# **Introduction to Magnetism**

## **LESSON PLAN**

## SPECIFIC OBJECTIVES

The students will learn about

- discovery of magnet
- magnet and its different shapes
- magnetic and nonmagnetic materials
- properties of magnets
- two poles of a magnet
- precautions while handling magnets

#### TEACHING AIDS

**Pictures/charts/models/animation** on magnets of different shapes; a bar magnet showing north and south poles; magnetic compass; magnetic crane; magnetic poles of the earth; keepers; applications of magnets in different devices – ATM card, credit card, etc.

#### **LESSON PLAN**

- ♦ The teacher will start the chapter with Gear Up and will discus with the students the questions asked in the section.
- ♦ Now, teacher should discuss the discovery of magnet.
- ♦ Teacher should define a magnet and tell the differences between artificial and natural magnets.
- ♦ The teacher should teach the students about different shapes of magnets.
- ♦ Teacher should explain the magnetic and nonmagnetic materials with the help of Activity 1.
- ♦ Teacher should discuss to check the presence of iron particles in soil or sand by performing Activity 2.
- ♦ The teacher should explain different properties of magnets by performing Activities 3, 4, 6, 7, 10 and 11 given in the chapter.

- ♦ Teacher should explain the structure and applications of magnetic compass and demonstrate making of magnetic compass with the help of Activity 9.
- ♦ The teacher should discuss how to magnetise an iron bar by performing Activity 8.
- ♦ The teacher should explain the magnetic behaviour of the earth due to magnetic materials inside its core.
- ❖ Teacher should also discuss precautions taken while handling magnets.
- ♦ Teacher should discuss the various uses of magnets.
- Students should be asked to learn the ways to take care of magnets. They should be asked to learn the facts related to magnets given in screen at page 108.
- ♦ Students should be asked to solve Check Points 1, 2 and 3.
- ♦ At last, the teacher will sum up the lesson by going through the points given under the head 'Wrap Up Now'.
- ♦ The teacher will help the students to solve the questions given in exercises under the head 'Practice Time' and will also discuss the topics given under the head 'Formative Tasks'.

## **BOOST UP**

The teacher should divide the students into two groups A and B and call one student from each group to write one magnetic substance and one nonmagnetic substance on the board. The group, who will give maximum correct answers, will be declared as a winner.

# EXPECTED LEARNING OUTCOMES

The students understand and know the

- discovery of magnet and its uses.
- properties of magnets.
- ♦ differences between magnetic and nonmagnetic materials.
- ♦ care of magnet while using and when not using.
- magnetic behaviour of the earth.

## **EVALUATIVE QUESTIONS**

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

- **1.** What is meant by a magnet?
- **2.** Which materials are easily attracted by a magnet?
- 3. Mention four types of magnets having different shapes.
- 4. Write the differences between magnetic and nonmagnetic materials.
- **5.** How can you say that magnetic poles always exist in pairs?
- **6.** What does a magnetic compass consist of?
- 7. Mention four uses of magnets.