of the area.





Most plants grow in soil. Soil provides **anchorage** to hold the plant in one place.

Soil is a source of minerals. Plants produce their own food, but have to obtain minerals from the environment. Plants growing on soils that are lacking in minerals often show symptoms related to deficiencies.

Soil also provides plants with water. Plants obtain water via their roots. Soil traps water, providing a reliable supply for plants.



## Are these statements about soil true or false?

1.	Animals could survive without the presence of soil on Earth.	
2.	Soils differ if they are produced from different rock sources.	
3.	Living organisms form the largest component of soil.	
4.	Humus is the term for dead organic material.	
5.	Plants can synthesize their own minerals.	
6.	The first stage in producing soil is the accumulation of organic matter.	

true

false



solve

