

7

Physical and Chemical Changes

LESSON PLAN

SPECIFIC OBJECTIVES

The students will learn about

- ✧ physical changes
- ✧ chemical changes
- ✧ rusting of iron and conditions necessary for it to take place
- ✧ methods of preventing rusting
- ✧ crystallisation

TEACHING AIDS

Pictures/charts/models/animations on some physical changes; some chemical changes; rusting of iron; crystallisation, etc.

LESSON PLAN

- ✧ The teacher should start the chapter with ‘Gear Up’ and discuss the activities and questions given in this section.
- ✧ Now, teacher should define physical changes by giving some examples and performing Activities 1, 2 and 3.
- ✧ The teacher should define chemical changes with examples and performing Activities 4, 5, 6, 7, 8, 9 and 10.
- ✧ Teacher should discuss the features of chemical changes which may be change in colour, release of heat and light energy, evolution of gas, production of sound, change in smell, etc. in different reactions.
- ✧ Teacher should also discuss the importance and occurrence of physical and chemical changes in everyday life.
- ✧ The teacher should describe the rusting of iron and conditions necessary for rusting to take place by performing Activity 11.
- ✧ Teacher should discuss various methods to prevent rusting.
- ✧ The teacher should define the process of crystallisation by performing Activity 12.
- ✧ Teacher should also discuss the use of crystallisation in everyday life.
- ✧ The teacher should tell the students to solve ‘Check Points’ 1 and 2.

- ✧ 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

- ✧ The teacher should write few changes on the board and ask each student one-by-one to tell the kind of changes.
- ✧ The teacher should ask each student to tell the definition of rusting of iron and the conditions necessary for rusting to take place.
- ✧ Students should be asked to tell the methods used to prevent rusting, and also to tell the utility of crystallisation.

EXPECTED LEARNING OUTCOMES

The students know about

- ✧ physical and chemical changes.
- ✧ features of chemical changes.
- ✧ uses of chemical changes.
- ✧ rusting of iron, conditions necessary for rusting to take place and methods involved to prevent rusting.
- ✧ uses of crystallisation.

EVALUATIVE QUESTIONS

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

1. Define physical changes and write their two examples.
2. Mention two examples of chemical changes.
3. Write the differences between physical and chemical changes.
4. Explain rusting of iron.
5. How can rusting be prevented?
6. What is meant by crystallisation?
7. Name the process in which a layer of zinc is deposited on iron.