

DETAILED CONTENTS

Each chapter of the book consists of exercises in various forms

BE PROMPT

- Filling in the blanks
- True or False
- Multiple choice questions (MCQs)
- Identifying the error(s) in the given statements

SHORT AND PRECISE

- Flowcharts
- Giving reasons
- Short answer questions

AT LENGTH

- Explaining the terms
- Differentiating between concepts
- Long answer questions
- Identifying the error(s)

Chapter Name	Details of Contents	Activities	Some More Assessment Tools
1. Transport of Food and Minerals in Plants	<p>TRANSPORTATION</p> <ul style="list-style-type: none"> • Xylem • Phloem <p>ABSORPTION OF WATER AND MINERALS</p> <ul style="list-style-type: none"> • Absorption of Water • Conduction of Water • Absorption of Minerals <p>TRANSPORT OF WATER AND MINERALS</p> <ul style="list-style-type: none"> • Importance of Water for Plants <p>TRANSPIRATION</p> <ul style="list-style-type: none"> • Factors Affecting the Rate of Transpiration • Importance of Transpiration <p>TRANSLOCATION OF FOOD</p> <p>NUTRIENTS REQUIRED BY PLANTS</p>	<p>1.1 To observe root hair</p> <p>1.2 To show how osmosis takes place</p> <p>1.3 To demonstrate the principle of osmosis in a living system</p> <p>1.4 To show that roots absorb water</p> <p>1.5 To demonstrate conduction of water in plants</p> <p>1.6 To study the rate of water absorption by plants</p> <p>1.7 To demonstrate root pressure in a plant</p> <p>1.8 To demonstrate transpiration in plants</p> <p>1.9 To demonstrate translocation in plants</p>	<ul style="list-style-type: none"> • Observe and Perform: Identify the diagram and label it. • Apply Your Learning: 1. Explain the reason behind the process of osmosis. 2. Name different forces involved in absorption and transportation processes in plants. • Life Skills: Create awareness about keeping plastic wastes away from areas where plants grow. • Integrate Your Learning: Integrate with chemistry—learn about the use of semipermeable membrane in different chemical processes. • Projects and Activities: 1. Prepare a PowerPoint presentation on absorption and translocation in plants. 2. Prepare a temporary slide of transverse section of a twig. • Review Your Learning: Worksheet
2. Reproduction in Plants and Animals	<p>MODES OF REPRODUCTION</p> <p>ASEXUAL REPRODUCTION IN PLANTS</p> <ul style="list-style-type: none"> • Fragmentation • Spore Formation • Vegetative Propagation <p>ASEXUAL REPRODUCTION IN OTHER ORGANISMS</p> <ul style="list-style-type: none"> • Binary Fission • Multiple Fission • Budding <p>SEXUAL REPRODUCTION IN PLANTS</p> <ul style="list-style-type: none"> • Pollination • Fertilisation <p>ASEXUAL REPRODUCTION IN ANIMALS</p> <ul style="list-style-type: none"> • Budding • Fragmentation <p>SEXUAL REPRODUCTION IN ANIMALS</p> <p>SEXUAL REPRODUCTION IN HUMAN BEINGS</p> <ul style="list-style-type: none"> • Male Reproductive System • Female Reproductive System • Fertilisation 	<p>2.1 To observe permanent slides of asexual reproduction</p> <p>2.2 To grow potato by vegetative propagation</p> <p>2.3 To grow ginger by vegetative propagation</p> <p>2.4 To grow grass by vegetative propagation</p> <p>2.5 To study vegetative propagation in <i>Bryophyllum</i></p> <p>2.6 To study the different parts of a flower</p> <p>2.7 To observe the models of male and female reproductive systems</p>	<ul style="list-style-type: none"> • Observe and Perform: Identify the process shown in figure. • Apply Your Learning: Organise a class debate on advantages and disadvantages of vegetative propagation. • Life Skills: Visit a nursery and learn about methods used for growing plants. • Integrate Your Learning: Integrate with economics—learn about the economic importance of artificial propagation. • Projects and Activities: 1. Learn more about artificial pollination and fertilisation in plants. 2. Learn about characteristic features of flowers of wheat rice and maize • Review Your Learning: Worksheet

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3. Ecosystems	BIOTIC COMPONENTS <ul style="list-style-type: none"> • Producers • Consumers • Decomposers FOOD CHAIN, FOOD WEB AND PYRAMID OF NUMBERS <ul style="list-style-type: none"> • Food Chain • Food Web • Pyramid of Numbers ABIOTIC COMPONENTS <ul style="list-style-type: none"> • Light • Air • Water • Soil • Temperature INTERACTION BETWEEN BIOTIC AND ABIOTIC COMPONENTS FOREST ECOSYSTEM <ul style="list-style-type: none"> • Energy Flow Through the Ecosystem INTERDEPENDENCE OF ORGANISMS <ul style="list-style-type: none"> • Symbiosis • Parasitism • Predation • Plants and Animals are Interdependent 	3.1 To show the effect of light on potted plants 3.2 To show the effect of water on potted plants 3.3 To show the effect of different kinds of soil on potted plants 3.4 To identify the biotic components in your environment	<ul style="list-style-type: none"> • Observe and Perform: Identify the images and complete the given information. • Apply Your Learning: 1. Why do plants wilt when kept in a room? 2. Explain the pros and cons of the man-made environment. • Life Skills: Learn about deforestation and its effects on life • Integrate Your Learning: Integrate with geography—learn about forests in three different regions of the world. • Projects and Activities: 1. Arrange a visit of the students to a forest area. 2. Collect more information on symbiosis, parasitism and predation and make a report. • Review Your Learning: Worksheet
4. Endocrine, Circulatory and Nervous Systems	ENDOCRINE SYSTEM ADOLESCENCE AND ACCOMPANYING CHANGES <ul style="list-style-type: none"> • Changes at Puberty • Secondary Sexual Characters • Importance of Personal Hygiene • Problems Related to Adolescence • Stress Management in Adolescence CIRCULATORY SYSTEM <ul style="list-style-type: none"> • Heart • Blood Vessels • Blood Circulation • Blood Transfusion • Blood Groups • Conditions Related to the Functioning of the Heart THE LYMPHATIC SYSTEM NERVOUS SYSTEM <ul style="list-style-type: none"> • Nervous Control NERVOUS SYSTEM IN DIFFERENT ORGANISMS NERVE CELL OR NEURON <ul style="list-style-type: none"> • Types of Neurons NERVOUS SYSTEM IN HUMANS <ul style="list-style-type: none"> • Central Nervous System • Peripheral Nervous System REFLEX ACTIONS	4.1 To observe a model of the human heart 4.2 To observe charts of the central nervous system 4.3 To observe reflex action	<ul style="list-style-type: none"> • Observe and Perform: Observe the images and answer the questions based on them. • Apply Your Learning: Complete the given table. • Life Skills: Find out about blood donation and make a report. • Integrate Your Learning: Integrate with psychology—find out about stress and mental instability during adolescence and discuss in class. • Projects and Activities: 1. Learn about blood tests. 2. Hold a class discussion on the importance of personal hygiene. • Review Your Learning: Worksheet

Chapter Name	Details of Contents	Activities	Some More Assessment Tools
5. Health and Hygiene	<p>DISEASES</p> <p>COMMUNICABLE DISEASES</p> <ul style="list-style-type: none"> • Airborne Diseases • Waterborne Diseases • Food-borne Diseases • Diseases Through Contact • Vector Borne Diseases • Infection Transmitted by Animal Bites <p>PREVENTION OF DISEASES</p> <p>OTHER NATURAL DEFENCES OF THE BODY</p> <p>ADDICTION TO TOBACCO, ALCOHOL AND DRUGS</p> <p>FIRST AID</p> <ul style="list-style-type: none"> • Cuts • Burns • Bites • Stings • Fractures • Swallowing Poison • Fainting • Fever • Object in the Eye 	<p>To find out your immunisation schedule</p>	<ul style="list-style-type: none"> • Observe and Perform: Observe the images and answer the questions based on them. • Apply Your Learning: 1. Why is vaccination important? 2. What measures will you take to prevent influenza? • Life Skills: 1. Create awareness about the first aid to be taken for different injuries that can occur in day to day life. 2. There are a large number of mosquitoes in your area. What precautionary measures should you take to prevent infection? • Integrate Your Learning: 1. Integrate with language—find out the names of different communicable diseases in any three regional languages. 2. Integrate with health and physical education—find out exercise helps in improving immunity. • Projects and Activities: 1. Organise a campaign to discourage the use of addictive substances. 2. Make a PowerPoint presentation on any two communicable diseases. • Review Your Learning: Worksheet
6. Food Production	<p>USEFUL MICROORGANISMS</p> <ul style="list-style-type: none"> • Uses of Bacteria in Food Industry • Uses of Fungi in Food Industry <p>AGRICULTURE</p> <ul style="list-style-type: none"> • Crop Plants • Crops Grown in India • Horticulture <p>GREEN REVOLUTION</p> <p>ORGANIC FARMING</p> <p>ANIMAL HUSBANDRY</p> <ul style="list-style-type: none"> • Milch Animals • White Revolution • Meat and Egg-yielding Animals • Draught Animals • Animals Giving Other Products 	<p>6.1 To make a herbarium</p> <p>6.2 To collect pictures of milch animals and write about them</p> <p>6.3 To know about the economic importance of animal husbandry</p>	<ul style="list-style-type: none"> • Observe and Perform: Observe the pictures and write few lines about them. • Apply Your Learning: 1. Mention some basic requirements of farming. 2. What is the economic importance of agriculture in our country? 3. Why is it important to cook meat properly? • Life Skills: Using the Internet learn about the living status of farmers in our country and think of ways in which we can make their life better • Integrate Your Learning: Integrate with geography—learn about agricultural pattern of different countries. • Projects and Activities: 1. Learn about decorative plants. 2. Prepare a chart on milk-yielding, meat-yielding and poultry animals. • Review Your Learning: Worksheet