Theme 4: What Is Living Together?

Lesson-5: All About Plants



13 Periods (40 minutes each)



Learn Better (Main Course Book), Stay Ahead (Workbook), Book of Holistic Teaching, Book of Project Ideas, Poster, CRM signs.





Animation, Animated Activities, Concept Map, Diagram, Dictionary, eBook, Infographic, I Explain, Quiz, Slideshow, Toy from Trash, Test Generator.

Curricular Goals and Objectives (NCF)

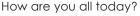
To enable the students:

- to identify and explain the functions of different parts of a plant.
- to compare the characteristics of plants and animals and understand their differences.
- to explore the interdependence of plants and animals in the environment.
- to engage in hands-on activities to enhance scientific learning.
- to develop a deeper connection with nature through traditional knowledge and practices.
- to apply concepts from Mathematics, English, and Social Studies to understand scientific ideas and real-life situations.

Methodology

Period 1

Teacher: Good morning, students.





Teacher: Before we dive into our lesson, let us take a moment to relax and focus our minds with a short meditation.

Teacher: Sit comfortably in your chair, with your back straight and feet flat on the ground. Close your eyes gently and take a deep breath through your nose. Hold it for a moment, then slowly breathe out through your mouth.

Let us do these three more times. Breathe in... and breathe out. As you breathe, imagine your mind becoming clear and ready to learn.

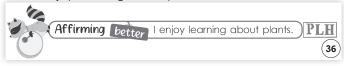
Open your eyes and smile at your friends. Let us start our day with positive energy.

Affirming better

Teacher: Before we start the class, let us all say something positive to start



the chapter, 'I enjoy learning about plants.' Repeat after me: 'I enjoy learning about plants.'



Teacher: Alright. Today, we are going to begin a new chapter 'All About Plants.' We use a KWL chart to help

us organize our thoughts and learning. I have made a KWL format on the blackboard. Please take out your notebooks and draw the same format.

K	W	L

Teacher: The KWL chart has three columns where you will write what you already know in the 'K' column, what you want to learn in the 'W' column and what you have learned in the 'L' column after the lesson to reflect on the new information.

Teacher: Let us start by filling out the 'K' and 'L' columns. Take a few minutes to think and write. If you have any questions, feel free to ask.

Teacher: Before we start the chapter, we will do a quick Re-KAP, which involves revisiting our previous knowledge through creative activities using Kinaesthetic, Auditory and Pictorial methods to make our learning interactive and engaging, starting with a kinaesthetic activity to get us ready for the new topic.



Kinaesthetic

Teacher: Let us start a Kinaesthetic activity. Pair up with your partner.



Discuss what creepers and climbers are. Can you name any plant that climbs or creeps? Now, draw a picture of

a creeper or a climber in your notebook. When you are done, exchange notebooks with your partner and colour each other's drawings.

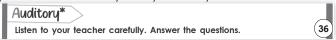
Kinaesthetic

Pair up with your partner. Discuss creepers and climbers. Draw an example of a creeper or a climber in your notebook. Then, exchange notebooks with your partner and colour each other's diagram.

Auditory

MUST DO

Teacher: Now, let's move to the auditory activity. I will ask you a few questions and I need you to listen carefully. Are you ready?



Teacher: Let us start. Listen carefully. Neha and Rohan were playing in the garden when they saw a plant with long, thin stems lying on the ground. 'Look, Rohan. This plant is a creeper. It cannot stand up because its stem is too weak. It is a watermelon plant.'

- 1. Why does the watermelon plant lie on the ground?
- 2. What kind of plant is the watermelon plant?

(Wait for students to answer) **Teacher:** Great listening. Keep it up.

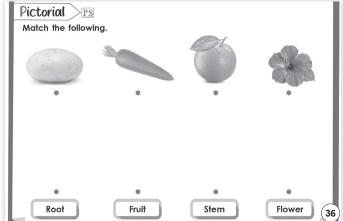
Teacher: Now, let us move on to the pictorial activity.

Pictorial

MUST DO

Teacher: Look at the pictures on page 36 of your Main Course Book. Here are

some pictures—a potato, carrot, orange and a flower. Which one is a root? Which is a fruit? What about the stem? And finally, the flower? Match them correctly.



(Wait for students to match the pictures and discuss the correct answers.)

Teacher: Brilliant. You all did a fantastic job.

Differentiated Activities

110 km/h



What type of plant is a pumpkin—climber or creeper?

80 km/h



Name one example of a plant that has a stem we eat.

40 km/h



What part of a plant is a rose?

Home Task

Observe the plants around your home or garden. Choose any one plant and draw its parts—root, stem, leaves, flower and fruit. Label them and write one function of each part.

Period 2

Interacting better



Teacher: Good morning, students. How are you all today?



Teacher: Today, we are going to start with an activity called 'Interacting Better'. I would like you to ask your partner to name three things that plants need to grow and stay healthy. Talk to your partner and share your ideas.

(Give time to the students to perform the activity.)



Teacher: Now, open your Main Course Books to page 37 with a story. We are going to explore a story about Sam



and his parents visiting a nursery. You will read the story on your own first. Observe the pictures, read the dialogues carefully and think about what is happening. Once you finish, we will discuss it together.

(Give students time to read the animated story quietly.)

Teacher: Now that you have read the story, let us talk about it. What did Sam notice about the nursery?

Teacher: Did you see the different plants in the pictures? Can you name any two plants that Sam identified?

Teacher: Sam's mother asked him to name some plants. What were the names of the plants he mentioned?

Teacher: Why do you think Sam wanted to buy an aloe

Teacher: Baba and Mum explained that plants make our lives more beautiful. Can you think of a way in which plants make our lives better?

Teacher: Towards the end of the story, Sam wanted to buy another plant. What was it?

Teacher: Now, imagine you are visiting a nursery with your family. What plant would you choose to buy and why? Share your answers with the class.



Teacher: If you could name a plant as your friend, what name would you give it? What would you say to your plant every day?

(You may show the **Dictionary** and **eBook** on the digital platform.

Differentiated Activities

110 km/h



Name two plants that can grow indoors.

80 km/h



What do plants need to grow?

40 km/h



Name one plant that has flowers.

Home Task

Visit a nearby park, garden or any place with plants. Observe the different plants around you. Draw one plant you like and write its name. Write one reason why you like this plant.

Period 3

Teacher: Good morning, students.

How are you all today?



Teacher: Wonderful. Today, we are going to play a fun game called 'What Am I?'. I will describe something related to plants and you have to guess what it is. Raise your hand if you know the answer. Let us begin.

Teacher: I am colourful and attract bees and butterflies. I help plants make seeds. What am I? (Flower)

Teacher: I am usually green and grow on the stem. I make food for the plant using sunlight. What am I? (Leaf)

Teacher: I grow inside fruits and can turn into a new plant when I get the right conditions. What am I? (Seed)

Teacher: I am the part of the plant that holds seeds and can be eaten. Some of me are sweet. What am I? (Fruit)

Teacher: I help plants breathe by taking in air through tiny openings. What am I? (Leaf)

Teacher: Fantastic answers, everyone. You are all thinking like plant experts. Give yourselves a big round of applause for the great energy you brought to class today. Now, let us continue with our lesson.

PARTS OF A PLANT

Like our body, the body of a plant is also made of different parts. Each part has a special function.

The part of a plant that grows above the ground is called the shoot. The shoot has stem, branches, leaves, buds, flowers and fruits. The part that grows below the ground is called the root. (38)

Teacher: Wonderful. Let us start with the topic of 'Parts of a Plant.'



(The teacher will read the first four

paragraphs of page 38 and provide explanations to ensure that the students understand the content.)

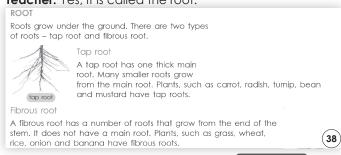
Teacher: Just like our body has different parts, plants also have different parts. Can you name some parts of a plant?

Teacher: Great. Now, look at this picture of a plant. Can you point to the part that grows above the ground?

Teacher: That part is called the shoot. It has a stem, branches, leaves, buds, flowers and fruits.

Teacher: And what about the part that grows under the ground?

Teacher: Yes, it is called the root.



Teacher: Let us talk about roots. Where do roots grow—above the ground or under the ground?



Teacher: Correct. Roots grow under the ground. But did you know there are two types of roots?

Teacher: Look at this picture. One of these roots has a thick main root with smaller roots coming from it. This is called a tap root. Can you think of a plant that has a tap root?

Teacher: Well done. Carrots, radishes, turnips and mustard plants have tap roots.

Teacher: Now, look at the other picture. This root has many thin roots growing from the end of the stem. It does not have a main root. This is called a fibrous root. Can you name a plant that has fibrous roots?

Teacher: Good thinking. Grass, wheat, rice, onion and banana plants have fibrous roots.

Teacher: Now, let us play a fun game. SHQULD DO I will name a plant and you will tell me if it has a tap root or a fibrous root. Let us start.



Teacher: Carrot – Tap root or Fibrous root? (Tap root) **Teacher:** Rice – Tap root or Fibrous root? (Fibrous root) **Teacher:** Radish – Tap root or Fibrous root? (Tap root) **Teacher:** Grass – Tap root or Fibrous root? (Fibrous root) **Teacher:** Onion – Tap root or Fibrous root? (Fibrous root) Teacher: Fantastic job, everyone. Give yourselves a big round of applause.

Poster

Teacher: Let us take a moment to look at the poster on the wall.



(Please display the poster prominently in the classroom to reinforce the learning about different types of roots and leaves. Encourage students to observe the posters and discuss the different types of roots and leaves.)

Teacher: Great observation everyone.

(You may show the **Diagram, Animation** and **I Explain** video on the digital plarform.

Differentiated Activities

110 km/h



Why do fibrous roots spread in all directions?

80 km/h



Which type of root helps plants hold the soil tightly?

40 km/h

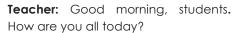


Name one plant with fibrous roots.

Home Task

Go outside and find two different plants. Carefully observe their roots (if visible) or think about what kind of roots they might have. Draw the plants and write whether they have tap roots or fibrous roots.

Period 4





Teacher: Wonderful. Today, we are going to play a fun game called 'Who Am I?'. I will describe something related to plants that we have learned in the last few classes and you have to guess what it is. Raise your hand if you know the answer. Let us begin.

Teacher: I grow under the ground and absorb water and nutrients for the plant. I also hold the plant firmly in the soil. What am I? (Root)

Teacher: I carry water from the roots to the leaves and help the plant stand upright. Some of me are strong like a tree trunk, while others are thin and weak. What am I? (Stem)

Teacher: I have a thick main root with smaller roots growing from it. Carrots and radishes have me. What am 1? (Taproot)

Teacher: I have many thin roots growing in all directions, but I do not have one main root. Grass and wheat have me. What am I? (Fibrous root)

Teacher: I store food in plants like potatoes, ginger and sugarcane. What am I? (Stem)

Teacher: Fantastic answers, everyone. You are all thinking like plant scientists. Let us give ourselves a big round of applause for all the enthusiasm we brought to class today. Now, let us begin our lesson

Teacher: Wonderful. Today, we will learn about two very important parts of a plant—the function of the root and the stem.

(The teacher will read the last three paragraphs of page 38 and the first paragraph of page 39 and provide explanations to ensure that the students understand the content.)

Functions of the root Roots have the following functions: They fix the plant to the soil. They provide support to the plants. They absorb water and nutrients from the soil for the plant. (38) Some roots also store food for plants.

Teacher: Can you quickly tell me where roots grow?



Teacher: Yes, roots grow under the ground. Now, tell me a reason why plants need roots.

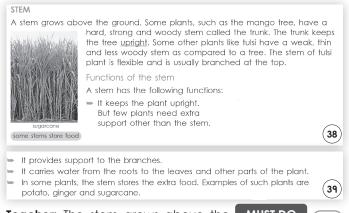
Teacher: Yes, it fixes the plant to the soil. Can you imagine

what would happen if a plant had no roots? **Teacher:** That is right. The plant would fall over.

Teacher: Roots also absorb water and nutrients from the soil, just like we drink water to stay strong. What do you think would happen if a plant did not get enough water from the roots?

Teacher: Good thinking. Some roots also store food for the plant. Can you name a root that we eat?

Teacher: Well done. Now, let us move on to the next important part of a plant—the stem.



Teacher: The stem grows above the ground. Look at this picture. Some stems, like the mango tree, are hard



and strong. Others, like the tulsi plant, are thin and flexible. Can you think of another plant with a strong, woody stem?

Teacher: Excellent. The stem helps keep the plant upright. Without it, plants would droop.

Discovering better



(Explain the terms mentioned in the 'Discovering better' activity mentioned on page 38 of the Main Course Book.) **Teacher:** The stem carries water from the roots to the leaves and other parts of the plant. It is like a straw, moving water upwards.

Teacher: Some stems even store food. Can you think of a plant where the stem stores food?

Teacher: Brilliant. Potato, ginger and sugarcane have stems that store food.

Differentiated Activities

110 km/h



Which part of the plant carries water to the leaves?

80 km/h



Name one plant where the stem stores food.

40 km/h



Name two plants with a strong, woody stem.

Home Task

Find a plant near your home. Observe its stem and roots (if visible). Draw the plant and write whether it has a strong

or weak stem. If possible, find out if its roots are tap roots or fibrous roots.

Period 5

Teacher: Good morning, students. How are you all today?



Teacher: Wonderful. Today, we are going to play a 'True or False' game. I will describe something related to plants and you have to tell whether it is true or false. Raise your hand if you know the answer. Let us begin.

Teacher: The stem carries water from the leaves to the roots. (False - The stem carries water from the roots to the

Teacher: All plants have fibrous roots. (False – Some have tap roots.)

Teacher: Some stems store food for the plant. (True -Sugarcane and potato store food in the stem.)

Teacher: Roots help a plant stand upright. (True – Roots fix the plant to the soil.)

Teacher: Fantastic answers, everyone. Let us give ourselves a big round of applause for all the energy you brought to class.

Most plants have green leaves. The flat and broad part of a leaf is called the leaf blade or lamina. In most leaves, you will see a straight line in the middle of the lamina. It is called the main vein or the midrib. Many side veins branch out from the main vein. The veins carry water to the leaf. The leaf is attached to the branch by a stalk.



Teacher: Excellent. We have already learned about roots and stems. Today, we will explore another important part of a plant—the leaf.

(The teacher will read the second and third paragraphs of page 39 and provide explanations to ensure that the students understand the content.)

Teacher: Can you name any plant whose leaves we eat?



Teacher: That is right. We eat the leaves of plants like spinach, cabbage

and lettuce. Now, let us learn more about leaves.

Teacher: Look at this picture of a leaf given on page number 39 of the Main Course Book. What is the flat and broad part of the leaf called?

Teacher: Yes, the flat and broad part of the leaf is called the leaf blade or lamina. Can you see the straight line running through the middle?

Teacher: Correct. It is called the main vein or midrib.

Teacher: Now, look closely, many small veins branch out from the midrib. What are they called?

Teacher: Yes. These are called side veins. What do you think the veins do?

Teacher: Yes. The veins carry water to different parts of the leaf.

Teacher: Finally, the leaf is attached to the stem by a small structure. What is it called?

Teacher: Yes, it is called stalk. Now, can you point to the stalk in the picture?

Teacher: Exactly. Now, let us discuss the functions of the Leaf.

Discovering better



(Explain the terms mentioned in the 'Discovering better' activity mentioned on page 39 of the Main Course Book.)

Functions of the leaf We know that plants make their own food. The green leaves of the plant make food with the help of air, water and sunlight. The leaf, therefore, is also called the kitchen or the food factory of a plant. The food from the leaves goes to all the parts of the plant through the stem. Leaves of some plants, such as cabbage, spinach and lettuce store extra food. We eat leaves of (39)

Teacher: Did you know that leaves help plants make their own food?

such plants.



Teacher: Yes, the green part of the leaf uses air, water and sunlight to

make food. That is why the leaf is called the food factory of the plant.

Teacher: What happens to the food made by the leaves? **Teacher:** Yes, it travels through the stem to other parts of

Teacher: Some leaves store extra food, like in cabbage, spinach and lettuce. That is why we eat them. Can you think of another leaf that people eat?

Teacher: Now, let us play a fun game to revise what we have learnt in this period. I will ask a question and you will answer in one or two words.



Teacher: What is the broad and flat part of the leaf called? (Leaf blade or Lamina)

Teacher: Which vein runs through the middle of the leaf? (Midrib or Main vein)

Teacher: What carries water to different parts of the leaf? (Veins)

Teacher: What is the small structure that attaches the leaf to the stem? (Stalk)

Teacher: What is the leaf called because it makes food for the plant? (Food factory)

Teacher: Which leaves do we eat? (Spinach, Cabbage, Lettuce)

Teacher: Fantastic work, everyone. Give yourselves a big round of applause.

Differentiated Activities

110 km/h



Name two plants whose leaves store food.

80 km/h



What is another name for the leaf blade?

40 km/h



What carries water to the leaf?

Home Task

Find a leaf from a plant near your home. Observe its shape, size and colour. Draw it in your notebook and label its parts—leaf blade, midrib, side veins and stalk. Write one function of the leaf.

Period 6



Teacher: Good morning, students. How are you all today?

hand if you know the answer. Let us begin.

Teacher: Wonderful. Today, we are going to play a 'True or False' game. I will describe something related to plants and you have to tell whether it is true or false. Raise your

Teacher: Leaves make food for the plant using sunlight, air and water. (True)

Teacher: Roots grow above the ground. (False – Roots grow under the ground.)

Teacher: The stem carries food and water to different parts of the plant. (True)

Teacher: All plants have the same type of root. (False -Some have tap roots and some have fibrous roots.)

Teacher: Potato, ginger and sugarcane store food in their stems. (True)

Teacher: Fantastic answers, everyone. Let us give ourselves a big round of applause for all the energy you brought to class.

(The teacher will read the last four paragraphs of page 39 and provide explanations to ensure that the students understand the content.)

Teacher: Over the last few classes, we have learned about roots, stems and leaves. Today, we will explore some



more parts of a plant—the flower, fruits, seeds and leaf diversity.

Teacher: Let us start with a simple question. Which part of the plant is the most colourful and beautiful?

Teacher: Yes, the flower. Flowers are bright and lovely. Some of them even have a sweet smell. But did you know that most flowers turn into fruits? Let us learn more about them.

FLOWER

A flower is the most beautiful part of a plant. It is bright and colourful. A young flower is known as a bud. Most flowers grow into fruits. We eat many fruits, such as apples, grapes, mangoes and pomegranates.



FRUITS AND SEEDS

Fruits have seeds inside them. Some fruits, such as mangoes and peaches, have only one seed. Some other fruits, such as oranges and apples, have a few seeds. Other fruits, such as papaya and watermelon, have many seeds.

Most plants grow from seeds. A baby plant and its food is protected inside the seed. The seed is sown in the soil. When the seed gets enough air, water and warmth, the baby plant starts to grow.

Teacher: Flowers are the most beautiful parts of a plant. They come in many colours and shapes. What a young flower is called?



(39)

Teacher: Yes, a young flower is called a bud. Can you name any flowers you have seen?

Teacher: Great. Why flowers are important?

Teacher: Flowers are very important because many of them grow into fruits. That is why we see fruits like apples, mangoes and grapes growing from flowers. Fruits have something inside them. What do you think it is?

Teacher: Correct. Fruits have seeds inside them. Do all fruits have the same number of seeds? For example, how many seeds do mangoes and peaches have compared to oranges and apples? What about papayas and watermelons?

Teacher: Some fruits, like mangoes and peaches, have only one seed. Other fruits, like oranges and apples, have a few seeds. Some fruits, like papayas and watermelons, have many seeds.

Teacher: Do you know how most plants start their life? What is inside every seed? What conditions does a seed need to start growing into a plant?

Teacher: Most plants grow from seeds. Inside every seed, there is a baby plant waiting to grow. But it needs the right conditions—air, water and warmth—to start growing.

LEAF DIVERSITY
Leaves of different plants have different shapes, sizes and colours. Some leaves are round-shaped, while some are heart-shaped. They may have smooth or uneven edges.

The lamina of some leaves is waxy, while some other leaves have hairy lamina.

This wide variation in appearance of leaves is known as leaf diversity.

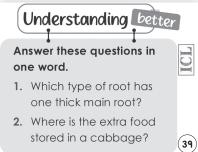
Teacher: Now, let us talk about leaf diversity. Have you ever noticed that not all leaves look the same?



Teacher: Some leaves are round, while others are heart-shaped. Some have smooth edges, while others have rough or uneven edges. Can you name a plant that has big leaves?

Teacher: Wonderful. The lamina of some leaves is waxy, while others have hairy lamina. This wide variation in the appearance of leaves is called leaf diversity.

Understanding better



Teacher: Let us do the understanding better activity given on page number 30



Teacher: I shall read out the two questions and you have to answer these in one word. Here is the first one: 'Which type of root has one thick main root?'

Teacher: Well done. Taproot is the correct answer. Now, here is the second statement: 'Where is the extra food stored in a cabbage?'

Teacher: Wonderful. Leaf is the correct answer. Great answers, everyone.

Teacher: Let us play a fun game to revise what we have learnt so far. I will ask a question and you will answer in one or two words.



Teacher: What is a young flower called? (Bud)

Teacher: Which part of the plant turns into a fruit? (Flower) **Teacher:** What is inside a fruit that helps grow a new plant? (Seed)

Teacher: Which fruit has only one seed? (Mango/Peach) **Teacher:** Which fruit has many seeds? (Papaya/Watermelon)

Teacher: Fantastic work, everyone. Give yourselves a big round of applause.

You may show the **Toy from Trash** video on the digital platform.

Differentiated Activities

110 km/h



How does leaf diversity help plants survive?

80 km/h



What do we call a baby flower?

40 km/h



What part of a plant is colourful?

Home Task

Find a flower near your home or in a park. Observe its colour, shape and size. Draw the flower in your notebook and write its name. Also, note whether the flower has a fragrance and whether it is small or big. Write one sentence about why flowers are important for plants.

Period 7

Teacher: Good morning, students. How are you all today?



Teacher: Great. Today, we are going to play a fun game called 'Move Like a Plant.'. I will say different plant parts or actions and you have to act them out. Are you ready? Let us beain.

Teacher: Roots: Spread your arms downwards like roots arowing deep into the soil.

Teacher: Stem: Stand up tall and straight, like a strong stem holding up a plant.

Teacher: Leaves: Stretch your arms out wide and move them gently like leaves swaying in the wind.

Teacher: Flower: Hold your hands together near your head like a blooming flower.

Teacher: Wonderful. You all acted just like plants. Give yourselves a big round of applause. Now, let us move on to our lesson.

(The teacher will read the second, third and fourth paragraphs of page 40 and provide explanations to ensure that the students understand the content.)

Diversity in shape of leaves

Leaves can be of many shapes. Lotus plant has round-shaped leaves, maple tree has hand-shaped leaves, snake plant has spear-shaped leaves, peepal tree has heart-shaped leaves and pine tree has needle-shaped leaves.



Teacher: We have learned that leaves help plants make food, but did you know that leaves come in different shapes, colours and edges?



Teacher: Today, we will explore how leaves are different from one another. Let us begin.

Teacher: Leaves come in many shapes. What shape are the leaves of the lotus plant? How about the maple tree, snake plant, peepal tree and pine tree?

Teacher: The lotus plant has round-shaped leaves. The maple tree has hand-shaped leaves. The snake plant has spear-shaped leaves. The Peepal tree has heart-shaped leaves. The pine tree has needle-shaped leaves.

Teacher: Can you think of another plant that has round-shaped leaves?

Teacher: Correct. Why do you think each leaf shape is important for the plant?

Teacher: That is right. Each leaf shape helps the plant in different ways. Some catch more sunlight, while others are

thin and pointed to reduce water loss.

Most leaves are green in colour. But some leaves are colourful; for example, the leaves of the croton and coleus plants.

Diversity in edges of leaves

Leaves may have smooth, toothed and lobed edges. For example, piegon pea plant has leaves which have smooth edges. Mulberry plant have leaves which have toothed edges. Oak tree has leaves which have lobed edges.



Teacher: Now, let us talk about leaf colours. Most leaves are green, but did you know some are colourful?



Teacher: The croton and coleus plants have bright and colourful leaves. Have you ever seen plants with red, yellow or purple leaves?

Teacher: Yes. Different colours make plants look beautiful and sometimes help them survive in their environment. Let us talk about the diversity in edges of leaves.

Teacher: Can you describe the different types of edges that leaves can have? What are some examples of plants with smooth, rough or toothed edges?

Teacher: What type of edges do the leaves of the pigeon pea plant have?

Teacher: Yes. The pigeon pea plant has smooth-edged leaves.

Teacher: How about the mulberry plant? What kind of edges do its leaves have?

Teacher: Yes. The mulberry plant has toothed edges.

Teacher: And what about the oak tree? Can you tell me what type of edges its leaves have?

Teacher: Correct. The oak tree has lobed edges.

You may show the **Animated Activities** on the digital platform.

Differentiated Activities

110 km/h



Name two plants that have colourful leaves.

80 km/h



Name one plant that has round leaves.

40 km/h



What part of a plant is usually green?

Home Task

Find three different leaves from your surroundings. Observe their shape, colour and edges. Draw them in your notebook and label their features. Write one sentence about why leaves have different shapes.

Period 8

Teacher: Good morning, students. How are you all today?

SHOULD DO OS MIN.

Teacher: Wonderful. Today, we are going to play a fun

game called 'Who Am I?'. I will describe something related to plants that we have learned in the last few classes and you have to guess what it is. Raise your hand if you know the answer. Let us begin.

Teacher: I am round and float on water. What plant do I belong to? (Lotus)

Teacher: I am shaped like a hand. Which plant has me? (Maple)

Teacher: I am thin and pointed like a needle. What tree do I belong to? (Pine)

Teacher: I am colourful and not green. Which plant has me? (Croton or Coleus)

Teacher: I have toothed edges. Which plant do I belong to? (Mulberry)

Teacher: Fantastic answers, everyone. You are all thinking like plant experts. Give yourselves a big round of applause for the great energy you brought to class today. Now, let us continue with our lesson.

Teacher: Great. Today, we will talk about two important topics—crop plants and how plants are different from animals.

(The teacher will read the fifth and sixth paragraphs of page 40 and the difference between plants and animals and provide explanations to ensure that the students understand the content.)



CROP PLANTS When the same type of plant is grown in a large grea, it is called a crop. Most crops are grains, such as corn, wheat and rice. Vegetable and fruit crops are also grown. Crops are grown (40) by farmers

Teacher: Let us start with a simple question. Have you seen a large field with many plants of the same kind growing together? What do you think such a field is called?



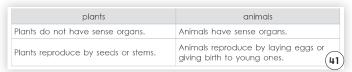
Teacher: Yes. It is called a crop. Most crops are grains like wheat, rice and corn. Can you think of any other crop that farmers grow?

Teacher: Good thinking. Farmers also grow vegetable and fruit crops. These crops give us food to eat. Can you name a vegetable crop?

Teacher: That is correct. Crops are very important because they provide us with grains, fruits and vegetables.

DIFFERENCES BETWEEN PLANTS AND ANIMALS We know that both animals and plants are living things. However, they are different from each other

in many ways.	
plants	animals
Plants do not move from one place to another.	Animals move from one place to another.
Most plants make their own food.	Animals eat plants or other animals for food.
Plants breathe through tiny pores on their leaves called the stomata.	Animals breathe through lungs, gills or air holes.



Teacher: Now, let us talk about something interesting. We know that both plants and animals are living things, but do you think they are the same?

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Teacher: Let us compare them by answering some questions. How do plants and animals move? Do plants move from one place to another or do they stay in one place? Can you give an example of an animal that moves?

Teacher: Correct. Now, tell me how do plants and animals get food? Do plants make their own food or do they eat something else? What do animals eat? What do you eat?

Teacher: Yes. How do plants and animals breathe? Plants breathe through tiny pores called stomata, but animals use different body parts to breathe. Can you name an animal that breathes through its gills?

Teacher: Correct. Do plants and animals have sense organs? Plants do not have sense organs, but animals do. What sense organs do you have?

Teacher: Great. How do plants and animals reproduce? Plants reproduce using seeds or stems, but animals reproduce differently. Can you name an animal that lays eggs?

Teacher: Fantastic answers. You can now see how plants and animals are different from one another.



(🗐) You may show the **Infographic** on the digital platform.

Differentiated Activities

110 km/h



Name two crops that provide us with grains.

80 km/h



How do plants breathe?

40 km/h

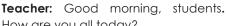


Name one animal that breathes through lungs.

Home Task

Observe the plants around your home. Find out if any of them are crop plants. Draw one crop plant and write whether it is a grain, vegetable or fruit crop.

Period 9





How are you all today?

Teacher: Wonderful. We have learned so much about plants, their parts, crop plants and how plants are different from animals. Today, we will play a fun game called 'Plant or Animal?'. I will say a statement and you have to tell me whether it describes a plant or an animal. Raise your hand if you know the answer. Let us begin.

Teacher: I grow in one place and do not move. Who am I? (Plant)

Teacher: I make my own food using sunlight, water and air. Who am I? (Plant)

Teacher: I eat food to stay alive. Who am I? (Animal)

Teacher: I breathe through tiny pores called stomata. Who am I? (Plant)

T----

Teacher: I breathe through lungs, gills or air holes. Who am I? (Animal)

Teacher: I reproduce using seeds or stems. Who am I? (Plant)

Teacher: Fantastic answers, everyone. You are all thinking like plant experts. Give yourselves a big round of applause for the great energy you brought to class today. Now, let us continue with our lesson.

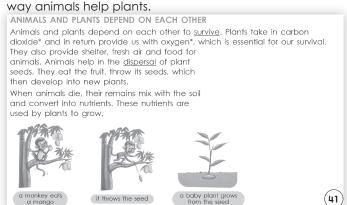
Teacher: Great. We have learned that plants and animals are different, but today, we will learn how they depend on each other. Have you ever seen a monkey eating a fruit?

(The teacher will read the first and second paragraphs of page 41 and provide explanations to ensure that the students understand the content.)

Teacher: What do you think happens to the seeds of the fruit after the monkey eats it?



Teacher: Yes. The monkey eats the fruit and throws away the seed. That seed may grow into a new plant. This is one



Let us explore more ways in which plants and animals help each other. Plants are very important for animals. Can you tell me how?



Teacher: Yes. Plants give us oxygen to breathe. Do you know what gas plants take in?

Teacher: Correct. They take in carbon dioxide and release oxygen, which we need to survive.

Teacher: Plants also provide food, shelter and fresh air. Can you name an animal that lives on trees?

Teacher: Exactly. Monkeys, birds and even insects depend on trees for their homes.

Teacher: Now, let us talk about how animals help plants. Can you think of a way animals might help plants grow?

Teacher: That is right. Animals help in the dispersal of seeds. What do you think dispersal means?



Teacher: Yes. Dispersal means spreading seeds over a large area. When animals eat fruits, they throw the seeds away or drop them in different places. These seeds grow into new plants.

Teacher: Also, when animals die, their remains mix with the soil and become nutrients. These nutrients help plants grow.

Teacher: So, do you see how animals and plants depend on each other?

Understanding better



Teacher: Let us do the understanding better activity given on page number 41.



Teacher: I shall read out the two statements and you will say whether you think it is true or false. Here is the first one: 'A young flower is called a bud.'

Teacher: If you said 'true,' you are correct. Well done. Now, here is the second statement: 'All leaves are green in colour.'

Teacher: If you said 'false,' you are correct. Wonderful. Great discussion, everyone.

You may show the **Concept Map** on the digital platform.

Differentiated Activities

110 km/h



How do plants clean the air?

80 km/h



Name one-way animals help plants grow.

40 km/h



What do plants provide animals for food?

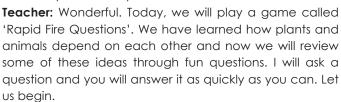
Home Task

Observe any plant near your home and note if you see any animals around it. Write two sentences about how that plant and animal might help each other. Draw a picture of the plant and the animal near it.

Period 10

Teacher: Good morning, students.

How are you all today?



Teacher: What do plants give us to breathe? (Oxygen) **Teacher:** Where do plants store extra food? (Leaves) **Teacher:** What helps animals spread seeds? (Fruits)

Teacher: Do all animals eat plants? (No)

Teacher: Fantastic answers, everyone. You are all thinking like plant experts. Give yourselves a big round of applause for the great energy you brought to class today. Now, let us continue with our lesson.

Connecting better

Teacher: After their trip to the nursery, Sam tells her friends about plants and their parts. Jas asks Sam why plants are known as air purifiers.



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Connecting better

English

After their trip to the nursery, Sam tells her friends about plants and their parts, Jas asks her why plants are known as air purifiers. Sam answers, "This is because a plant takes in carbon dioxide and gives out oxygen." Jas then adds, "Sam, do you know you have used 'a'? It is known as an article." Sam nods her head.

Teacher: Sam says, 'A plant takes in carbon dioxide and gives out oxygen.' Can anyone tell me why we used 'a' in that sentence?

Teacher: Exactly. 'A' is used when we are talking about something in general, not a specific plant. So, when we say 'a plant', we are talking about any plant, not one particular plant.

Grasping better

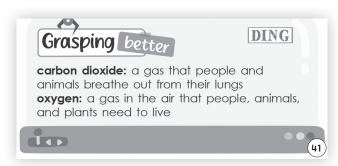
Teacher: The plant takes in carbon dioxide and gives out oxygen. So,

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xygen, which they

plants help animals by giving them oxygen, which they need to survive. Can anyone tell me what carbon dioxide is and why plants need it?



Teacher: Excellent. Carbon dioxide is a gas that people and animals breathe out and plants use it to make food. Now, who can tell me what oxygen is?

Teacher: Yes, oxygen is a gas that plants, animals and people need to live. Plants help keep the air fresh by giving out oxygen.



Hopper: Because it needed a light meal!

plant out for dinner?

Teacher: Roli asks, 'Why did the scientist take the plant out for dinner?'

Teacher: What do you think the answer is?

Teacher: Yes. Hopper says, 'Because it needed a light meal.'

Teacher: That's right. The joke is all about a plant needing a light meal because plants take in sunlight and don't need heavy food like animals do.

Teacher: I hope you enjoyed the joke.

Healing better

Teacher: Wonderful. Today, we will be learning about some healing plants



(41)

and how they help us. Let us take a look at one special plant. Have you ever heard of Ashwagandha?



Teacher: Yes. It is also known as Indian winter cherry. Can anyone guess where we use the roots and leaves of this plant?

Teacher: The roots and leaves of Ashwagandha are often added to tea. Can anyone guess what these leaves help treat?

Teacher: That's right. Ashwagandha is used to help treat cough, cold, fever and pain. It is also very helpful for improving sleep. Is it not that amazing?

Finding better

Teacher: Great. Now, let us talk about another amazing plant. Have you



ever heard of the Venus Flytrap? What do you think this plant might eat?



Teacher: You may be surprised, but the Venus Flytrap catches insects for food. Can anyone guess how it does this?

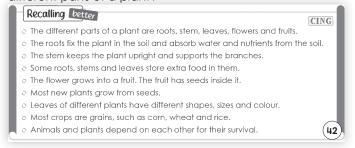
Teacher: Yes, the Venus Flytrap can move quickly to catch insects. Isn't that fascinating? It has special leaves that close quickly when an insect lands on them.

Recalling better

Teacher: Wonderful. Let us begin by recalling what we have learned about plants. Can anyone tell me the



different parts of a plant?



Teacher: Yes, roots, stem, leaves, flowers and fruits. Excellent.

Teacher: Now, let's go through the functions of each part of the plant. What do you think the roots do for the plant?

Teacher: That's right. The roots help fix the plant in the soil and they absorb water and nutrients from the soil.

Teacher: And what about the stem? What does it do?

Teacher: Yes, the stem keeps the plant upright and supports the branches.

Teacher: Some parts of the plant, such as the roots, stems and leaves, store extra food. Can anyone think of a plant that stores food in its stem?

Teacher: Correct. Potatoes and ginger store food in their stems

Teacher: Now, what happens to the flower of the plant?

Teacher: Yes. The flower grows into a fruit and the fruit has seeds inside it. Can you name a fruit that has seeds inside it?

Teacher: Excellent. Most new plants grow from seeds.

Teacher: Now, let us talk about the leaves of the plant. What can you tell me about the leaves?

Teacher: That is right. Leaves of different plants have different shapes, sizes and colours. Can anyone give me an example of a plant with round leaves?

Teacher: Great job. Most crops, like corn, wheat and rice, are grains. What is a crop?

Teacher: Yes. Crops are plants grown in large fields and they are important for us to eat.

Teacher: Finally, let us remember how plants and animals depend on each other. Can anyone tell me how plants help animals?

Teacher: Excellent. Plants give us oxygen to breathe and animals help disperse seeds so plants can grow.

Play the **Slideshow** from the Apptive Teach Plus to reinforce the learning. And discuss with the class.)

Differentiated Activities

110 km/h



What role do plants play in the oxygen-carbon dioxide cycle?

80 km/h



What do plants give to animals to breathe?

40 km/h



What do plants take in to make food?

Home Task

The 'Trying better' activity, given on page number 41 of the Main Course Book. Keep a small potted plant near a window through which light can come in. What do you notice after a few days? Discuss with your friend.

Period 11

Teacher: Good morning, students. How are you all today?



Teacher: Fantastic. Over the past few lessons, we have learned how plants and animals depend on each other and how plants help us in many ways. Today, we will play a fun game called 'Plant and Animal Helpers'. I will describe something and you have to tell me if it is a plant or an animal. Are you ready? Let us begin.

Teacher: I help purify the air by taking in carbon dioxide and giving out oxygen. What am I? (Plant)

Teacher: I help in spreading seeds by eating fruits and dropping the seeds in different places. What am I? (Animal)

Teacher: I give shelter to birds and insects by providing leaves and branches. What am I? (Plant)

Teacher: I help plants grow by giving them the nutrients from my remains when I die. What am I? (Animal)

Teacher: Fantastic answers, everyone. You are all thinking like plant experts. Give yourselves a big round of applause for the great energy you brought to class today. Now, let us continue with our lesson.

Learning better

Teacher: Everyone please open page number 42 of your book. We have an



exercise called 'Learning Better.' In part 'A' of 'Learning better' you have to tick the correct answer. Are you ready to get started?

3	Learning better			CBA
A	Tick (√) the correct of	answer.		
	1. What do we call t	he part of a plant that is foui	nd above the ground?	
	a. soil	b. root	c. shoot	
	2. What do we call t	he part of a plant that is fou	nd mostly below the ground?	
	a. stem	b. roots	c. leaves	
	3. Which of these pla	ints has a tap root?		
	a. rice	b. bean	e. banana	
	4. Name the flat and	broad part of a leaf.		
	a. stalk	ь. lamina	e. midrib	
	5. Which of the follow	ving is a stem?		
	a. carrot	b. potato	c. spinach	(42)

Teacher: Great. Let us begin with the first question. What do we call the part of a plant that is found above the ground?

Teacher: The correct answer is shoot. Well done.

(Similarly complete all five questions)

B Write true or false.

1. A leaf is a part of the shoot of a plant.

2. A mango tree grows along the ground.

3. The leaves of different plants differ in size, shape and colour.

4. Most flowers grow into seeds.

5. Plants can move from one place to another.

Teacher: Now, in part 'B' of the 'Learning better' section, you have to write 'true' or 'false'. Are you ready to aet started?



Teacher: Great. Let us begin with the first question. A leaf is a part of the shoot of a plant. Think carefully and write true or false in the space given in front of the statement.

(Similarly complete all five questions)

Write short answers in your notebook.	
What are the different parts of a shoot?	
2. Why do you think the leaf is called the 'kitchen of the plant'?	(
3. Write two functions of the stem.	(4

Teacher: Now, let us explore some short-answer questions. In part 'C' of the 'Learning better' section, you



have to write short answer. Are you ready to get started?

Teacher: Great. Let us begin with the first question. What are the different parts of a shoot?

(Students have to write the answers for the given questions in about 40 to 50 words in their notebook. Wait for the students to write the answers.)

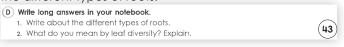
(Similarly complete all three questions)

Learning better

Teacher: Everybody please open page 43 of your Main Course Book. Let us explore some long-answer



questions. Let us begin with the first question. Write about the different types of roots.



(Students have to write the answers for the given questions in about 100 to 150 words in their notebook. Wait for the students to write the answers.)

You may start the **Quiz** on the digital platform.) (Instruct students to bring their workbooks in the next class.

Differentiated Activities

110 km/h



Why do plants need to store food in certain parts like the

80 km/h



Name one plant that stores food in its stem.

40 km/h



Where do roots absorb water from?

Home Task

Draw a plant and label its parts, then write one sentence about how each part helps the plant survive.

Period 12

Teacher: Good morning, students. How are you all today?



Teacher: Let us play 'Plant and Animal Helpers'. I will describe how plants and animals help each other and you will act it out.

Teacher: When I say 'Plants give oxygen', take a deep breath and show how you breathe in oxygen from the air.

Teacher: When I say 'Animals help spread seeds', pretend to be an animal by walking around and dropping seeds.

Teacher: When I say 'Plants make food', pretend to collect sunlight and turn it into food for the plant.

Teacher: When I say 'Animals breathe out carbon dioxide', act like an animal breathing out carbon dioxide for the plants.

Teacher: Well done. You all made a perfect team of plants and animals. Now, let us start our lesson.

Thinking better

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Teacher: Let us begin with a question to make you think. 'If there are no

plants left on the Earth, it will not be possible for humans and animals to survive.' Is the statement true? Why? Why not? Take a moment to think and write your answer in your notebook.



21st CS HOTS

Think and write the answer in your notebook.

'If there are no plants left on the Earth, it will not be possible for humans and animal usurvive.' Is the statement true? Why? Why not?

Teacher: Now, who would like to share their thoughts? **Teacher:** Excellent thinking. Now, let us move on to a real-life situation.

Choosing better

MUST DO

Teacher: Plants are very important because they give us food, oxygen



to breathe and even medicine when we are sick. But air pollution is making the air dirty, which is not good for plants, animals and humans. What can we do to improve air quality? Here are two choices:



- 1. Cut the trees
- 2. Plant new trees

Teacher: Yes. Planting new trees can reduce pollution and improve air quality. Now, think about how planting trees can help us breathe cleaner air. How do you think planting new trees can help with air pollution?

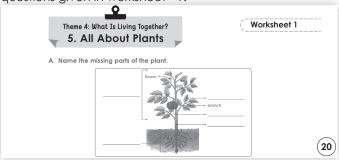
Teacher: Great. Trees absorb carbon dioxide and release oxygen, making the air fresh and clean for everyone to breathe.

Worksheet - 1

Teacher: Let us do some activities from the workbook. Everybody, please



open page number 20 of your workbook and answer the questions given in worksheet - 1.



B. Fill in the blanks.	
The part of a plant that grows about the	ove the ground is called
2. The part of a plant that grows bel the	ow the ground is called
3. Most plants have green	
4. The flat and broad part of a leaf i or	s called the leaf blade
5. The is the most be	peautiful part of a plant.
C. Unscramble the letters to find the	names of the parts of a plant.
1. OTRO	
2. EMST	
3. AFLE	
4. WERFLO	
5. UITFR	

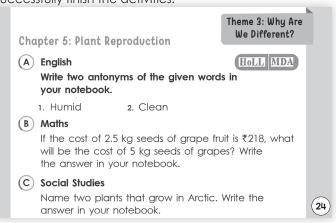
(Let the students answer the questions on their own. Then discuss the answer by writing the correct answer on the blackboard.)

Book of Holistic Teaching



Refer to the Book of Holistic Teaching, page number 24 under the title 'All

About Plants.' Complete the activities mentioned in this section and ensure that the students complete them. These activities are designed to enhance their holistic understanding and engagement with the topic. Provide any necessary support and materials to help the students successfully finish the activities.



(Instruct the students to bring their Little Book in their next class.)

Differentiated Activities

110 km/h



How do plants react to light without sense organs?

80 km/h



Name one plant with smooth edges.

40 km/h



What part of the plant is flat and green?

Home Task

The project Idea given in the book of Project Ideas, page 14, under the title 'All About Plants.' This project should be assigned to the students to work on. Ensure that the students understand the project requirements and provide any necessary guidance or materials they might need. Encourage them to explore and learn about Plants through this engaging project.

Period 13

Teacher: Good morning, students. How are you all today?



Teacher: Today, we are going to act like plants. I will say different plant parts or actions and you have to act them out. Are you ready?

Teacher: When I say 'Roots', bend down and pretend to dig your roots into the ground.

Teacher: When I say 'Stem', stand up tall and straight like a plant's stem.

Teacher: When I say 'Leaves', stretch your arms out wide and pretend to sway like the leaves in the wind.

Teacher: When I say 'Flower', pretend to bloom by stretching your arms and turning around like a flower

Teacher: When I say 'Seed', crouch down small like a tiny seed waiting to grow.

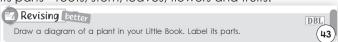
Teacher: Fantastic acting. You all did a great job. Let us give ourselves a big round of applause.

Revising better

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Teacher: Now, let us go ahead and revise the parts of a plant. I want you

to draw a diagram of a plant in your Little Book and label its parts—roots, stem, leaves, flowers and fruits.



Teacher: Take your time and be sure to label each part clearly. Think about what each part of the plant does, like how the roots absorb water and the stem helps support the plant.

Pledging better



Teacher: Let us move on to the final section. We will be talking about pledging to help protect plants and improve air quality.



Teacher: I want you to pledge to use food scraps as natural fertilisers in your own little way. It will also help to meet our Sustainable Development Goal 13: Climate Action.

Teacher: Fantastic ideas. Remember, every little action counts in helping our planet thrive.

Worksheet - 2

Teacher: Let us do some activities from the workbook. Everybody, please



open page number 20 of your workbook and answer the questions given in worksheet - 2.

	Worksheet 2
A. Answer the following questions.	
1. What are the two types of roots?	
2. Name two plants where stems store the e	extra food.
3. What is the lamina?	
4. What is photosynthesis?	
5. What is a bud?	
B. Give five differences between plants ar	nd animals.
1	
2	
3	
5	
C. Write true or false.	
Crops are grown by farmers.	
2. Green plants make their own food.	
3. Plants breathe through lungs.	
4. Animals reproduce by seeds.	
5. Animals help in dispersal of plant seeds.	

(Let the students answer the questions on their own. Then discuss the answer by writing the correct answer on the blackboard.)

You may generate additional COULD DO practice worksheets using the **Test Generator** given on digital platform.

Discuss the project assigned as the home task in the last period, focusing on helping students understand the objectives and addressing any challenges they face.

Teacher: Now, let us fill in the last column of the KWL chart.

Teacher: In this column, we will write what we have learned in this chapter.



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Teacher: Think about the topics, we have learned and write them neatly in the 'L' column of the chart.

(Wait for students to fill in the chart.)

Differentiated Activities

110 km/h



Why is planting trees important for improving air quality?

80 km/h



Why do plants store food in certain parts?

40 km/h



What do plants give us to help us breathe?

Home Task

The 'Creating better' activity, given on page 43 of the Main Course Book. – Make the table mats.

Learning Outcomes

The students will:

Physical Development	develop fine motor skills by drawing and labelling plant diagrams, handling materials for creative activities like making table mats and engaging in tasks that involve hand-eye coordination such as pressing leaves on paper.
Socio-Emotional and Ethical Development	develop collaboration skills by working in pairs to discuss the functions of plant parts and enhance empathy and responsibility by learning how plants and animals depend on each other for survival. They will also take part in the 'Pledge' activity, fostering a sense of commitment to environmental protection and sustainability.
Cognitive Development	build their understanding of plant biology by identifying and describing the different parts of a plant (roots, stem, leaves, flowers, fruits) and their functions. They will apply logical thinking to reason about the importance of plants in the ecosystem and their role in survival.
Language and Literacy Development	improve their language skills by answering questions, describing the functions of plant parts and writing about their observations in notebooks. They will engage in activities that strengthen their vocabulary related to plants, their parts and the environment, as well as use critical thinking to explain complex concepts.
Aesthetic and Cultural Development	explore creativity through the activity of making table mats with leaves of various shapes and sizes, fostering appreciation for nature's diversity. They will also gain insight into the cultural importance of plants in the form of medicinal plants like ashwagandha and how plants play a role in different cultures.
Positive Learning Habits	develop positive learning habits by engaging in thoughtful reflection (through the 'Thinking better' and 'Choosing better' activities), collaborating with peers and committing to environmentally friendly practices such as using food scraps as natural fertilisers.

Starry Knights

Are you contented with the lesson taught to the learners? If yes, what helped you in getting the content across the learners effectively?

Award yourself a STAR for the fabulous task achieved.