

# 6

## 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 will start the lesson with 'Science Vocabulary' section by telling the meaning/definition of new terms which are used in the chapter.
- ✧ Now, teacher should define physical changes by giving some examples and performing Activities 2, 3 and 4.
- ✧ The teacher should define chemical changes with examples and performing Activities 6, 7 and 8.
- ✧ The 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.
- ✧ The 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 9.
- ✧ The teacher should discuss various methods to prevent rusting.
- ✧ The teacher should define the process of crystallisation by performing Activity 10.
- ✧ The teacher should also discuss the use of process of crystallisation in everyday life.

- ✧ The teacher should tell the students to solve 'Check Points' 1 and 2.
- ✧ The teacher will help the students to solve the questions given in exercises under the head 'Let's Drill Our Skills' and to complete the flowchart given under the head 'Let's Memorise'.

### **BOOST UP**

- ✧ The teacher should ask students to carry out Activities 1 and 5.
- ✧ 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.