

Chapter 6

Metals and Nonmetals

LESSON PLAN

SPECIFIC OBJECTIVES

The students will learn about

- ❖ physical and chemical properties of metals and nonmetals
- ❖ methods to prevent rusting
- ❖ uses of metals and nonmetals
- ❖ metalloids and their uses
- ❖ alloy, its compositions, properties and uses

Teaching Aids

Pictures/charts/models/animation on physical and chemical properties of metals and nonmetals (as described in the chapter); methods to prevent rusting; comparison of properties of metals and nonmetals; uses of metals and nonmetals; metalloids and their uses; some alloys, their composition, properties and uses (as given in the chapter)

Teaching Strategy

- ❖ Teacher will start the chapter by differentiating elements into metals and nonmetals and will explain physical properties of metals and nonmetals by demonstrating Activities 1, 2, 3, 4, 5 and 6.
- ❖ Teacher will ask the students to solve 'Check Point 1'.
- ❖ Now, teacher will explain chemical properties of metals and nonmetals and will discuss rusting in detail by demonstrating Activities 7, 8, 9 and 10.
- ❖ Teacher will compare properties of metals and nonmetals.
- ❖ Now, teacher will ask the students to solve 'Check Point 2'.
- ❖ Teacher will discuss uses of some metals and nonmetals (as given in the chapter).
- ❖ Teacher will explain metalloids and their uses.
- ❖ Teacher will discuss some alloys, their composition, properties and uses.

- ❖ Now, teacher will 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.
- ❖ Students should also be asked to know the number of valence electrons of metals and nonmetals, and formation of ions when metals or nonmetals lose or gain electrons.
- ❖ Students should be encouraged to learn methods used to prevent rusting.

Expected Learning Outcomes

The students understand and know:

- ❖ physical and chemical properties of metals and nonmetals.
- ❖ conditions necessary for rusting to occur and methods to prevent rusting.
- ❖ uses of metals and nonmetals.
- ❖ metalloids and uses of metalloids.
- ❖ some alloys, their composition, properties and uses.

Evaluative Questions

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

1. Name two nonmetals which are shiny.
2. Name the most ductile metal.
3. What is meant by malleability?
4. Name one nonmetal which is a good conductor of electricity.
5. In which physical state is bromine found?
6. Define metalloid.
7. Write one use of metalloid antimony.
8. Name the elements present in alloy stainless steel.