

Plant Reproduction

LESSON PLAN

SPECIFIC OBJECTIVES

The students learn about

- growing plants from seeds
- growing plants from other parts of plant
- crops and vegetables
- significance of plants

TEACHING AIDS

Picture/chart/animation of a seed showing its parts, germination of seed showing different stages, dispersal of seeds (as given in chapter); grafting of rose, potato plant growing from eyes on potato, plants growing from root in sweet potato, plants growing from *Bryophyllum* leaves; mould and mushroom; **pictures** of rabi and kharif crops (as given in chapter), farmers ploughing the field, irrigating the crop, spraying insecticides; containers for storing grains; different products obtained from plants such as timber, rubber, gum, tea, coffee, etc.

LESSON PLAN

- Teacher will start the chapter with 'Warm Up' section by asking some general questions on the parts of plants based on previous knowledge of the students. Teacher will help them to fill in the blank.
- Now, teacher will explain that all the flowering plants produce seeds enclosed inside the fruits and seeds contain a baby plant inside them.
- With the help of teaching aids, teacher will discuss various parts of a seed and will explain monocotyledonous and dicotyledonous seeds.
- Teacher will discuss the conditions necessary for germination of seeds and with the help of teaching aids will explain how germination of seed takes place.
- Now, to check the understanding of students about the topic, teacher will ask them to solve 'Checkpoint 1'.
- Teacher will define the dispersal of seeds and its need for plants. Teacher will also introduce different agents of seed dispersal and with the help of teaching aids, will explain how these agents help in the dispersal of seeds.
- Now, teacher will define vegetative propagation and explain the means of growing plants from parts of plants other than seeds (as given in chapter).

- Teacher will introduce non-flowering plants and explain that these plants do not produce seeds but they reproduce by spores.
- Now, teacher will define crop and discuss its types with the help of teaching aids showing suitable examples (as given in chapter).
- Teacher will discuss the suitable conditions for growing different crops (as given in chapter).
- Now, teacher will define the term agriculture, its need and how a good and healthy crop can be grown. Teacher will also discuss how crop is stored and protected from rats, birds, insects, etc.
- Teacher will also discuss the significance of plants, their products and their role in giving life gas, i.e., oxygen.
- Now, teacher will ask students to solve 'Checkpoint 2'.
- At last, teacher will sum up the chapter by going through all the points given under the head 'At One Go' and make students revise the new terms given under the head 'Remember These Terms'.
- Teacher will help students to solve all the questions given under the head 'Check Your Study'.

BOOST UP

- Teacher should show a bean seed as a whole and a split one to show all its parts.
- Teacher should show the sapling of a plant.
- Teacher should show the samples of different types of seeds.
- Teacher should show the growing of new plants from the eyes on potato, root in sweet potato and *Bryophyllum* leaf.
- Teacher should show some samples of kharif and rabi crops.

EXPECTED LEARNING OUTCOMES

The students

- know about different parts of seeds, monocotyledonous and dicotyledonous seeds
- learn about conditions necessary for germination of seeds and its stages
- understand dispersal of seeds and know various agents involved in it
- understand vegetative propagation and know about growing plants from plant parts other than seeds.
- know about non-flowering plants.
- learn about types of crops, conditions necessary for growing crops, protection against pests and storage of seeds
- understand the significance of plants

EVALUATIVE QUESTIONS

The teacher may ask the following questions for evaluating the understanding of students.

1. What is a seed coat?
2. What is an embryo?
3. What is a seedling?
4. What is dispersal of seeds?
5. What is vegetative propagation?
6. Name some rabi crops.
7. Name some kharif crops.
8. Why are plants important to us?