

3

Rocks and Minerals

LESSON PLAN

SPECIFIC OBJECTIVES

The students learn about

- ✧ the rocky nature of the earth
- ✧ the types of rocks and their features
- ✧ the minerals and their types
- ✧ underground resources

TEACHING AIDS

Pictures/animation on formation of igneous rocks, sedimentary rocks and metamorphic rocks; samples/pictures of various types of igneous, sedimentary and metamorphic rocks; pictures of some metallic and non-metallic minerals (as given in chapter), pictures/animation on the formation of coal, petroleum; picture of an oil refinery, fossil fuels—coal, petroleum; CNG gas station, vehicles run by CNG

LESSON PLAN

- ✧ Teacher will start the chapter with 'Warm Up' section giving brief idea of rocks and minerals from the earth.
- ✧ Now, teacher will explain the rocky nature of the earth that it contains a large number of valuable minerals in different forms.
- ✧ Teacher will define the three types of rocks and with the help of teaching aids, explain their formation (as given in chapter).
- ✧ With the help of teaching aids, teacher will explain the features of various kinds of rocks (as given in chapter).
- ✧ Now, to check the learning of students about the topic, teacher will ask students to solve 'Checkpoint 1'.
- ✧ Teacher will define the terms 'mineral' and 'ore' and with the help of suitable examples, will explain the features of metallic and nonmetallic minerals (as given in chapter).
- ✧ Now, with the help of teaching aids, teacher will explain coal and petroleum are underground resources, how they were formed and how petroleum is purified.
- ✧ With the help of teaching aids, teacher will discuss some petroleum products.
- ✧ Now, teacher will ask the students to solve 'Checkpoint 2'.
- ✧ The teacher will sum up the chapter by going through the points given under the head 'At One Go'.
- ✧ Finally, the teacher will help students to solve all the exercises given under the head 'Check Your Study'.

BOOST UP

- ✧ To make the students understand how layers of sedimentary rocks are cemented, teacher should perform the Activity 1 given in the chapter.
- ✧ Students should be encouraged to explore the materials used in the making of famous monuments such as Taj Mahal, Red Fort, etc.

EXPECTED LEARNING OUTCOMES

The students

- ✧ understand the rocky nature of the earth.
- ✧ know the formation and types of rocks.
- ✧ know about minerals and their types.
- ✧ know about coal and petroleum and their uses.

EVALUATIVE QUESTIONS

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

1. Which planet is called 'the third rock from the sun'?
2. Name the ores of iron, copper and aluminium.
3. Which rocks are called fire rocks?
4. How are layers of sedimentary rocks held together?
5. Which types of minerals are used in making of gemstones?
6. Which type of rock is the coal?

