

Respiration in Animals and Plants

LESSON PLAN

SPECIFIC OBJECTIVES

The students will learn about

- ✧ respiration and its types
- ✧ respiration in humans
- ✧ breathing 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; root hair in soil.

LESSON PLAN

- ✧ The teacher should start the chapter with ‘Gear Up’ and discuss the questions given in the section.
- ✧ Teacher should describe process of respiration as a biochemical process.
- ✧ The teacher should describe the types of respiration, i.e., aerobic and anaerobic respiration and their features.
- ✧ The teacher should explain respiratory system and process of respiration in humans.
- ✧ Teacher should describe the process of breathing in humans by explaining mechanism of inhalation and exhalation.
- ✧ The teacher should demonstrate Activities 1 and 2.
- ✧ The teacher should make students to perform Activities 3 and 4 for a clear understanding of the process of breathing.
- ✧ Teacher should explain the process of external, internal and cellular respiration.
- ✧ Now, the teacher should explain the process of respiration in other animals – earthworm, cockroach and fish (as given in the chapter).

- ✧ Teacher should discuss the process of respiration in plants and also the respiration occurring in different parts of plant.
- ✧ Students should be asked to solve 'Check Points' 1, 2 and 3.
- ✧ At last, the teacher will sum up the lesson by going through the points given under the head 'Wrap Up Now'.
- ✧ The teacher will help the students to solve all the questions given in exercises under the head 'Practice Time' and will also discuss the topics given under the head 'Formative Tasks'.

BOOST UP

- ✧ Teacher may ask students to perform Activity 4 as home assignment and discuss the results in the class.
- ✧ Students should be encouraged to perform Activity 2 at their own for a clear understanding of mechanism of breathing – inhalation and exhalation.

EXPECTED LEARNING OUTCOMES

The students know about

- ✧ process of respiration and its types.
- ✧ respiratory system and breathing process in humans.
- ✧ respiration in other animals.
- ✧ respiration in plants and 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. What does respiration involve?
3. Mention the differences between aerobic and anaerobic respiration.
4. How do human beings respire?
5. What is meant by breathing?
6. How many times does a normal human breathe?
7. List the differences between external and internal respiration.