CBSE Class 7 Science Notes Chapter 1: Plant Nutrition Students who wish to completely prepare for their exams can conveniently acquire the class 7 notes online. These revision notes have been meticulously crafted by our experts, taking into account every detail of the chapter and the most recent syllabus. The principles of the chapter are covered in these review notes, which provide a solid foundation for students to grasp these subjects in more advanced lectures.

Students learn about plant nutrition and the different ways that these nutrients can be obtained from plants through the NCERT notes for Class 7 Science Chapter 1. To prepare for your exams, download the NCERT Solutions Revision Notes PDF for each topic.

CBSE Class 7 Science Notes Chapter 1 Overview

Students can use the Class 7 Science Chapter 1 notes as a quick and efficient study tool to be ready for their exams. Students can quickly understand the material, gain confidence, and be well-prepared for their exams with the help of these notes. The idea of nourishment in plants and other organisms is the main topic of this chapter.

The notes emphasize the role that nutrition plays in the growth and health of plants. The explanation of nutrition modes covers both autotrophic and heterotrophic organisms. It highlights how important photosynthesis is to plant nutrition and how important chlorophyll and chloroplasts are to this process.

Experts here have offered thorough explanations and illustrations to help students better comprehend photosynthesis, chlorophyll, and chloroplasts. The notes also discuss nutrition in a variety of plant and animal species, including saprophytic, insectivorous, non-chlorophyll, and parasitic species. Additionally examined is the symbiotic interaction that organisms have for their nutritional demands.

Through consulting these notes, students acquire a thorough comprehension of nutrition, its significance, and its diverse facets in diverse creatures. Students preparing for exams can find the summarised bullet points to be a useful review aid and an easy way to memorize information.

CBSE Class 7 Science Notes Chapter 1

Introduction to Nutrition in Plants

Living and Non-Living Organisms

- Living organisms like human beings, plants, and animals need food to survive and exist.
- Living organisms reproduce, respond to the environment, and also adapt.
- Living organisms respire and excrete as well.

Cells

One of the smallest components of a living thing is its cell. As a result, they are frequently referred to as an organism's building blocks.

A cell is composed of three main components:
The cell membrane is a thin outer layer.
A nucleus is a spherical structure found in the middle of a cell.
cytoplasm, a jelly-like material that envelops a nucleus.

Single and Multi-Cellular Organisms

Units of life consisting of a single cell are referred to as single-celled or unicellular organisms.
For instance, amoeba
Multicellular organisms are defined as organisms that contain several cells in their body.
All living things, including plants, animals, and humans, are multicellular.

Nutrition

Nutrition is the process through which an organism consumes food and uses it for bodily purposes.

Since nutrients from food allow living things to grow and build their bodies, nutrition is crucial.
Repairing injured organs and parts is aided by nutrition.
Energy from nutrition is also needed for a variety of tasks.

Autotrophs and Heterotrophs

Autotrophs are organisms that are capable of producing their sustenance.

Since they produce their sustenance from carbon dioxide, water, and light energy, plants are an example of autotrophs.
Heterotrophic organisms are those that depend on other living things and typically consume autotrophic food that has already been prepared.

Given their numerous dietary reliance on plants, animals and humans are examples of heterotrophs.

Photosynthesis

The mechanism by which green plants manufacture food is called photosynthesis.

Usually, plant leaves are where this activity occurs.
Chlorophyll, a green pigment, sunlight, carbon dioxide, and water are needed for the process.

Organelles

Organelles are microscopic cellular structures that serve a variety of vital purposes for the organism.
They are located in a cell's cytoplasm.
For instance, the cell organelle responsible for photosynthesis is the chloroplast.

Chloroplasts

One kind of organelle found in plants is the chloroplast.
The green pigment chlorophyll, which is present in these organelles, is what allows plants to carry out the process of photosynthesis.

Chlorophyll

In green plants, the pigment called chlorophyll is in charge of food synthesis.
This pigment, which is widely present in leaves, imparts a green tint to its carriers.
The chloroplast contains all of the chlorophyll.

Process of Photosynthesis

The "food factory" of plants, the leaves, is where photosynthesis occurs.

Through microscopic pores on the leaves called stomata, carbon dioxide is absorbed.
Via the stem, water, and minerals needed for the process are transferred from the roots to the leaves.
Chlorophyll aids in the leaves' use of solar energy to process carbon dioxide, water, and minerals into nourishment.
As a result of this process, oxygen is released.

Nutrients Being Replenished in Soil

Nutrients

To produce their food as well as for other vital functions, plants absorb mineral nutrients from the soil.
Regular enrichment of soils with nutrients like potassium, phosphorus, and nitrogen is necessary.
It is only after that we can cultivate and maintain plants.

The top 17 nutrients are vital to plants.
Six of these are referred to as macronutrients, and the remaining five as micronutrients.
Micronutrients are needed in extremely minute amounts, whereas macronutrients are needed in vast numbers.

Other Modes of Nutrition

Symbiotic Relationship

Symbiotic relationships are those in which organisms coexist and share resources and a place to live.

Some fungi are found in tree roots.
In exchange for the fungus's provision of nutrients, the tree gets assistance from it in absorbing water and nutrients from the soil.
This relationship benefits the fungus as well as the tree.
Bacteria called Rhizobium are another typical example.
They live in the nodules found in the roots of leguminous plants.
The plant fixes the nitrogen that the bacteria provide it, and in return, the plant gives the bacteria food and housing.

Rhizobium

Nitrogen fixation is the process by which rhizobium bacteria transform atmospheric nitrogen into a soluble form that plants can use.
It is mostly found in the roots of leguminous plants, such as moong, gram, and peas, and it plays a vital role in giving these plants an abundant supply of nitrogen.

Nitrogen Fixation

One essential mineral that plants and soil both need is nitrogen.
Nevertheless, it is difficult to access nitrogen in the atmosphere.
Nitrogen fixation is the process by which nitrogen is changed into a form that plants and other living things can use.

Parasites

A parasite is a heterotroph that gets all of its nourishment from another organism.

The host is the organism that the parasite attaches itself to.
As the parasite consumes the nutrients, the host is thus denied all necessary nutrients for its growth.
As an illustration, the nongreen plant Cuscuta (Amarbel) consumes ready-made nourishment from the plant it is growing on.

Saprotrophs

Saprotrophs are organisms that consume dead or rotting substances as nourishment.

We refer to this type of eating as saprotrophic nutrition.
Take fungi, for instance.
Digestive fluids are secreted by fungi onto decomposing materials, turning them into a solution.
After that, they take up its nutrition.

Insectivorous Plants

Insectivorous plants are those that consume insects as a food source.

These green plants use photosynthesis to stay alive.
However, they thrive in soils low in nitrogen.
Therefore, they eat insects to obtain nitrogen.
The components of these insectivorous plants have been altered to draw and hold insects.
For instance, the venous flytrap and pitcher plant

Benefits of CBSE Class 7 Science Notes Chapter 1

Our subject matter experts have created these notes to assist students in learning and completely reviewing all of the material discussed in the chapter on nutrition in plants before the test.

Students can download these notes in PDF format and use them on laptops, tablets, and smartphones, among other devices, for quick reference.

These revision notes provide accurate definitions, examples, and diagrams for every topic covered in the chapter on nutrition in plants.

The day before their exam, students can review these revision notes to quickly and efficiently grasp the key ideas without having to spend a lot of time turning pages in the book.

Concerning the most recent CBSE guidelines for Class 7 Science, our specialists have created these notes, ensuring that students may confidently respond to questions from this chapter during exams.