

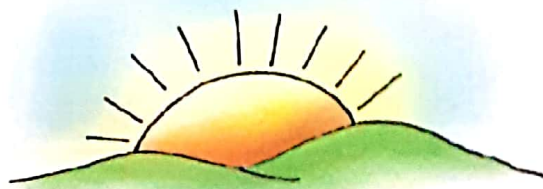
### 3. NATURAL RESOURCES



**Resources** that are drawn from nature are called the natural resources. The air we breathe, the water in our rivers, the soils, minerals all are called the natural resources.

In ancient times, man did not know how to use the different gifts of nature. Gradually, he learnt to convert them into useful resources. For example, Solar energy, waterfalls are gifts of nature. The force of falling water is used to generate electricity. Therefore, waterfalls have become a valuable resource.

**Classification:** Natural resources are classified into different groups based on origin. Resources can be biotic and abiotic.



*Deforestation*

## BIOTIC RESOURCES

Biotic or inexhaustible natural resources consist of living things. These resources continue to reproduce and regenerate as long as the conditions remain favourable. All biotic resources are renewable and hence, inexhaustible.

## ABIOTIC RESOURCES

Abiotic or exhaustible resources consist of non-living things. These resources in general are **non-renewable**. While some abiotic resources like land, water, air are **inexhaustible**, others like mineral and fossil fuels are **exhaustible**.

**Uses:** Natural resources, for example raw material, are very important for all industries. Since most of the raw materials are **non-renewable**, we need to use them carefully. If we don't use them carefully, they would soon be exhausted.

Some natural resources can be used directly, while others need to be processed before use. For example, land, air and water can be used directly. However, we need to separate minerals from their ores before using them. Similarly, petroleum taken out from the earth is in a crude form it is refined and turned into petrol, diesel, kerosene, etc. These products are then used to be in homes and industries.

The demand for natural resources is rising day by day due to the growing population. Scientists are now trying to find out resources and their uses. One such resource is solar energy. Man is trying to tap this energy for many uses. But the cost of tapping solar energy is still very high.

Research is going on to make it affordable. When it happens, most of the home appliances will run on solar energy. Therefore, solar energy is called the "**resource of the future**". [ India has a solar plant at Madhapur near Bhuj ]



**Conservation:** Developed and rich countries use natural resources much more than poor and underdeveloped countries. But, overuse and misuse of natural resources can spoil our environment. For example, cutting of forest and trees has endangered many plants and animals. Some species are already extinct.

If growth of population and misuse of resources are not checked, many species would be threatened and may suffer extinction. The need of the hour is to:

- (1) Use the natural resources judiciously.
- (2) Tap the inexhaustible sources of energy for different uses, like solar energy, biogas etc.
- (3) Preserve the exhaustible resources.

We must encourage afforestation. We must also learn to wisely use and conserve these valuable resources, so that we can have a safe future on the Earth.

### AMAZING FACT



- Forests are renewable resource. India has 752.3 lakh hectares of area notified as forests.

### Glossary



**Resource** - Materials that fulfill human needs.

**Fossil fuel** - Substances that produce energy such as coal.

### Quick Glance



- ❖ Resources that are drawn from Nature are called natural Resources.
- ❖ Natural resources can be classified into biotic and abiotic resources.
- ❖ All biotic resources are renewable and hence inexhaustible.
- ❖ Solar energy is called the resource of the future.
- ❖ Overuse and misuse of resources can spoil our environment.
- † We must learn to wisely use and conserve natural resources so that we have a safe future on the Earth.

## Question Bag

### A. BRAIN GAME

Guess my name?

1. I am a valuable resource.
2. I am called the resource of the future.
3. I am a renewable resource.
4. I am a resource that can be used directly.

### B. Multiple Choice Questions:

1. Biotic resources are  
(a) renewable (b) non-renewable (c) valuable
2. Cutting of forest and trees has endangered  
(a) plants (b) animals (c) both a & b
3. We must encourage \_\_\_\_\_ programmes  
(a) deforestation (b) afforestation (c) conservation

### C. Fill in the blanks :

1. The force of falling water is used to generate \_\_\_\_\_.
2. Resources drawn from nature are called \_\_\_\_\_.
3. We must \_\_\_\_\_ valuable resources.
4. Land, water and air are \_\_\_\_\_ resources.

### D. Answer the following questions :

1. What do you mean by natural resources?
2. What is the difference between biotic and abiotic resources?
3. What are inexhaustible resources? Give an example.
4. How can we save our environment?
5. Why is solar energy called the 'resource of the future'?

## REALITY CHECK

List the petroleum products we use.

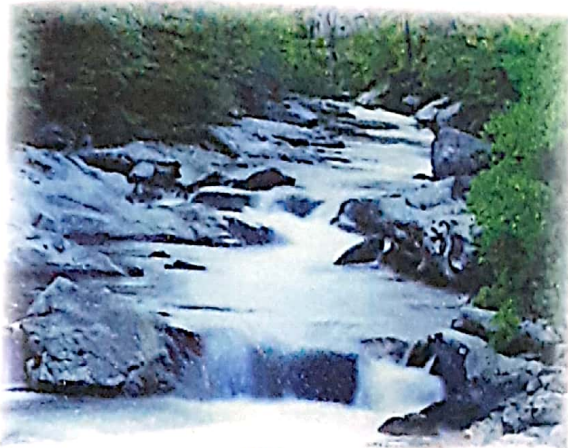
### Petroleum Products



## 4. VARIOUS LANDFORMS



*Grassland*



*River*



*Agriculture*

You have already read that the Earth's surface is covered by land and water bodies and 71 percent of the Earth's surface is water. Various landforms are found on the Earth because the surface of the Earth is not uniform everywhere. Some parts are raised while some are flat. This variation in the landforms is called **relief**. Landform on the Earth includes plains, plateaus, deserts, mountains and river valleys.

### PLAINS

Flat and low-lying land surfaces are called **plains**. Plains are also called **lowlands**. The plains have neither highest nor lowest points because of their flatness. However, the plains may be slightly sloppy.

Rivers have played an important role in the formation of most of the plains of the world. Rivers bring sand and silt from highlands to low-lying lands. When these rivers slow down, the sand and silt remain deposited and plains are formed.

Plains are usually thickly populated. It is always easier to construct roads, railway tracks, aerodromes, industries, canals, on the plains. Most big cities and towns are, therefore, found on the plains. The plains in the river valleys are very fertile and thus suitable for agriculture. Most ancient civilizations came up in the plains of river valleys.

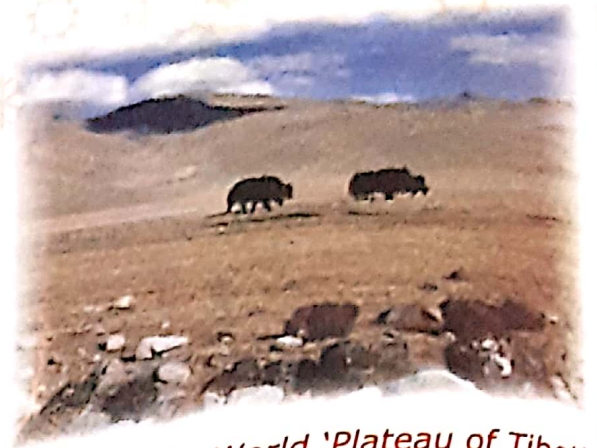


## PLATEAUS

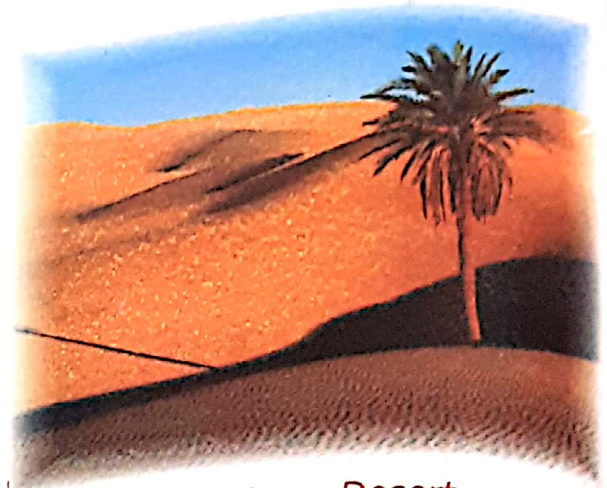
Highlands with flat tops are called **plateaus** or **tableland**. The sides of plateaus have steep slopes as the plateau rises abruptly from the surrounding areas. More often, rivers or streams cut the surfaces of plateaus.

All the continents have plateaus. Large part of Australia, Asia, Africa and North America is covered by plateaus. Some plateaus like the Deccan Plateau are very large in view of their area coverage. Plateaus are rich in mineral deposits. So, mining is an important occupation in the plateau regions. Grasslands in the plateaus are mostly used for cattle and sheep rearing.

Most plateaus are found in dry regions having cold climate. The plateau of Tibet is the highest plateau in the world. It is known as the "Roof of the World".



*Roof of the World 'Plateau of Tibet'*



*Sahara Desert*

## DESERTS

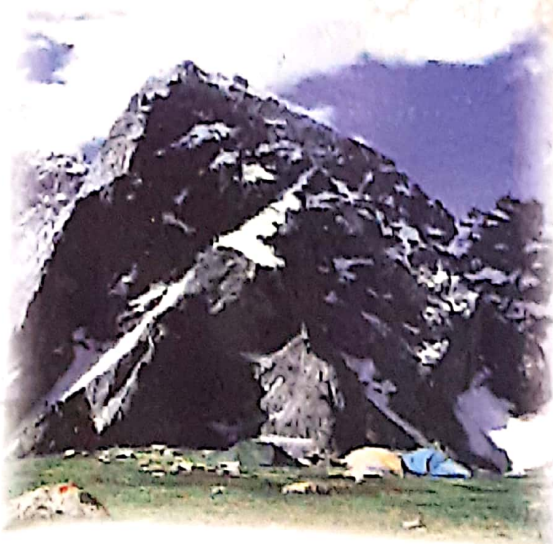
**Deserts** are large sandy areas which support little or no vegetation. Deserts may be either hot or cold. Hot deserts have little or no rainfall, and hot days and cold nights. More often, high speed winds and dust storms occur and sand dunes are formed in hot deserts. Cold deserts are at high altitude. Due to a very low temperature and snow fall, there is almost no vegetation in these deserts.

Deserts are mostly located on the Western sides of the continents having arid and semi-arid climate. The largest hot desert in the world is the Sahara desert in Africa and the largest cold desert is Antarctica.

## MOUNTAINS

The highest landforms on the surface of the Earth are called **mountains**. These landforms are more than 900 metres above the sea level having steep slopes. Mountains have different shapes and heights depending upon their age. The older they are, the shorter they are. Very high mountains have conical peaks while low





*Mountain*



*River Valleys*

mountains have rounded peaks. The **Aravallis** are the old mountains and the **Himalayas** are the young mountains. So, the Aravallis are low mountains with rounded peaks while Himalayas are high having conical peaks. When several mountains join together, they form a chain or range like the **Rockies in North America**. Some mountains have a series of parallel ranges that extend hundreds of kilometers eg the Himalayas.

Mountainous regions are thinly populated because there are very few flat lands. Moreover, these regions are not suitable for large-scale agriculture due to thin soil cover and climate conditions. Besides, there is difficulty in transportation in these regions. However, mountains help cool the water vapour in the air that brings rain.

Mountains also stand as a barrier against hot and cold winds. The cool climate of mountains attracts tourists in the summer. Mountainous regions are the store house of minerals. Mountain rocks are widely used as building materials. Mountains cover 24% of the land area

on the Earth. The river coming from the mountains provide water for irrigation.

### **RIVER VALLEYS**

The valleys carved out by the rivers and streams are called **river valleys**. When it rains, some water seeps through the ground and gets deposited underground. The underground water in higher areas flows towards lower areas sometimes in the form of streams. When many stream join together, a river is formed.

Most rivers originate in the mountains. At the place of origin, the speed of the rivers is very high and so a deep valley is cut and canyons, water falls and rapids are formed. This is the first stage of the river. This stage is called the **upper or the young course**. At this stage, the river carries less water.

The second stage of the river is called the **middle course** or **Mature course**. This stage begins when the river leaves the mountains and enters the plains. At this stage, the valley widens and develops loops, called **meanders**.

The last stage is known as the **lower or the old course**. At this stage, the river joins a bigger water body like a lake or a sea. Hence, the speed of the river is very slow. Most of the rivers form deltas near the mouth or the end point.

### AMAZING FACT



- 30% of the world's population live in mountainous region.
- Asia has the largest mountain-covered area (52% of its total land surface)

### Glossary



**Dune** - A hill or ridge made of sand.

**Canyon** - Deep valley with very steep sides.

**Rapids** - Part of a river where water flows very fast over rocks.

### Quick Glance



- ❖ 71 per cent of the Earth is water.
- ❖ Earth's surface is not uniform everywhere. So various landforms are found on the Earth.
- ❖ Variation in landforms is called relief.
- ❖ Plains are flat and low-lying land surfaces on the Earth.
- ❖ Plateaus or tablelands are highlands with flat tops.
- ❖ Deserts are land areas which support little or no vegetation.
- ❖ Deserts are mostly located on the Western sides of the continents having arid or semi-arid climate.
- ❖ River valleys are valleys carved out by rivers or streams.
- ❖ Mountains are the highest landforms on the surface of the Earth. These landforms are more than 900 metres above the sea level having steep slopes.
- ❖ Mountainous regions are thinly populated because of lack of flat lands.



## Question Bag



### A. BRAIN GAME

Guess my name?

1. I am flat and non-living.
2. I have little or no vegetation.
3. I stand as a barrier against hot and cold winds.
4. I am a valley carved out by rivers.

### B. Multiple Choice Questions:

1. Plains are also called  
(a) Highlands ☐ (b) Lowlands ☐ (c) Tabeland ☐
2. The Sahara desert is located in  
(a) Australia ☐ (b) Antarctic ☐ (c) Africa ☐
3. \_\_\_\_\_ are rich in mineral deposits.  
(a) Plateaus ☐ (b) Plains ☐ (c) Mountains ☐

### C. Fill in the blanks :

1. The highest land forms of the earth are called \_\_\_\_\_.
2. The plateaus of Tibet is the \_\_\_\_\_ plateaus in the world.
3. Desert are mostly located on the \_\_\_\_\_ sides of the continents.

### D. Answer the following questions :

1. What is relief?
2. How do rivers play an important role in the formation of plains?
3. Why are the plains thickly populated?
4. What is "Roof of the World? Why is it called so?
5. Why are the mountainous regions thinly populated?

## REALITY CHECK

Write the names of various landforms. Collect their pictures and paste them in your copy.