Vision Empower & XRCVC

Teacher Instruction KIT

Plants

Syllabus: Karnataka State Board
Subject: EVS
Grade: 3
Textbook Name: ENVIRONMENTAL STUDIES - Text cum Workbook (Revised) - Third Standard
Chapter Number & Name: 2. Green Wealth

1. OVERVIEW

1.1 OBJECTIVE AND PREREQUISITES

Objective

- Identify and classify plants such as herbs, crops, shrubs, trees and creepers
- Understand the places of growth of such plants
- Understand that leaves have different shapes, sizes, structures, colors and smell
- Learn the process of preparing manure using shed leaves
- Identify crops, water plants and epiphytes

Prerequisite Concept:

- Recognition and identification of some common plants around us

EVS _Grade1_Chapter3_Plants of Backyard

Content Index

*Note: The fields marked with * are mandatory*

2. LEARN

2.1 KEY POINTS

Plants are classified into herbs, shrubs, creepers and trees according to their height and hardness of their stem. Leaves come in different sizes, shapes and colours which are mostly green. Fallen dry leaves can be used to make manure for the plants.

Some plants grow in water like lotus and lily and some plants grow on the branches of a tree. These are called epiphytes.

Farmers grow crops in large fields. Examples of crops are rice, ragi, wheat etc. They are grown in large quantities.

2.2 LEARN MORE:

For more information about types of plant go to the link https://byjus.com/biology/plants/

3. ENGAGE

3.1 INTEREST GENERATION ACTIVITY

INTRODUCTION OF PLANTS

Activity 1: Exploring the garden/plants *

Materials required:

If access to a garden is not possible then use different varieties of small potted plants

Prerequisites: NA

Activity flow:
Take a walk to the garden in the school premises and have children understand the difference between different kinds of plants and trees in the vicinity. Discuss the difference between different types of plants and have them relate with what they learnt. Tell them not to pluck any leaves or flowers.

Pass around the plants to students. Have them feel the plants and explore the parts and if possible, identify the plants. Have a discussion about their observations.

Encourage students to think and share how one plant differs from another. Ask students to observe the difference between the two plants and share how they feel these two plants are different from each other. Direct their attention towards, shape, size, texture and color of leaves, stem and/or flowers.

Activity 2: List names of plants (reading and writing) *
Materials required: Writing materials
Prerequisites: Comfortable writing in braille

Activity flow:
Ask students to make a list of at least 10 plants they know. Ask some of them to read and share with the class. Alternatively, students can call out names of 10 plants they are familiar with.

3.2 CONCEPT GENERATION ACTIVITY

TYPES OF PLANTS

Activity 3: Introducing types of plants *

Materials Required: Either whole plant on a pot (small size) or few twigs and leaves of tulsi, mint, hibiscus, rose, money plant, stone with moss on the surface
Students can be taken outside to show the different kinds of herbs and shrubs if they are available in the school premises.
Prerequisites: NA

Activity Flow:

Shrubs: If real plants are not available in the school premise, then pass around the rose and/or the hibiscus flowers to students. Allow them to feel and smell the flowers. Tell them these flowers belong to plants which are called shrubs.
Do you know what a shrub is? The stems of a shrub are a bit hard. The branches or the stems spread out at the lower part of the plant. The difference between an herb and shrub can be understood from their stem. As these plants look like clusters, they are also called bushes. Examples of shrubs are - rose plant, hibiscus plant, tomato plant.
Herbs: Pass around the materials. Tell the names of each item. Give some time for children to touch, smell and understand the difference between the different types of herbs.
How many of you know or heard about tulsi plants? What kind of plant is it?
Inform that a tulsi plant is also called as holy basil in English. It is an herb.
An herb is a plant which is small in size and has a soft stem. They are used for their medicinal properties and flavours.
Other examples of herb are - mint/pudina plant, tomato plant, curry leaves plant, coriander/dhania plant.
Creepers: Can a small plant grow a big fruit like watermelon or vegetable like pumpkin? They grow along the ground and the stems of these plants are very long. The stems are not very strong and hence cannot stand upright. Examples of creepers are: pumpkin, watermelon, sweet potato.
Climbers are similar to creepers with long stems but they bore small fruits. Examples of climbers are - money plants.
Trees: What do we call the stem of a tree? How different is it from a plant? The stem of the tree is called a trunk. It is much thicker and taller than a plant. Inform children that we can differentiate between herb, shrub, creeper or a tree according to their height and hardness of their stem.

The plants are classified into herbs (small plants), shrubs, trees and creepers according to their height and hardness of their stem.

PARTS OF PLANTS

Activity 4: Parts of plants *
Materials Required:

- A small real flowering plant and preferably with fruits like tomato, lemon or chilli
- A Tactile Diagram of a plant with labeled parts such as roots, stem, leaf, flower, fruit

Prerequisites: NA
Activity Flow:

Have students feel the different parts of the plant and understand the name of each part. Now pass around the TD and help students relate the real parts with the one in the diagram.
Discussion: Inform that we cannot feel the roots of the real plant since it is under the soil. It is important to understand that although chilli or a tomato is a vegetable, they are basically the fruit of the plant.

Colours of different parts of plants:

Discuss the colours of the different parts of the plant.

The leaves are generally green in colour.
The stem is green, brownish grey or brown in colour.
The flowers have many colours like brown, yellow, white, saffron etc.
The unripe fruit is generally green in colour.
The fruits are in different colours-red, yellow, green etc.

Uses of Plants:

You know that plants provide food, fodder, manure, firewood, fruits and medicines etc. All these are obtained from different parts of the plants.

LEAVES

Activity 5: Sing and enjoy (song on leaves)

Materials Required: None
Prerequisites: NA
Activity Flow: Sing the following song with students
I am green, the life of a plant.
See our size, so different our shape
Though in colour, we rarely differ
And our smell, you all will love.

I grow on plants, fall on the soil
Turned into manure, join the plants again.

When on plant, I serve the plant
When I fall, I will dry
And join the plant again.

Activity 6: Types of Leaves *

Materials Required: Different types of leaves (not dry) in various shapes, sizes and colours
Prerequisites: NA

Activity Flow:
Pass around the leaves to students. Have them feel the size, shapes, texture, veins and colour (for the partially sighted students). Ask them to feel the veins of each leaf. These veins help transport water and food through leaves to the rest of the plant.
Have interactive discussion with students by asking following questions:
Q - What happens to the leaves when they become dry in a plant or tree? (it sheds/falls off to the ground)
Q - Have you ever thought about what happens to all the leaves that fall to the ground? (Mostly we clean them using a broom or rake)
Q - Instead of throwing away these leaves, can we make use of them?
We can make manure using these dry leaves. A manure is a substance that can be used as fertilizers for better growth of plants. It is like food for plants that provides nutrition for the plants. This goes like a complete circle. Dry leaves turned into manure which nourishes plants that grow new leaves.
Q - Ask students to think and share the uses of plants?
Plants provide us with food, fodder, manure, firewood, fruits and medicines etc.

Activity 7: Making Manure (using dry leaves)
Note*: Kindly note this activity will take 30-45 days for the leaves to convert to manure so kindly plan accordingly*
Materials Required: Dry leaves collected over few days enough to make manure (approximately half of a medium sized bucket), kitchen waste (wet waste only), big container to mix the compost
Prerequisites: NA

Activity Flow:
Collect the leaves that have fallen in your school premises with the help of your friends and keep them on a bag. Under the guidance of teacher, prepare manure with students. Discuss with them its use and use it.
Instructions:
1. First, segregate your household waste into dry and wet in your kitchen. Leftovers of food, fruit peels, and tea bags are wet waste whereas paper, plastic and packaging area dry waste.

2. Secondly, put both these wastes in two different containers in the kitchen. When the wet waste container is full, put its contents into the first compost pot.

3. Then add dry leaves of the same quantity as the waste and semi-composted material, buttermilk or cow dung to start with the decomposition process.

4. Turn the pile around every other day. Keep the pile at the right level of dampness. If it is too wet, add dry leaves and stir and if it is too dry add water and stir.

5. Once it is full, leave the pot open for 30-45 days for the composition to happen. Then move the semi-composted matter into a larger container or bin.

6. After two months the waste will convert into rich compost that can be used as manure.

WATER PLANTS, CROPS, EPIPHYTES

Activity 8: Water plants, crops and epiphytes *
Materials Required: Lotus or lily or any other variety of water plant, plant variety of any crop such as rice, wheat, pulses, jute, tea etc., orchids (if available)
Prerequisites: NA
Activity Flow:
If there is a small water body (natural or artificial) in which water plants grow then take students to the location and have them feel the plants. Alternatively, bring a lotus or water lily to the class and pass it around.
Water plants: Where does lotus flower grow? Inform students that there are many other plants that can grow on water. Plants which grow on water are also called aquatic plants. Another plant that grows on water is water lily. Example: Lotus and lily float on water.
Crops: Pass around the crop with stem. Allow students to feel how and where the seeds grow. Ask them to identify what it is and where they are grown. Ask what do we call these plants which farmers grow in large numbers on a field.
Summarise the discussion by saying that they are called crops. Examples of crops are, wheat, rice, sugarcane, ragi, jowar, millets, oil seeds etc. We need vast areas of land to grow these crops.
Epiphytes: These are small plants which grow on the branches of a big tree. These are called epiphytes. Examples of epiphytes are mosses and orchids.

3.3 LET'S DISCUSS: RELATE TO DAILY LIFE

Ask students if they are aware of any variety of plants/crops being grown in their houses or in their villages. Ask them to share their experiences. Have a discussion about how these plants are useful to us.

4. EXERCISES & REINFORCEMENT

4.1 REINFORCEMENT

Activity 9: Leaf Print

Materials Required: Few small leaves which are thick and have prominent veins, clay
Prerequisites: NA

Activity Flow: Take a lump of wet clay and press the leaves on to it. Let the clay dry and then feel the shape of the leaf printed on the clay.

Activity 10: Visit to a kitchen garden (HW suggestion)
Take a tour to the kitchen garden and check the varieties of plants that are grown in the garden. Alternatively, they can ask the adults in the house to talk and discuss what can be grown in the kitchen garden and if possible, plant a couple of plants to begin with. Example: curry leaves plant or tomato plant.

- Encourage students to talk to the elders in the family and explore nearby areas to learn about plants and trees and share the same in the class. (HW suggestion)

Teaching Tips

NA

References

NA

4.2 IMPORTANT GUIDELINES

Exercise Reading
It is very important that the children practice their learnings as well as their reading. Hence have the children read out the newly learned concepts from their textbooks or other available resources.

Perform Textbook Activity
It is good practice to have the children perform the textbook activities. Your textbook activities might not be accessible hence go through this resource to learn how to make textbook content accessible.

Provide Homework
To evaluate their understanding and to help the student revise and implement the new learnt concept ensure to provide them with homework. Students should perform one or two of the questions mentioned above or from the textbook exercises with the teacher in class and the remaining may be given for homework. Also, ensure that the student knows

their special skills linked to independently using their accessible books as it will be critical to doing homework independently.

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