

**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 lesson with ‘Science Vocabulary’ section by telling the meaning/definition of new terms which are used in the chapter.
- ✧ 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 ‘Check Point 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 fossil fuels (coal, petroleum and natural gas) and how they were formed.
- ✧ With the help of teaching aids, teacher will discuss some petroleum products.

- ✧ Teacher will also discuss about the conservation of fossil fuels.
- ✧ Now, teacher will ask the students to solve 'Check Point 2'.
- ✧ The teacher will sum up the chapter by going through the points given under the head 'Wrapping it up'.
- ✧ Finally, the teacher will help students to solve all the questions given in the 'Exercises'.

### **BOOST UP**

- ✧ To make the students understand how layers of sedimentary rocks are cemented, teacher should perform the Activity 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?