

LESSON PLAN

SPECIFIC OBJECTIVES

The students learn about

- ✧ matter, its three states
- ✧ change of one state of matter into another
- ✧ solution and solutions of three states of matter in liquids

TEACHING AIDS

Pictures/charts/models of different types of molecules of same and different atoms (as given in the chapter); Molecules arranged in solid, liquid and gaseous states (as given in chapter); **Picture/animation** on the process of freezing, melting, evaporation and condensation of water; The process of dissolution of a solid in a liquid; **Samples** of some soluble and insoluble solids in a water, some miscible and immiscible liquids; Soda

LESSON PLAN

- ✧ Teacher will start the lesson with ‘Science Vocabulary’ section by telling the meaning/definition of new terms which are used in the chapter.
- ✧ Now before defining the term ‘matter’, teacher will introduce the terms ‘volume’ and ‘weight’, and explain that anything that takes space and has weight is called matter.
- ✧ With the help of teaching aids, teacher will explain that all matter is made of tiny particles called atoms.
- ✧ With the help of teaching aids, teacher will explain that atoms of a matter unite to form molecules.
- ✧ Now showing pictures/charts/models of arrangement of molecules in solids, liquids and gases and by performing Activities, teacher will explain the three states of matter (as given in chapter).
- ✧ With the help of teaching aids, teacher will explain the process of freezing, melting, evaporation and condensation of water and also tell that some substances such as water can exist in more than one states.

- ✧ Now to evaluate the learning of students about the chapter, teacher will ask them to solve 'Check Point 1'.
- ✧ With the help of teaching aids, teacher will define the terms solute, solvent and solution and explain the process of dissolution of a solid in a liquid (as in chapter).
- ✧ By performing an Activity, teacher will also explain that all solids do not dissolve in water.
- ✧ Teacher will explain the type and formation of different solutions with the help of Activities given with the topic.
- ✧ Teacher will give examples of each type and explain the terms miscible and immiscible liquids.
- ✧ Now, teacher will ask students to solve 'Check Point 2'.
- ✧ The teacher will sum up the chapter by going through the points given under the head 'Wrapping it up'.
- ✧ Finally, the teacher will help students to solve all the questions given in the 'Exercises'.

BOOST UP

- ✧ To define the term volume, teacher should display a cuboidal or rectangular solid and explain that amount of space occupied by it is called its volume.
- ✧ While teaching liquid state of matter, teacher should demonstrate, by pouring same amount of a liquid in two different containers, that liquids do not have a definite shape.
- ✧ Teacher should demonstrate the process of freezing, melting, evaporation and condensation of water while teaching change in the state of matter.
- ✧ Teacher should demonstrate the process of dissolution of a solid in a liquid while teaching the terms solute, solvent and solution.
- ✧ Teacher should show the mixing of two immiscible liquids (oil in water) and two miscible liquids (milk in water) while teaching solution type 'liquids dissolve in liquids'.

EXPECTED LEARNING OUTCOMES

The students understand

- ✧ matter and know its three states.
- ✧ that a matter can change its one state into other.
- ✧ differences between atoms and molecules.
- ✧ the process of dissolution of one substance in other.
- ✧ the solutions of three states of matter, i.e., solid, liquid and gas in liquid.

EVALUATIVE QUESTIONS

The teacher may ask the following questions for evaluating learning and understanding of students:

1. What is volume of an object?
2. What are three states of matter?
3. How are molecules arranged in three states of matter?
4. What is freezing and melting of a substance?
5. What are immiscible and miscible liquids?