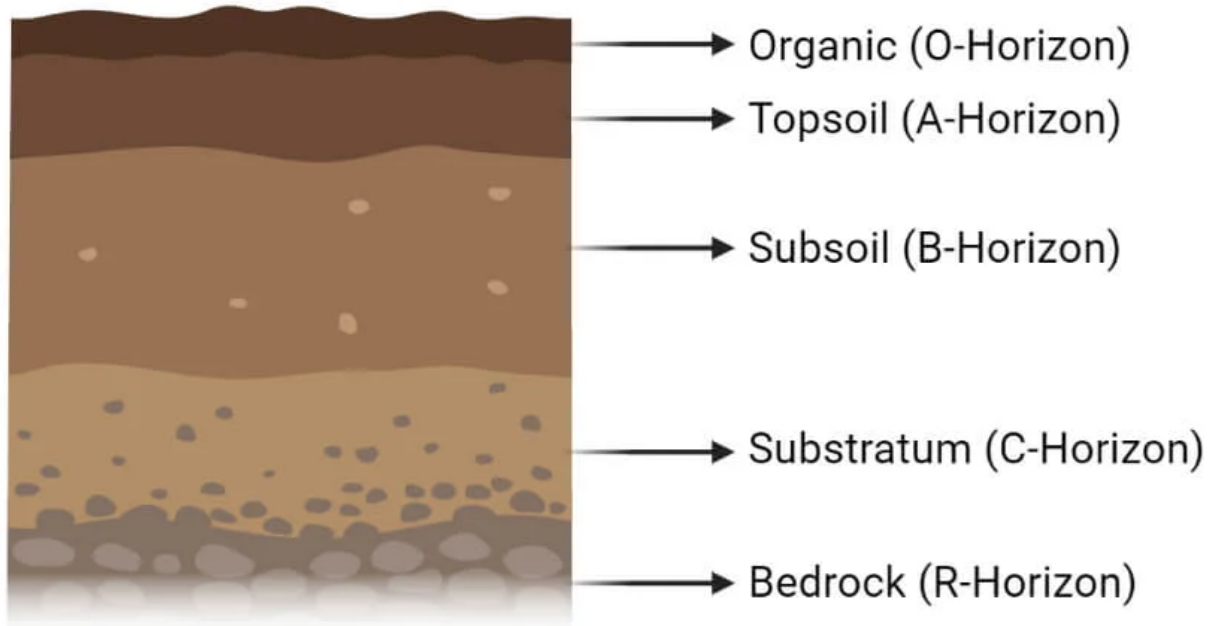


## D2. Components of Soil

### The Fantastic World Beneath Our Feet: Components of Soil

Welcome to the exciting world of soil! Did you know that soil is made up of different components that work together like a team? Let's dig in and discover the fascinating components of soil.



#### 1. Rocks: The Backbone of Soil

Rocks are like the backbone of soil. They are the hard pieces that give soil its structure. Over time, big rocks break into smaller ones, creating tiny rock pieces that mix with other soil components.

#### 2. Clay: The Sticky Superhero

Clay is like a sticky superhero of soil. It holds water and nutrients tightly, making it the perfect home for plant roots. When it rains, clay soaks up the water like a sponge, keeping it available for plants to drink.

#### 3. Silt: The Smooth Operator

Silt is a smooth operator. It's not as sticky as clay, but it still holds some water and nutrients for plants. Silt particles are smaller than sand but bigger than clay, making it a great balance for soil.

#### 4. Sand: The Quick Drainer

Sand is the quick drainer in soil. It doesn't hold water as well as clay and silt, but it allows air to move freely. This helps plant roots breathe and stay healthy, especially after a heavy rain.

#### 5. Humus: The Nutrient Booster

Humus is the nutrient booster. It's made up of decaying plants and animals, which add rich nutrients to the soil. It's like giving plants a delicious and healthy meal!

## **6. Air: The Breathing Space**

Yes, soil needs air too! Air spaces between soil particles allow oxygen to reach plant roots. Just like we need to breathe, plant roots need air to stay alive and grow.

## **7. Water: The Quencher of Thirst**

Water is the quencher of thirst for plants. It's essential for their survival. When it rains or when we water plants, the soil soaks up the water, and plants drink it through their roots.

## **How Soil Components Work Together**

Soil components work as a team to support plants and all living things. When soil has the right mix of rocks, clay, silt, sand, humus, air, and water, it becomes a nutrient-rich home for plants to grow big and strong.

1. What are the tiny pieces that give soil its structure?
  - A) Water and nutrients
  - B) Rocks
  - C) Humus
  - D) Air
2. Which soil component holds water and nutrients tightly?
  - A) Clay
  - B) Sand
  - C) Silt
  - D) Humus
3. What does sand allow to move freely in the soil?
  - A) Rocks
  - B) Air
  - C) Water
  - D) Nutrients
4. What is humus made of, and what does it add to the soil?
  - A) Decaying plants and animals; rich nutrients
  - B) Tiny rock pieces; structure
  - C) Air and water; breathing space
  - D) Sticky particles; holding water
5. Why does soil need air spaces between particles?
  - A) To make it lighter
  - B) To allow water to drain faster
  - C) To help plant roots breathe
  - D) To keep the soil cold
6. Which soil component allows air to move freely in the soil?

- A) Humus
  - B) Sand
  - C) Silt
  - D) Clay
7. What does clay do when it rains?
- A) It absorbs water like a sponge
  - B) It allows water to drain quickly
  - C) It holds air spaces
  - D) It becomes sticky
8. Which soil component is like a sticky superhero?
- A) Sand
  - B) Silt
  - C) Clay
  - D) Humus
9. What is the nutrient booster in soil?
- A) Rocks
  - B) Air
  - C) Water
  - D) Humus
10. How do soil components work together to support plants?
- A) They make the soil heavy
  - B) They add color to the soil
  - C) They provide nutrients and water for plants
  - D) They protect the soil from animals

## ANSWERS & EXPLANATIONS

1. B) Rocks.
  - Rocks are the tiny pieces that give soil its structure.
2. A) Clay.
  - Clay holds water and nutrients tightly, making it an essential soil component for plant growth.
3. B) Air.
  - Sand allows air to move freely in the soil, helping plant roots breathe.
4. A) Decaying plants and animals; rich nutrients.
  - Humus is made of decaying plants and animals, and it adds rich nutrients to the soil.
5. C) To help plant roots breathe.
  - Air spaces between soil particles allow oxygen to reach plant roots, helping them breathe.
6. B) Sand.
  - Sand allows air to move freely in the soil.
7. A) It absorbs water like a sponge.
  - When it rains, clay absorbs water like a sponge, making it helpful for plants to drink water.
8. C) Clay.
  - Clay is like a sticky superhero that holds water and nutrients tightly.
9. D) Humus.
  - Humus is the nutrient booster in soil, adding rich nutrients for plant growth.
- 10.C) They provide nutrients and water for plants.
  - Soil components work together to support plants by providing essential nutrients and water for their growth and health.