

## LESSON PLAN

### SPECIFIC OBJECTIVES

- The students will learn about
- ✧ respiration and its types
  - ✧ breathing and respiration in humans
  - ✧ respiration in other animals
  - ✧ respiration in plants

### TEACHING AIDS

Pictures/charts/models/animations on a cell showing respiration; respiratory organs of humans; structure of alveoli; changes in the chest cavity during inhalation and exhalation; earthworm, tracheal system of cockroach; gills of fish; stomata on leaves, lenticels on old woody stem, root hair in soil.

### LESSON PLAN

- ✧ Teacher will start the chapter by going through the points given in 'Know these points before you start' section.
- ✧ Teacher will describe the process of respiration as a biochemical process.
- ✧ Teacher will describe the types of respiration, i.e., aerobic and anaerobic respiration.
- ✧ Now, teacher will ask students to solve Check Point 1.
- ✧ Teacher will explain respiratory system in humans.
- ✧ Teacher will describe the process of breathing in humans by explaining mechanism of inhalation and exhalation and will demonstrate the related activity given in the chapter.
- ✧ Teacher will explain the process of external, internal and cellular respiration.
- ✧ Teacher will ask students to solve Check Point 2.
- ✧ Now, teacher will explain the process of respiration in other animals – earthworm, cockroach and fish (as given in the chapter).
- ✧ Teacher will discuss the process of respiration in plants and describe different parts of plant which carry out respiration.

- ✧ Now, teacher will ask students to solve Check Point 3.
- ✧ Teacher will make students revise the new terms given under the head 'Know These Terms'.
- ✧ Finally, teacher will help students to solve the questions given in exercises under the head 'Practice Time' and 'Think Zone'.

### BOOST UP

- ✧ Teacher should demonstrate and explain activities given in the chapter.
- ✧ Teacher should discuss the information given under the head 'Something More'.
- ✧ Teacher should discuss the conversation of Annu and Mannu given in between the topics.
- ✧ Teacher should encourage students to watch Discovery, National Geographic and Animal Planet channels to know more about plants and animals.

### EXPECTED LEARNING OUTCOMES

The students know about

- ✧ aerobic respiration and anaerobic respiration.
- ✧ respiratory system and breathing process in humans.
- ✧ respiration in earthworm, insects and fish.
- ✧ parts of plants which take part in respiration.

### EVALUATIVE QUESTIONS

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

1. Define respiration.
2. Why do living beings respire?
3. Mention the differences between aerobic and anaerobic respiration.
4. What is meant by breathing?
5. How many times does a normal human breathe?
6. What is the key difference between external and internal respiration?
7. Name the respiratory organs of earthworm, frog, cockroach and fish.
8. Which parts of plants take part in respiration?