

# Rocks, Minerals And Soils

# 14

Our Earth is made of land and water.

The surface of the land is made of **soil** and **rocks**. Rock is hard matter. Beneath the rocks are found minerals.

Some important minerals are **coal**, **petroleum**, **iron**, **mica**, **quartz**, **graphite** and **diamonds**.

## Do You Know ?

Graphite is one of the softest mineral and diamond is the hardest mineral.



*Coal*



*Mica*



*Diamond*



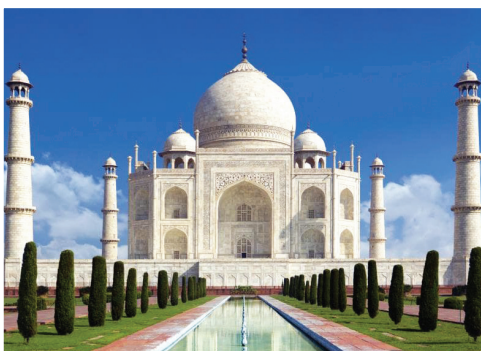
*Granite*



*Slate*

## HARD ROCKS

Hard rocks are mostly used for building construction.



**Marble** : Marble is a hard and smooth rock. It is used for making floors, buildings and statues. Marble is of many colours, white, black, green and pink. The famous Taj Mahal in Agra is made of white marble.

**Granite** : Granite is very hard rock. It is used for making floors and statues. It is also used for kitchen slabs.

**Sandstone** : Sandstone is a hard rock. It is red in colour. It is used to make buildings.

Red Fort of Agra and Delhi are made of Sandstone.





**Diamond** : Diamond is the hardest rock. It is the most expensive rock. It is glassy and shining. It is used to cut glass and in making jewellery.

## Test your Self

1. The Taj Mahal is made up of white \_\_\_\_\_.
2. Granite is a \_\_\_\_\_ rock.

## SOFT ROCKS

**Graphite** : Graphite is a soft rock. It is used for making leads of pencils. It is black in colour.

**Coal** : Coal is a soft rock. It is used for burning.

**Talc** : Talc is a very soft rock. It is used for making talcum powder. Talc is white in colour.

**Slate** : Slate is also a soft rock. It is used for making blackboards and roofs of the houses.

**Chalk** : Chalk is a soft rock. It is used to write on slate and blackboard.



Raw garnet



Raw ruby



Garnet



Raw sapphire



Sapphire



Emerald



Raw emerald



Ruby

### Do You Know ?

Scientists who study rocks are called geologists.

## MINERALS

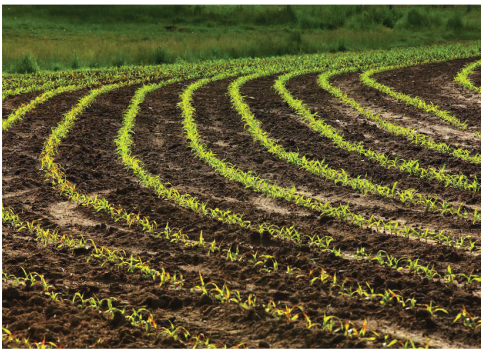
All rocks are made of **minerals**. Most rocks are made of two or more minerals. Most rocks contain **mica** and **quartz**. Other common minerals are **talc**, **graphite**, **china clay** and **diamond**. Talc is the softest mineral. It is used in making talcum powder.



*light bulbs are made of tungsten*

China clay is also a soft mineral. It is used in making pottery.

Graphite is a soft grey coloured mineral. It is used in making lead for pencils.



*Crop in soil*

## SOIL

Soil is the top layer of land.

It is made of fine particles of rocks.

Different kinds of soil are made of very fine particles of different kinds of rocks.

Plants grow in the soil.

Different kinds of plants grow in different kinds of soil. Crops are grown in soil.

Different soils are required for different crops.

## KINDS OF SOIL

1. **Sandy Soil** : It is coarse. It dries up soon after watering. It is available in grey and yellow colours.



*Sandy Soil*



*Clay soil*



*Loam Soil*

2. **Clay** : Clay is a sticky soil. It is dark-coloured. It is used in making earthen vessels.

3. **Loam** : It is a mixture of sandy soil and clay. It does not dry up soon. It also does not remain wet for too long. Thus it has qualities of both sandy soil and clay. Plants grow best in loam.

### Test your Self

1. Name two colours of sandy soil.

2. What is the colour of clay ?

### Point to Remember

- We find rocks and minerals on the Earth.
- The Earth is made of hard matter called rocks.
- Rocks are different from one another in shape, size and colour.
- Marble, granite, diamond and sand stone are rocks.
- All the rocks are made of minerals.
- Talc, graphite, china clay and diamond are minerals.
- Soil is very important for us because plants grow in it.



### Know the Keywords :

- Rocks : Hard solid material that forms part of the surface of the Earth.  
Mineral : Useful substances found in rocks.  
Marble : Rock which is used to make buildings and statues.  
Diamond : Hardest rock.  
Graphite : Crystalline form of carbon.

## EXERCISE TIME

### A. Multiple choice questions (MCQs).

Tick (✓) the correct option :

1. \_\_\_\_\_ is a soft black rock.

a. Graphite

b. Chalk

c. Slate

2. \_\_\_\_\_ is used for cutting glass.

a. Chalk

b. Graphite

c. Diamond

3. \_\_\_\_\_ is a soft white rock.

a. Slate

b. Chalk

c. Sandstone

4. \_\_\_\_\_ is a hard and beautiful rock.

a. Marble

b. Granite

c. Sandstone

**B. Tick (✓) the correct and cross (X) the incorrect ones :**

1. The Red Fort is made of marble.

2. Diamond is the most expensive rock.

3. Talc is used to make talcum powder.

4. China clay is used to make pottery.

**C. Fill in the blanks with the given words :**

limestone, hardest, slate, smooth

1. \_\_\_\_\_ is used to make a black-boards.

2. \_\_\_\_\_ is used to make cement.

3. Diamond is the \_\_\_\_\_ rock.

4. Marble is a \_\_\_\_\_ rock.

**D. Differentiate between them :**

1. Rocks and soil

2. Soil and pebbles

3. Talc and diamond

4. Minerals and gems

**E. Answer the following questions :**

1. What is a rock?

\_\_\_\_\_

2. What is a mineral?

\_\_\_\_\_

3. Which is the hardest mineral?

\_\_\_\_\_

4. What is soil?

\_\_\_\_\_



## Creative Work

- Collect stones of different shapes and sizes. Colour and decorate them with the things glitter, bindies, buttons, sequins, wool etc. available around you. Gift them to your parents, grandparents or the person you like the most.