

## LESSON PLAN

### SPECIFIC OBJECTIVES

- The students will learn about
- ❖ components of a mixture
  - ❖ need for separation of substances from mixtures
  - ❖ methods of separation of substances from mixtures
  - ❖ soluble and insoluble solids in liquids
  - ❖ soluble and insoluble liquids in liquids
  - ❖ solution
  - ❖ saturated solution
  - ❖ universal solvent

### TEACHING AIDS

Pictures/charts/models/animation on straining of tea leaves; churning of milk; threshing of paddy crop on wooden boards; winnowing; sieving flour and sand; sedimentation, decantation and filtration; gathering of common salt on sea bed; making of saturated solution (all as given in the chapter).

### LESSON PLAN

- ❖ Teacher will start the chapter by going through the points given in 'Know these points before you start' section.
- ❖ Teacher will discuss the components of a mixture, their separation and need for separation of substances from mixtures.
- ❖ Teacher will discuss the methods such as handpicking, threshing, winnowing, sieving used for separating mixtures of two or more solids.
- ❖ Now, teacher will ask students to solve Check Point 1.
- ❖ Teacher will explain the processes of sedimentation and decantation, and filtration used for separating insoluble solids in liquids by performing activities given in the chapter.

- ❖ Teacher will explain separating a mixture of insoluble liquid in liquid by decantation method.
- ❖ Teacher will explain process of evaporation for separating a mixture of soluble solid in liquid by performing the activity given in the chapter.
- ❖ Now, teacher will define solute, solvent, solution and saturated solution.
- ❖ Teacher will explain preparation of saturated solution by demonstrating the activity given in the chapter.
- ❖ Teacher will explain water as universal solvent by performing the activity given in the chapter.
- ❖ Teacher will explain that components of some mixtures are separated by using more than one methods by performing activity given in the chapter.
- ❖ Teacher will discuss the applications of separation of mixtures in everyday life.
- ❖ Now, teacher will ask students to solve Check Point 2.
- ❖ Teacher will make students revise the new terms given under the head 'Know These Terms'.
- ❖ Finally, teacher will help students to solve the questions given in exercises under the head 'Practice Time' and 'Think Zone'.

### BOOST UP

- ❖ Teacher should demonstrate and explain activities given in the chapter.
- ❖ Teacher should discuss the information given under the head 'Something More'.
- ❖ Teacher should discuss the conversation of Annu and Mannu given in between the topics.

### EXPECTED LEARNING OUTCOMES

The students understand and know

- ❖ components of a mixture.
- ❖ different methods used in separating components of a mixture of two or more solids, insoluble solid-liquid, soluble solid-liquid and insoluble liquid-liquid.
- ❖ solution, saturated solution and universal solvent.

### EVALUATIVE QUESTIONS

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

1. Components of which type of mixture are separated by handpicking?
2. Which type of mixture is separated by using a large sieve at a construction site?
3. What is the difference between sedimentation and decantation?
4. Which process is used for separating salt from a mixture of salt and water?
5. Define saturated solution.
6. What is a universal solvent?
7. What is meant by winnowing?