

Reproduction in Animals

SPECIFIC OBJECTIVES

The students learn about

- the phenomenon of reproduction
- the animals giving birth to young ones and egg-laying animals
- life cycles of amphibians and insects (cockroach and butterfly)
- to be sympathetic towards animals

TEACHING AIDS

Pictures of animals producing young ones, egg-laying animals; **Picture/chart** showing internal structure of an egg; **Picture/animation** on hatching of eggs of snakes/turtle/bird, spawn of fish/frog, eggs of cockroach, butterfly; **Picture/chart** on life cycle of frog, cockroach and butterfly (as given in the chapter); **Pictures/animations** showing some mammals like cow and dog feeding their young ones

LESSON PLAN

- Teacher will start the chapter with 'Warm Up' section by asking some simple questions on parenting in birds, based on the previous knowledge of students. Teacher will also tell the name of bird, i.e., eagle, shown in the picture, and help the students to fill in the blank.
- Now, by showing pictures of some animals with their young ones, teacher will define reproduction and its need.
- By showing pictures of animals producing young ones and those laying eggs, teacher will explain that some animals give birth to young ones whereas some others lay eggs.
- Teacher will explain that the animals which produce young ones are called mammals and we humans are also mammals.
- By using teaching aids, teacher will also explain that mammals feed their babies on their milk and take care of them.
- Now, teacher will explain that birds, fishes, reptiles, amphibians and insects do not give birth to young ones but they lay eggs.
- With the help of teaching aids, teacher will explain the structure of a bird's egg.
- Now, with the help of teaching aids, teacher will explain that animals like fish and frog lay a mass of eggs covered by jelly. This mass of eggs is called spawn. Teacher will also tell that eggs of these animals do not have hard shell so they are covered by jelly.

- With the help of teaching aids, teacher will explain the features of eggs of reptiles and insects that they have hard shells. They are not incubated by parents and young ones come out of them when they get warmth from outside.
- Now, with the help of teaching aids, teacher will explain the life cycle of frog, cockroach and butterfly (as given in chapter).
- To create some moral values, teacher will discuss about being kind towards animals.
- To evaluate the understanding of students about the chapter, the teacher will ask them to solve the Checkpoint given at the end of chapter.
- At last, teacher will make students revise the new terms given under the head 'Remember These Terms' and sum up the lesson by going through the points given under the head 'At One Go'.
- Now, teacher will help students to solve the questions given under the head 'Check Your Study'.

BOOST UP

- Teacher can discuss the information given in 'Knowledge Zone' under the heads 'Animals that give birth to young ones' and 'Birds'.
- Teacher can show the eggs of fish, frog and other animals (without harming them) in their breeding season.
- Teacher should arouse moral values in children to be kind and careful towards animals.

EXPECTED LEARNING OUTCOMES

The students

- can define reproduction and its need.
- know about the animals that give birth to young ones and the ones that lay eggs.
- know about the features of eggs of birds, amphibians, fish, reptiles and insects.
- know about the life cycle of amphibians (frog) and insects (cockroach and butterfly).

EVALUATIVE QUESTIONS

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

1. What is reproduction?
2. Why do animals reproduce?
3. What are mammals?
4. How do mammals feed their young ones?
5. What is incubation?
6. What is a spawn?
7. Eggs of which animal groups do not have hard shell?
8. Where does a frog lay its eggs?
9. What is a tadpole?
10. What is a nymph?
11. What is moulting?
12. What is a caterpillar?
13. What is a pupa?