Chapter 2

Reproduction in Plants

LESSON PLAN

SPECIFIC OBJECTIVES

The students will learn about

- growth and development
- reproduction and its different modes in plants
- various forms of asexual reproduction
- sexual reproduction in plants

Teaching Aids

Pictures/charts/models/animation on binary fission in bacteria, budding in yeast, fragmentation in *Spirogyra,* spore formation in *Rhizopus*; tuberous roots of sweet potato/*Dahlia,* vegetative propagation by underground stems, subaerial stems, leaf, stem cutting, layering and grafting, tissue culture; LS of a flower, types of pollination, insect pollination, wind pollination, water pollination, procedure of artificial-pollination in pea, germination of pollen grains on stigma leading to fertilisation; structure of fruit, fleshy and juicy fruits, dry fruits, stony and hard fruits

Teaching Strategy

- Teacher will start the chapter by defining reproduction and its importance.
- Now, teacher will define two modes of reproduction, i.e., asexual and sexual reproduction.
- Teacher will explain different forms of asexual reproduction and will demonstrate Activities 1 and 2 in the class.
- Teacher will ask students to solve 'Check Point 1'.
- Now, teacher will define vegetative propagation and its different methods.
- Teacher will explain the natural and artificial methods of vegetative propagation and will also discuss its advantages and disadvantages.
- Teacher will perform Activities 3, 4 and 5.
- To evaluate students, teacher will ask them to solve 'Check Point 2'.

- Now, teacher will define sexual reproduction and role of flower in carrying out sexual reproduction.
- Teacher will discuss the parts and types of flowers by performing Activity 6.
- Teacher will explain the mechanism of sexual reproduction.
- Now, teacher will explain pollination, its types, advantages and disadvantages of each type and the agents of pollination.
- Teacher will discuss the features of flowers pollinated by different agents. Teacher will also demonstrate Activities 7 and 8.
- Teacher will explain cross-pollination and how it is carried out artificially.
- Now, teacher will discuss the process of fertilisation and changes occurring in flower after fertilisation.
- Further, teacher will define a fruit and types of fruits.
- Now, teacher will ask students to solve 'Check Point 3'.
- At last, teacher will sum up the lesson by going through the points given under the head 'Wrapping It Up'.
- Teacher will finally help students to answer the questions given under the head 'Test Yourself'.

Boost Up

- Teacher can help students to perform the activities given in chapter.
- Teacher can make students revise new terms given under the head 'Know These Terms'.
- Teacher can encourage students to learn the facts given under the head 'Something More'.
- Teacher can show animations related to the topics taught, if possible.
- Teacher should assign Activities 3, 4, and 5 to students as their project work and discuss the results in the class.

Expected Learning Outcomes

The students understand and know:

- the concept of reproduction, its significance and its various modes
- various forms of asexual reproduction
- process of vegetative reproduction, its types and advantages as well as disadvantages
- process of sexual reproduction, its mechanism and role of flowers in carrying out sexual reproduction
- process of pollination and its agents, fertilisation and its significance
- structure and types of fruit

Evaluative Questions

The teacher should ask the following questions to evaluate the students:

1. What is the difference between asexual and sexual reproduction?
2. Name the various forms of asexual reproduction.
3. What is vegetative propagation?
4. What are agents of pollination? Name them.
5. What is the fate of zygote, ovule and ovary?
6. Define fruit.