CBSE Class 6 Science Notes Chapter 7 – Getting to Know Plants PDF, Important Topics & Questions

*Physics Wallah's **CBSE Class 6 Science Notes Chapter 7** offers explanations and insights that enable students to grasp the underlying principles behind plant morphology, anatomy, and physiology!*

CBSE Class 6 Science Notes Chapter 7: Download the Class 6 Science Chapter 7 – Getting to Know Plants Revision Notes in PDF format for free. These concise notes have been prepared by experienced Science teachers based on the latest edition of CBSE(NCERT) books.

Enhance your understanding and score higher marks in the CBSE board examination by registering for NCERT Class 6 Science tuition on Physics Wallah. Physics Wallah is your go-to platform for accessing free CBSE Solutions (NCERT) and a wide range of study materials to support your academic journey.

CBSE Class 6 Science Notes Chapter 7 Overview

In Chapter 7 of CBSE Class 6 Science, titled "Getting to Know Plants," students are introduced to the fascinating world of plants and their significance in the ecosystem. The chapter begins with an overview of the importance of plants, emphasizing their role in maintaining the balance of nature and supporting life on Earth.

CBSE Class 6 Science Notes Chapter 7 – Getting to Know Plants Notes

Chapter 7 of CBSE Class 6 Science, titled "Getting to Know Plants," delves into the fascinating world of plant biology, exploring the structure, functions, and diversity of plants. Here are some key points covered in this chapter:

1) Introduction to Plant Kingdom:

Plants are essential living organisms that play a crucial role in maintaining the ecological balance of our planet. They are classified into different groups based on various characteristics such as structure, habitat, and reproductive methods.

2) Parts of a Plant:

Plants have several distinct parts, each serving specific functions to ensure their survival and growth. The main parts of a plant include roots, stems, leaves, flowers, and fruits. Roots anchor the plant in the soil, absorb water and nutrients, and provide support.

Stems transport water, minerals, and nutrients between the roots and leaves, while also providing structural support. Leaves are the primary sites for photosynthesis, where plants convert sunlight into chemical energy. Flowers are reproductive structures that produce seeds, while fruits protect and disperse seeds for the propagation of new plants.

3) Types of Plants:
Plants can be classified into different groups based on their characteristics and life cycles. Some common types of plants include herbs, shrubs, trees, climbers, and creepers.

Herbs are small, non-woody plants with soft stems, while shrubs are larger, woody plants with multiple stems. Trees are tall, perennial plants with a single main stem or trunk. Climbers and creepers are plants that use external support to grow vertically or horizontally.

4) Plant Reproduction:
Plants reproduce through various methods, including sexual and asexual reproduction. Sexual reproduction involves the fusion of male and female gametes to produce seeds, while asexual reproduction involves the formation of new plants from vegetative parts such as roots, stems, and leaves. Pollination is the process by which pollen grains are transferred from the male reproductive organs to the female reproductive organs of flowers, leading to fertilization and seed formation.

5) Plant Adaptations:
Plants exhibit a wide range of adaptations to survive and thrive in different environments. These adaptations may include structural features such as specialized roots, stems, and leaves, as well as physiological adaptations such as water conservation mechanisms and tolerance to extreme temperatures. Plants also display behavioral adaptations, such as opening and closing of stomata to regulate water loss and gas exchange.

6) Ecological Importance of Plants:
Plants play a vital role in the environment by producing oxygen through photosynthesis, regulating the water cycle, providing habitats and food for various organisms, and stabilizing soil and preventing erosion. They also act as carbon sinks, absorbing carbon dioxide from the atmosphere and mitigating climate change. Additionally, plants contribute to the aesthetic beauty of natural landscapes and provide valuable resources such as timber, medicines, and fibers.

7) Plant Tissues and Organs:
Plants are composed of various specialized tissues and organs that perform specific functions essential for their survival. These tissues include meristematic tissue, which is responsible for plant growth and development, and permanent tissues such as parenchyma, collenchyma, and sclerenchyma, which provide structural support and

storage. Organs such as roots, stems, and leaves are made up of these tissues and work together to facilitate processes like nutrient absorption, photosynthesis, and water transport.

8) Photosynthesis and Transpiration:
Photosynthesis is the process by which green plants and some other organisms convert light energy into chemical energy stored in glucose. This vital process takes place in the chloroplasts of plant cells, where chlorophyll captures sunlight and uses it to power the synthesis of glucose from carbon dioxide and water.

Transpiration is the loss of water vapor from plant leaves through small openings called stomata. This process helps regulate temperature, facilitate nutrient uptake, and maintain cell turgidity, but excessive transpiration can lead to water stress and dehydration.

9) Plant Growth and Development:
Plant growth and development are regulated by various internal and external factors, including hormones, environmental conditions, and genetic factors. Hormones such as auxins, cytokinins, gibberellins, and abscisic acid play crucial roles in controlling processes like cell elongation, cell division, flowering, and fruit development. Environmental factors like light, temperature, water availability, and soil nutrients also influence plant growth and development, affecting traits such as plant height, leaf size, and flowering time.

10) Plant Diseases and Pests:
Plants are susceptible to various diseases caused by pathogens such as bacteria, fungi, viruses, and parasites. Common plant diseases include powdery mildew, leaf spot, rust, and damping-off disease. Additionally, plants are vulnerable to damage from pests like insects, mites, rodents, and nematodes, which feed on plant tissues and disrupt normal growth and development. Integrated pest management strategies, including cultural, biological, and chemical control methods, are used to mitigate the impact of plant diseases and pests on crop yields and plant health.

11) Conservation of Plants:
The conservation of plant species and ecosystems is essential for maintaining biodiversity, preserving genetic resources, and safeguarding ecosystem services. Threats such as habitat loss, deforestation, pollution, climate change, and invasive species pose significant challenges to plant conservation efforts.

Conservation initiatives focus on habitat restoration, ex situ conservation in botanical gardens and seed banks, and the establishment of protected areas and conservation reserves to safeguard vulnerable plant species and their habitats for future generations.

CBSE Class 6 Science Notes Chapter 7 Important Topics

- **Classification of Plants:** Students will learn about the different groups of plants based on various criteria such as size, habitat, and structure. They will explore categories like herbs, shrubs, trees, climbers, and creepers.
- **Parts of a Plant:** This topic covers the structure and functions of different plant parts such as roots, stems, leaves, flowers, and fruits. Students will understand the roles these parts play in plant growth, reproduction, and survival.
- **Types of Roots:** The chapter discusses various types of roots such as taproots, fibrous roots, and adventitious roots. Students will learn about their structures, functions, and adaptations to different environmental conditions.
- **Photosynthesis:** Students will be introduced to the process of photosynthesis, where plants convert light energy into chemical energy to produce glucose and oxygen. They will understand the role of chlorophyll, sunlight, carbon dioxide, and water in this vital process.
- **Transpiration:** Transpiration is the process by which plants lose water vapor through stomata in their leaves. Students will learn about the factors affecting transpiration rates and its significance in plant physiology, including nutrient uptake and cooling.
- **Plant Reproduction:** The chapter covers the different methods of plant reproduction, including sexual and asexual reproduction. Students will explore concepts such as pollination, fertilization, seed formation, and dispersal.
- **Plant Hormones:** Students will be introduced to plant hormones such as auxins, gibberellins, cytokinins, and abscisic acid. They will understand how these hormones regulate various plant processes such as growth, flowering, fruit ripening, and response to environmental stimuli.
- **Plant Diseases and Pests:** This topic covers common plant diseases caused by pathogens such as fungi, bacteria, viruses, and pests like insects and mites. Students will learn about the symptoms, causes, and management strategies for controlling plant diseases and pests.
- **Medicinal Plants:** The chapter may also include information about medicinal plants and their uses in traditional medicine. Students will explore examples of medicinal plants, their active compounds, and therapeutic properties.
- **Conservation of Plants:** Students will learn about the importance of plant conservation for biodiversity conservation, ecosystem stability, and sustainable development. They will understand the threats to plant diversity and the strategies for conserving endangered plant species and habitats.

These topics provide students with a comprehensive understanding of plant biology, ecology, and conservation, laying the foundation for further studies in biology and environmental science.

CBSE Class 6 Science Notes Chapter 7 Important Questions

1) Explain the difference between herbs, shrubs, and trees based on their size and structure.
Herbs, shrubs, and trees are categorized based on their size and structure. Herbs are small plants with soft, green stems, and they generally do not have a woody structure. Shrubs are medium-sized plants with a hard, woody stem that branches out close to the ground. Trees are large plants with a single woody stem called a trunk, which supports branches and leaves high above the ground.

2) Describe the structure and functions of roots in plants. How are taproots different from fibrous roots?
Roots in plants serve various functions such as anchoring the plant in the soil, absorbing water and minerals, and storing food. Taproots have a single, thick main root that grows deep into the soil, while fibrous roots have thin, branching roots that spread out near the surface of the soil.

3) What are the different types of leaves based on their venation patterns? Explain each type with examples.
Leaves exhibit different venation patterns based on the arrangement of veins. There are three main types: parallel venation, where veins run parallel to each other (e.g., grasses), reticulate venation, where veins form a network pattern (e.g., dicot plants), and palmate venation, where several veins arise from a single point (e.g., maple leaves).

4) How do plants obtain water and minerals from the soil? Discuss the process of absorption in plants.
Plants absorb water and minerals from the soil through their roots via a process called absorption. This process is facilitated by root hairs and the root system's structure, which increases the surface area for absorption.

5) Explain the process of photosynthesis in plants. What are the raw materials required, and what are the products formed?
Photosynthesis is the process by which plants convert light energy into chemical energy to produce glucose and oxygen. The raw materials required for photosynthesis are carbon dioxide, water, and sunlight, and the products formed are glucose and oxygen.

6) Describe the process of transpiration in plants. How does it help in maintaining the water balance in plants?
Transpiration is the process by which plants lose water vapor through small openings called stomata on their leaves. This loss of water helps in maintaining the water balance in plants, regulates temperature, and facilitates the uptake of nutrients from the soil.

7) Discuss the role of flowers in plant reproduction. Explain the process of pollination and its types.
Flowers play a crucial role in plant reproduction by producing gametes and facilitating pollination. Pollination is the transfer of pollen grains from the male reproductive organ (anther) to the female reproductive organ (stigma) of the same or different flowers. It can occur through various agents such as wind, water, animals, or insects.

8) What are the different methods of seed dispersal in plants? Provide examples of each method.
Plants disperse their seeds through various methods such as wind dispersal (e.g., dandelion seeds), water dispersal (e.g., coconut seeds), animal dispersal (e.g., burrs sticking to animal fur), and self-dispersal (e.g., explosive seed pods).

9) Explain the functions of plant hormones in regulating plant growth and development.
Plant hormones regulate various physiological processes such as growth, development, and response to environmental stimuli. Examples of plant hormones include auxins, gibberellins, cytokinins, abscisic acid, and ethylene.

10) Describe the symptoms, causes, and preventive measures for common plant diseases like powdery mildew and leaf spot.
Common plant diseases include powdery mildew, leaf spot, root rot, and bacterial wilt. These diseases are caused by fungi, bacteria, viruses, or environmental factors such as poor soil drainage or inadequate air circulation. Preventive measures include proper sanitation, crop rotation, and use of disease-resistant plant varieties.

11) How do plants defend themselves against herbivores and pathogens? Discuss the role of chemical and physical defenses.
Plants defend themselves against herbivores and pathogens through chemical and physical defenses. Chemical defenses include toxins and repellents produced by plants, while physical defenses include thorns, spines, and tough outer coverings.

12) Explain the importance of conserving plant diversity. What are the threats to plant diversity, and how can they be addressed?
Threats to plant diversity include habitat destruction, invasive species, climate change, and overexploitation. Conservation efforts involve habitat protection, seed banking, ex situ conservation, and public awareness campaigns. Conserving plant diversity is essential for maintaining ecosystem stability and ensuring the availability of genetic resources for future generations.

13) Discuss the significance of medicinal plants in traditional medicine. Provide examples of medicinal plants and their uses.

Medicinal plants have been used in traditional medicine for centuries to treat various ailments and diseases. Examples include aloe vera for skin conditions, ginger for digestive problems, and turmeric for its anti-inflammatory properties.

14) What are the adaptations of desert plants to survive in arid conditions? Explain with examples.
Desert plants have adaptations to survive in arid conditions, such as reduced leaf surface area to minimize water loss, deep root systems to access underground water sources, and succulent stems or leaves to store water.

15) Describe the role of fungi, bacteria, and viruses in causing plant diseases. How can plant diseases be managed effectively?
Fungi, bacteria, and viruses can cause plant diseases by infecting plant tissues and disrupting normal physiological functions. Management strategies include using fungicides, bactericides, and viruses-resistant plant varieties, practicing crop rotation, and maintaining proper plant hygiene.

CBSE Class 6 Science Notes Chapter 7 Exercise Questions

Here are the exercise questions for CBSE Class 6 Science Chapter 7:

1) Define the term "Photosynthesis". Explain the process of photosynthesis in plants.

- Definition: Photosynthesis is the process by which green plants, algae, and some bacteria convert light energy, usually from the sun, into chemical energy stored in glucose. It occurs in the chloroplasts of plant cells.
- Process: During photosynthesis, plants use carbon dioxide, water, and sunlight to produce glucose and oxygen. Chlorophyll, the green pigment in plant leaves, absorbs sunlight and powers the chemical reactions that convert carbon dioxide and water into glucose and oxygen.

2) Describe the different parts of a flower and their functions.

- Parts of a flower include the petals, sepals, stigma, style, ovary, ovule, anther, and filament.
- Functions:
    - Petals: Attract pollinators with their bright colors and fragrances.
    - Sepals: Protect the flower bud.
    - Stigma: Receives pollen during pollination.
    - Style: Connects the stigma to the ovary.
    - Ovary: Contains ovules, which develop into seeds after fertilization.
    - Ovule: Contains the female reproductive cells (eggs).
    - Anther: Produces pollen grains containing male reproductive cells (sperm).
    - Filament: Supports the anther.

3) Explain the process of pollination. How does pollination occur in plants?
Pollination is the transfer of pollen from the male reproductive organs (anther) to the female reproductive organs (stigma) of a flower. This process can occur through various agents such as wind, water, insects, birds, or animals.

4) What are the different methods by which seeds are dispersed in plants? Give examples of each method.

- Methods of seed dispersal include wind, water, animals (through ingestion, attachment to fur or feathers, or carrying), and explosion (mechanical action).
- Examples:
  - Wind: Dandelion seeds are carried by the wind.
  - Water: Coconut seeds float on water.
  - Animals: Berries are eaten by birds, and the seeds are dispersed through their droppings.

5) Define the term "Transpiration". How does transpiration occur in plants, and what is its significance?

- Definition: Transpiration is the process by which plants lose water vapor through the stomata (tiny pores) in their leaves.
- Process: Water is absorbed by the roots from the soil and transported to the leaves through the xylem vessels. Once in the leaves, water evaporates from the leaf surface and exits through the stomata into the atmosphere.

6) What are plant hormones? Name any two plant hormones and explain their functions.

- Plant hormones are chemical messengers that regulate various physiological processes in plants.
- Examples: Auxin (promotes cell elongation) and Gibberellin (regulates plant growth and development).

7) Discuss the importance of conserving plant diversity. Why is it essential to conserve plant species?

- Importance: Conservation of plant diversity is essential for maintaining ecosystem balance, providing food, medicine, oxygen, and other ecosystem services, and preserving genetic diversity for future generations.

8) What are the different types of roots found in plants? Explain each type with examples.

- Types: Taproots (e.g., carrot), Fibrous roots (e.g., grass), and Adventitious roots (e.g., maize).

9) Describe the adaptations of desert plants to survive in arid conditions.

- Examples: Succulents store water in their fleshy stems or leaves, deep roots to reach underground water sources, reduced leaves to minimize water loss, and waxy coatings to reduce transpiration.

10) Explain how plants defend themselves against herbivores and pathogens. Give examples of chemical and physical defenses in plants.

- Chemical defenses: Some plants produce toxins or chemicals that deter herbivores or pathogens. For example, tobacco plants produce nicotine.
- Physical defenses: Plants may have thorns, spines, or tough leaves to deter herbivores, or they may release irritating compounds. For example, stinging nettle plants have stinging hairs that release irritating chemicals when touched.

CBSE Class 6 Science Notes Chapter 7 PDF

CBSE Class 6 Science Notes Chapter 7 cover topics such as plant morphology, photosynthesis, parts of a flower and their functions, pollination, seed dispersal, transpiration, plant hormones, conservation of plant diversity, types of roots, adaptations of desert plants, and plant defenses. These notes are essential for students to understand the concepts taught in this chapter effectively.

Students can find PDF versions of these notes online through Physics Wallah. It's important for students to choose reliable sources for their study materials, ensuring they receive accurate and comprehensive information to support their learning.

CBSE Class 6 Science Notes Chapter 7 FAQs

1. What are the main functions of roots in plants?
Roots anchor the plant in the soil, absorb water and minerals, and store food.

2. How does transpiration occur in plants?
Transpiration is the process by which plants lose water vapor through tiny pores called stomata on the surface of leaves.

3. What are the two main types of roots found in plants?
The main types of roots are taproots and fibrous roots.

4. How do plants reproduce?
Plants can reproduce sexually through seeds and flowers or asexually through methods like vegetative propagation.

5. What are some adaptations of desert plants to survive in arid environments?

Desert plants have adaptations like reduced leaf surface area, thick waxy coatings on leaves, and deep root systems to conserve water.