

# New Science Power 5

## Plant Reproduction

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### SPECIFIC OBJECTIVES

- The students learn about
- ❖ growing plants from seeds
  - ❖ structure and dispersal of seeds
  - ❖ growing plants from spores
  - ❖ growing plants from other parts of plant
  - ❖ crops and their types
  - ❖ growing of crops

### 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.

### LESSON PLAN

- ❖ The teacher will start the chapter by asking some questions on the parts of plants based on previous knowledge of the students.
- ❖ 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, the teacher will discuss various parts of seed and explain about 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 seeds takes place.
- ❖ 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, to check the understanding of students about the topic, teacher will ask them to solve 'Checkpoint 1'.
- ❖ Teacher will introduce non-flowering plants and explain that these plants do not produce seeds but they reproduce by spores.
- ❖ Now, teacher will define vegetative propagation and explain the means of growing plants from parts of plants other than seeds (as given in chapter).
- ❖ Now, teacher will ask the students to solve 'Checkpoint 2'.
- ❖ Now, teacher will define crop and its types.
- ❖ Teacher will discuss different stages for growing crops.
- ❖ Teacher will discuss how crop is stored and protected from rats, birds, insects, etc.
- ❖ Teacher will ask the students to solve 'Checkpoint 3'.
- ❖ At last, teacher will make students revise the new terms given in 'Science Vocabulary' and sum up the lesson by going through the points given in 'Wrapping it up'.
- ❖ Now, teacher will help students to solve the questions given in 'Exercises'.

### BOOST UP

- ❖ Teacher should encourage students to carry out activities given in the chapter.
- ❖ Teacher should discuss the conversation of Annu and Mannu given in bubbles in between the topics.
- ❖ Teacher should help students to find the answers of questions given in 'Think Zone' and encourage to do activities or projects given in 'Beyond the Text'.
- ❖ Teacher should also discuss the facts given in 'Interesting Information' section.
- ❖ Teacher should show the sample of 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, steps for growing crops, protection against pests and storage of seeds

## 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?