Chapter 4

Matter

LESSON PLAN

SPECIFIC OBJECTIVES

The students will learn about

- matter; air is matter
- water is matter
- classification of matter
- properties of solids, liquids and gases
- change of state
- changes taking place in matter

Teaching Aids

Pictures/charts/models/animation on classification of matter; arrangement of molecules in different physical states of matter; properties of solids, liquids and gases; compressibility of matter; change of state; physical and chemical changes

Teaching Strategy

- Teacher will start the chapter by defining matter and will explain air and water as matter by demonstrating Activities 1, 2 and 3.
- Teacher will discuss classification of matter; physical states of matter; and properties of matter by demonstrating Activities 4, 5, 6, 7 and 8.
- Now, teacher will ask students to solve 'Check Point 1'.
- Teacher will explain properties of solids, liquids and gases by demonstrating Activities 9, 10 and 11.
- Teacher will then explain compressibility of matter by demonstration of Activity 12.
- Teacher will explain process of diffusion by demonstrating Activity 13.
- Now, teacher will explain change of state by changing temperature and applying pressure by demonstrating Activity 14.
- Students should be asked to solve 'Check Point 2'.

- Teacher will then explain changes taking place in matter by discussing physical and chemical changes.
- Teacher will perform Activity 15 related to chemical change and will also explain differences between physical and chemical changes.
- Teacher should ask the students to solve 'Check Point 3'.
- At last, teacher will sum up the lesson by going through the points given under the head 'Wrapping It Up'.
- Teacher will finally help students to answer the questions given under the head 'Test Yourself'.

Boost Up

- Teacher can help students to perform the activities given in chapter.
- Teacher can make students revise new terms given under the head 'Know These Terms'.
- Teacher can encourage students to learn the facts given under the head 'Something More'.
- Teacher can show animations related to the topics taught, if possible.
- Teacher should ask the students to explain why air and water are called matter.
- Students should be asked to define properties of matter, define molecules, kinetic energy, intermolecular force of attraction and intermolecular space.
- Teacher should ask the students to identify the physical states of three things based on their characteristics.
- Teacher should give few examples of changes occurring in surroundings and ask students to identify them as chemical or physical changes.

Expected Learning Outcomes

The students understand and know:

- matter.
- air and water as matter.
- classification, physical states and properties of matter.
- properties of solids, liquids and gases.
- compressibility of matter.
- change of all the three states of matter.
- physical and chemical changes in matter.

Evaluative Questions

The teacher should ask the following questions to evaluate the students.

1. Define matter.
2. Why is air called matter?
3. What is meant by intermolecular forces of attraction?
4. In which state of matter are molecules very closely packed?

5. Which states of matter have a definite shape and a definite volume?
6. Why do gases flow easily?
7. Name two physical and two chemical changes.
8. Name one physical change which is irreversible.