

Lesson 1: Structure of Plants

Introduction

Is it possible to live on a planet without plants?

We are going to look the leaves, stems and buds of plants. We will look at the structure of these parts and what their functions are.

In the next part, Structure of a Plant - Part 2, we will talk about flowers and fruit, as well as the root system and tissue types of the plant.

Objectives

After completing this lesson you will be able to:

- Identify the shoot system of the plant.
- Locate and describe leaves, stems and buds on the plant.
- List the functions of leaves, stems and buds of the plant.
- Understand how secondary growth in plants takes place.
- Explain how leaves, stems and buds have been adapted to carry out their functions.

List of Sections

This lesson includes the following sections:

- The Shoot System
- Leaves
- Stems
- Secondary Growth
- Buds

Lesson 2: Structure of Plants (Part 2)

Introduction

In Structure of Plants - Part 1, we looked at the leaves, stems and buds of the shoot system. The shoot system is that part of the plant that grows above the ground.

Now, in Structure of Plants - Part 2, we will discuss flowers and fruit that are also found on the shoot system and then discuss the root system. The root system is that part of the plant that grows under the ground.

At the end we will look at the types of plant tissue that are found in the root and shoot system of the plant.

Objectives

After completing this lesson you will be able to:

- Name the functions of flowers and fruit.
- Identify the root system the plants.
- Name and locate the organs of the root system.
- Explain how the plant organs have been adapted to carry out their functions.
- Describe the tissue types found in plants.

List of Sections

This lesson includes the following sections:

- Flowers
- Fruits
- The Root System
- Tissue Types

Lesson 3: Reproduction of Plants

Introduction

Are there male and female plants?

We are now going to look at the process by which plants create new plants. Angiosperms and gymnosperms make seeds that grow into new plants. Ferns and mosses use spores to reproduce. There are also many plants that can reproduce from a piece of the parent plant. This is called asexual reproduction.

We will look at the differences between sexual and a-sexual reproduction and decide which is better. We will also talk about how the plants make spores and seeds and distribute them.

Objectives

After completing this lesson you will be able to:

- List the differences between sexual and a-sexual reproduction.
- Describe how spores are made and distributed.
- Describe pollination, pollen germination and fertilization.
- State how plants make seed and what seed germination is.
- Name various types of seed dispersal.
- Name various types of vegetative reproduction.

List of Sections

This lesson includes the following sections:

- Sexual and A-sexual Reproduction
- Seeds
- Germination
- A-sexual Reproduction

Lesson 4: Plant Processes

Introduction

We know now that plants provide us with food but what do plants eat? Can they even eat?

We will answer this question by looking at the following processes that take place in the plants:

- Photosynthesis: Plants produce food in the form of glucose.
- Respiration: Plants breaks down the glucose to produce energy for the plants to grow.
- Transpiration: The loss of water vapour through the stomata.

Objectives

After completing this lesson you will be able to:

- Name all the factors needed for photosynthesis.
- Explain what a chloroplast is.
- Describe the process of photosynthesis.
- Describe the process of respiration.
- Describe the process of transpiration.
- List the factors that affect the rate of transpiration.

List of Sections

This lesson includes the following sections:

- Photosynthesis
- Chloroplasts
- Process of Photosynthesis
- Respiration
- Transpiration
- Factors that Affect the Rate of Transpiration

Lesson 5: Fungi

Introduction

Are fungi a plant, an animal or maybe an insect?

- They do not move and grow in soil, just like plants.
- They contain chitin in their cell walls. Chitin is the same material that is found in the hard skeleton of insects.
- Fungi store their sugars in the form of glycogen, just like animals.

Objectives

After completing this lesson you will be able to:

- Name the different divisions of fungi.
- Describe the sexual reproduction of a mushroom.
- Describe the asexual reproduction of mold and yeast.
- Name the physical structures of the mushroom.
- Name the different ways that fungi can absorb food.
- Name some of the uses of fungi.
- Know how fungi can be dangerous.

List of Sections

This lesson includes the following sections:

- Types of Fungi
- Anatomy of Club Fungi
- Nutrient Absorption
- Reproduction
- Useful Fungi
- Destructive and Pathogenic Fungi