

Chapter 2

Elements and Compounds

LESSON PLAN

SPECIFIC OBJECTIVES

The students will learn about

- ❖ matter and its parts
- ❖ elements, their classification; atoms and symbol of an element
- ❖ compounds and their properties
- ❖ molecule; molecule of an element and compound; formula of a compound

Teaching Aids

Pictures/charts/models/animation on matter, its types; some examples of metals and nonmetals; structure of atom; symbols of elements (old, new as given in the chapter) compounds of some elements; electrolysis of water; chemical formulae of some compounds (as given in the chapter)

Teaching Strategy

- ❖ Teacher will define matter and its categories, i.e., pure substances like elements and compounds, and impure substances like mixtures.
- ❖ Teacher will also define atoms and molecules.
- ❖ Now, teacher will explain elements, their classifications, i.e., metals, nonmetals and metalloids.
- ❖ Teacher will discuss properties of metals, nonmetals and metalloids.
- ❖ Teacher will explain structure of atom of an elements.
- ❖ Now, teacher will ask students to solve 'Check Point 1'.
- ❖ Teacher will discuss the symbols of elements.
- ❖ Teacher will explain the concept of compounds, their properties and constituents of compounds and will demonstrate Activities 1 and 2.
- ❖ Now, teacher will ask students to solve 'Check Point 2'.

- ❖ Teacher will define molecule, molecule of an element, molecule of a compound, i.e., monoatomic, diatomic, triatomic, tetratomic and polyatomic and formula of a compound, showing the number of elements in some compounds.
- ❖ 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 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 call each student one-by-one to tell the definition of matter and properties of a pure substance.
- ❖ Students should be asked to write few elements and also two metals and their properties.
- ❖ Students should be asked to remember the name and symbol of some elements given in Table 2.3 and Table 2.4.
- ❖ Students should be asked to tell one metal and one nonmetal behaving as liquid at room temperature.
- ❖ Students should be asked one-by-one to write one metalloid on the blackboard, and to tell the charge present in proton, neutron and electron.
- ❖ The teacher should ask the students to write the symbol of few elements on the blackboard. He/She should also ask the students to answer the questions related to constituents of compounds, their properties; molecule and molecule of an element, molecule of a compound, formula of a compound; elements present in the compound.

Expected Learning Outcomes

The students understand and know:

- ❖ definition of matter.
- ❖ pure and impure substances.
- ❖ elements, their types, i.e., metals, nonmetals and their properties, metalloids and noble gases.
- ❖ atoms and symbols of elements.
- ❖ compounds and their properties.
- ❖ molecule and molecule of an element.
- ❖ formula of a compound.

Evaluative Questions

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

1. What is a pure substance? Write its different types.
2. Is mixture an impure substance?
3. Name one liquid nonmetal.
4. Define metalloid.
5. Write the names of two noble gases.
6. Mention the charges present in all three subparticles.
7. Name the elements present in sodium chloride.
8. Name the molecule made up of many atoms.