



CLASS-VIII

LAND, SOIL AND WATER RESOURCES

SUBJECT : GEOGRAPHY
CHAPTER NUMBER: 02
**CHAPTER NAME : LAND, SOIL AND
WATER RESOURCES**

CHANGING YOUR TOMORROW



Learning Outcomes:-

- To be able to know the location and distribution of soil in India.
- To be able to understand the significance of soil and its impact on agriculture/vegetation of various location.

CONTENTS:-

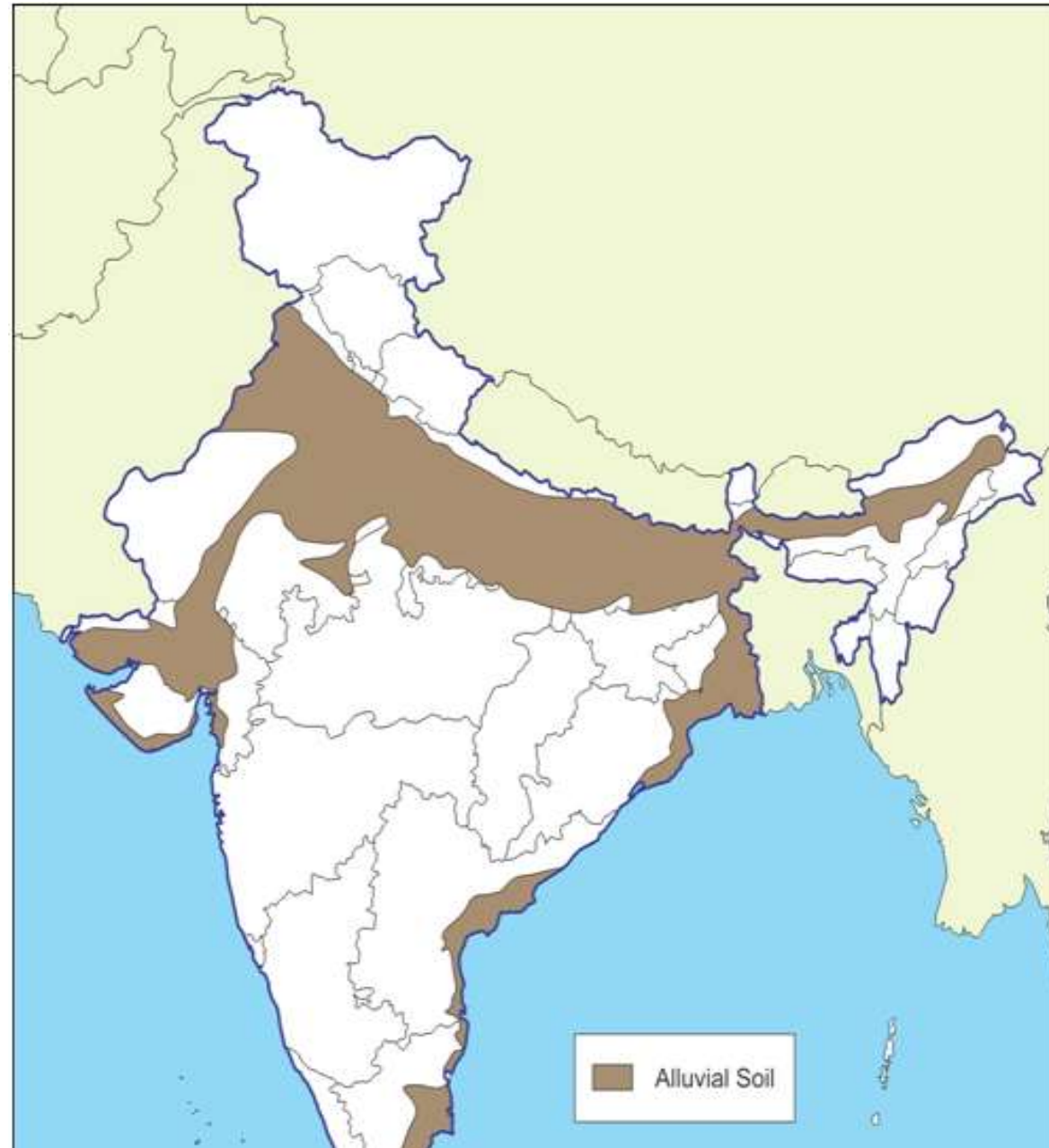
- SOILS OF INDIA
 1. Alluvial Soil
 2. Black Soil
 3. Laterite Soil
 4. Arid Soil
 5. Mountain Soil
 6. Red/Yellow Soil

SOILS OF INDIA

The soils of India are classified into eight different types according to The Indian Council of Agricultural Research (ICAR).



ALLUVIAL SOILS

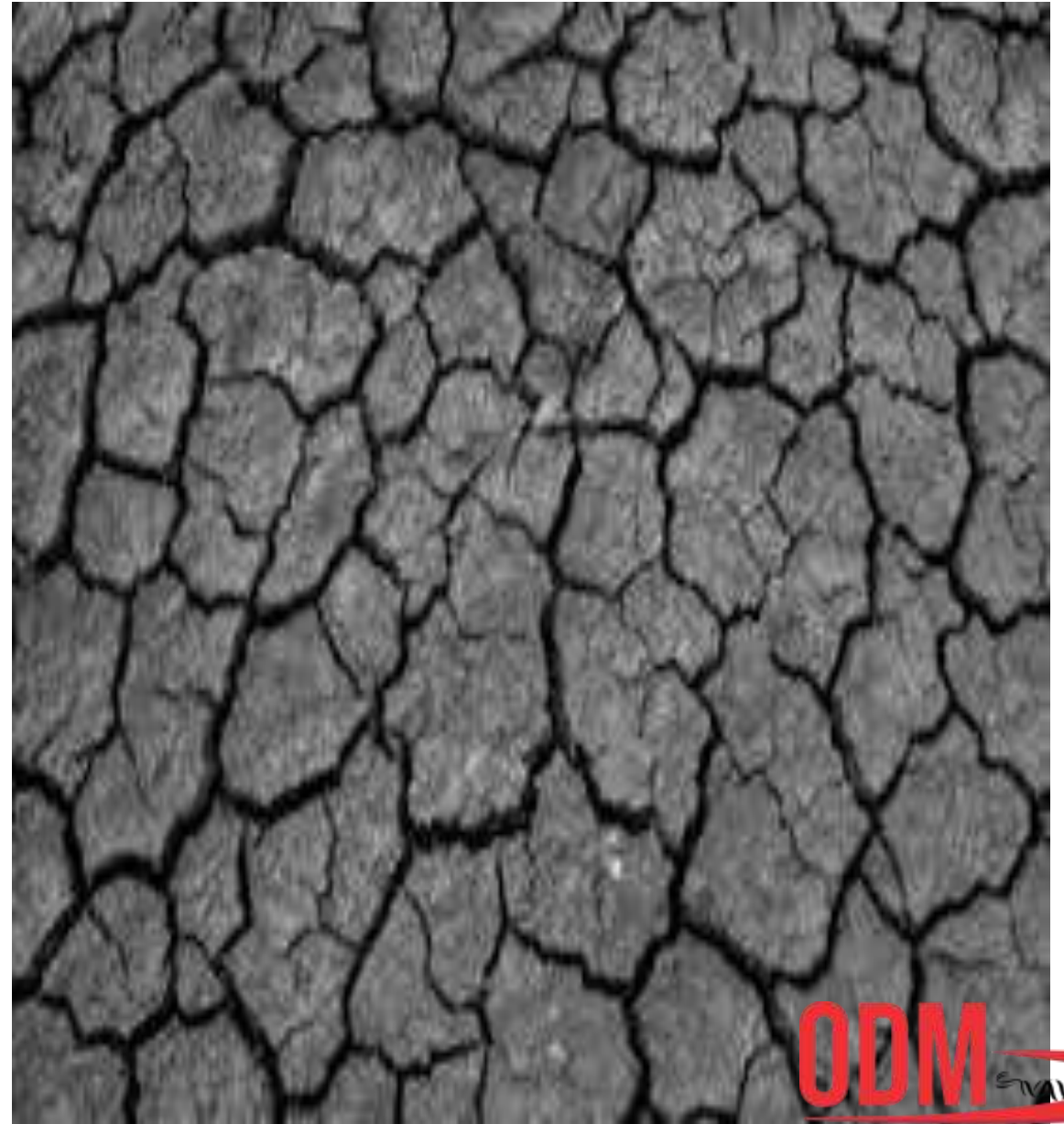


BLACK SOIL



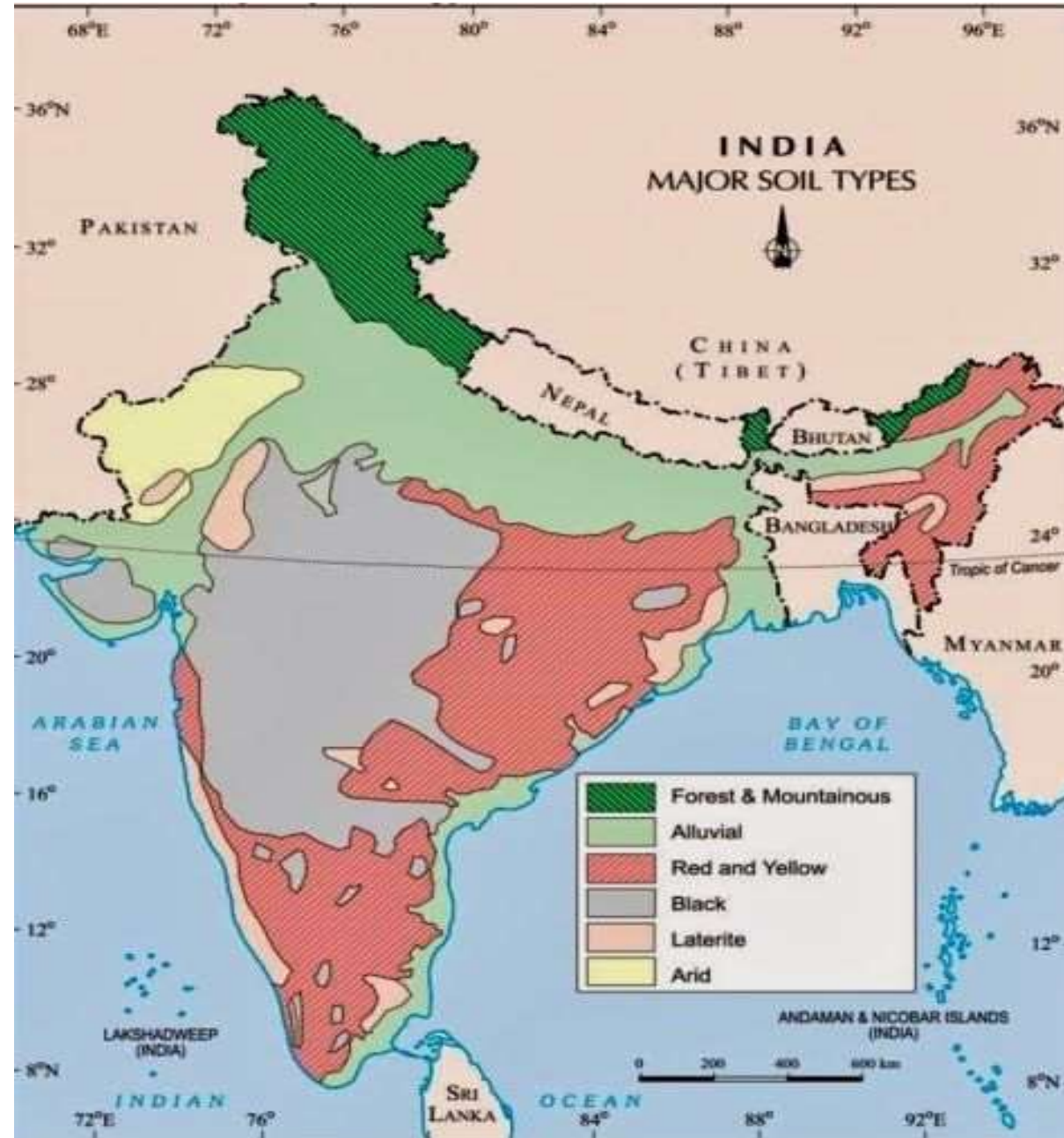


Black Soil

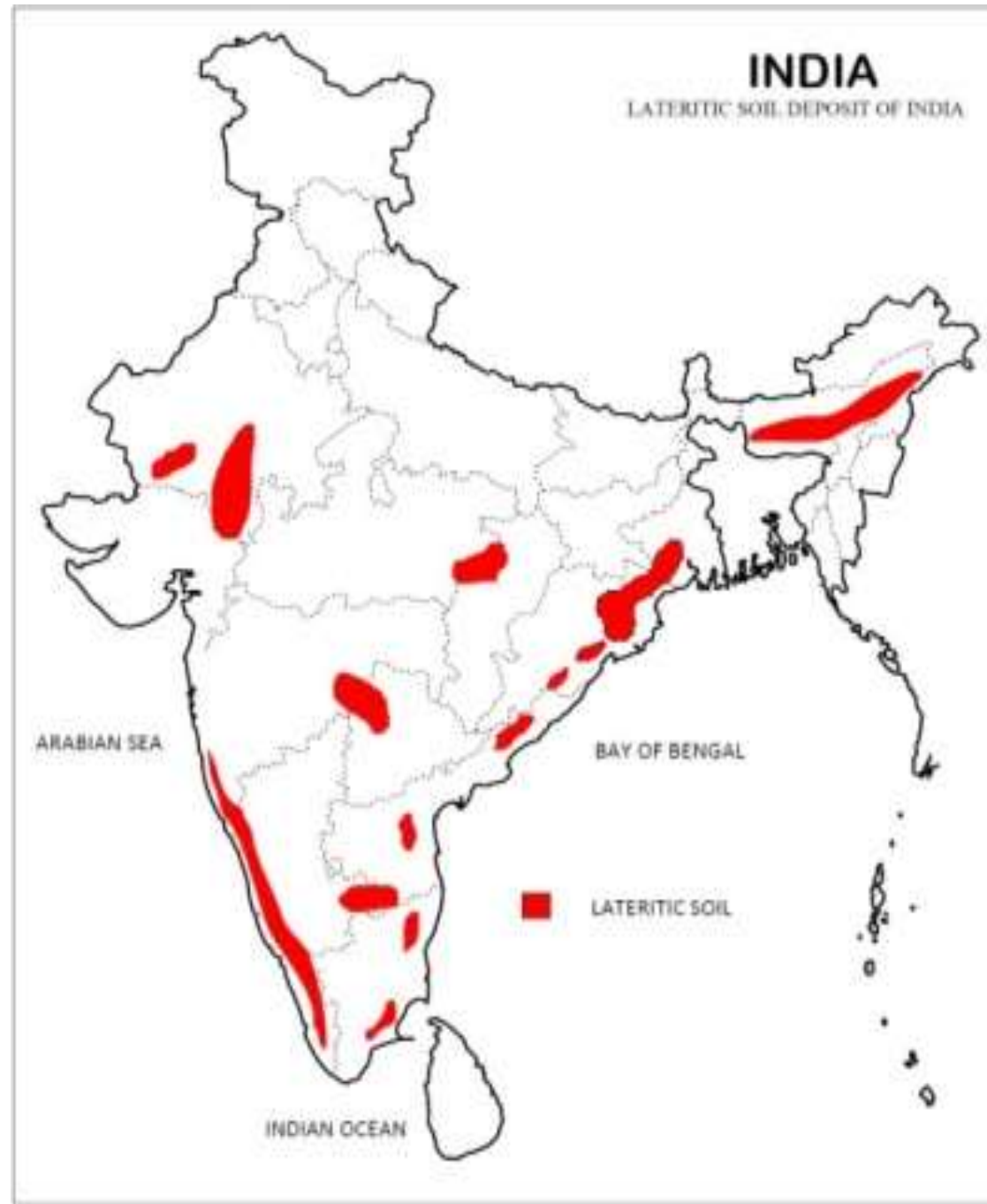


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RED SOILS



LATERITE SOIL



ARID SOILS

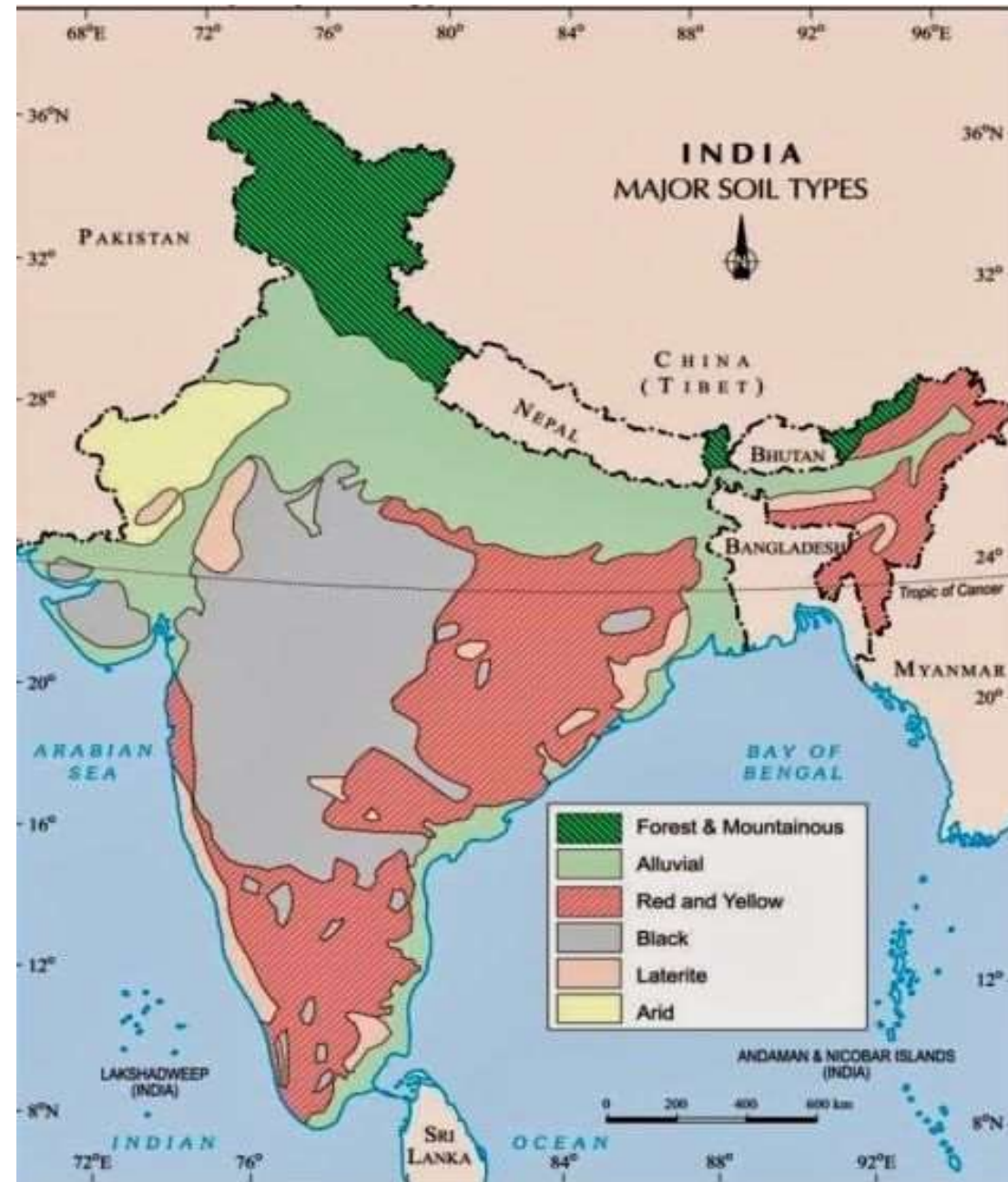
Formed by Weathering of Rocks

Rich in Salt

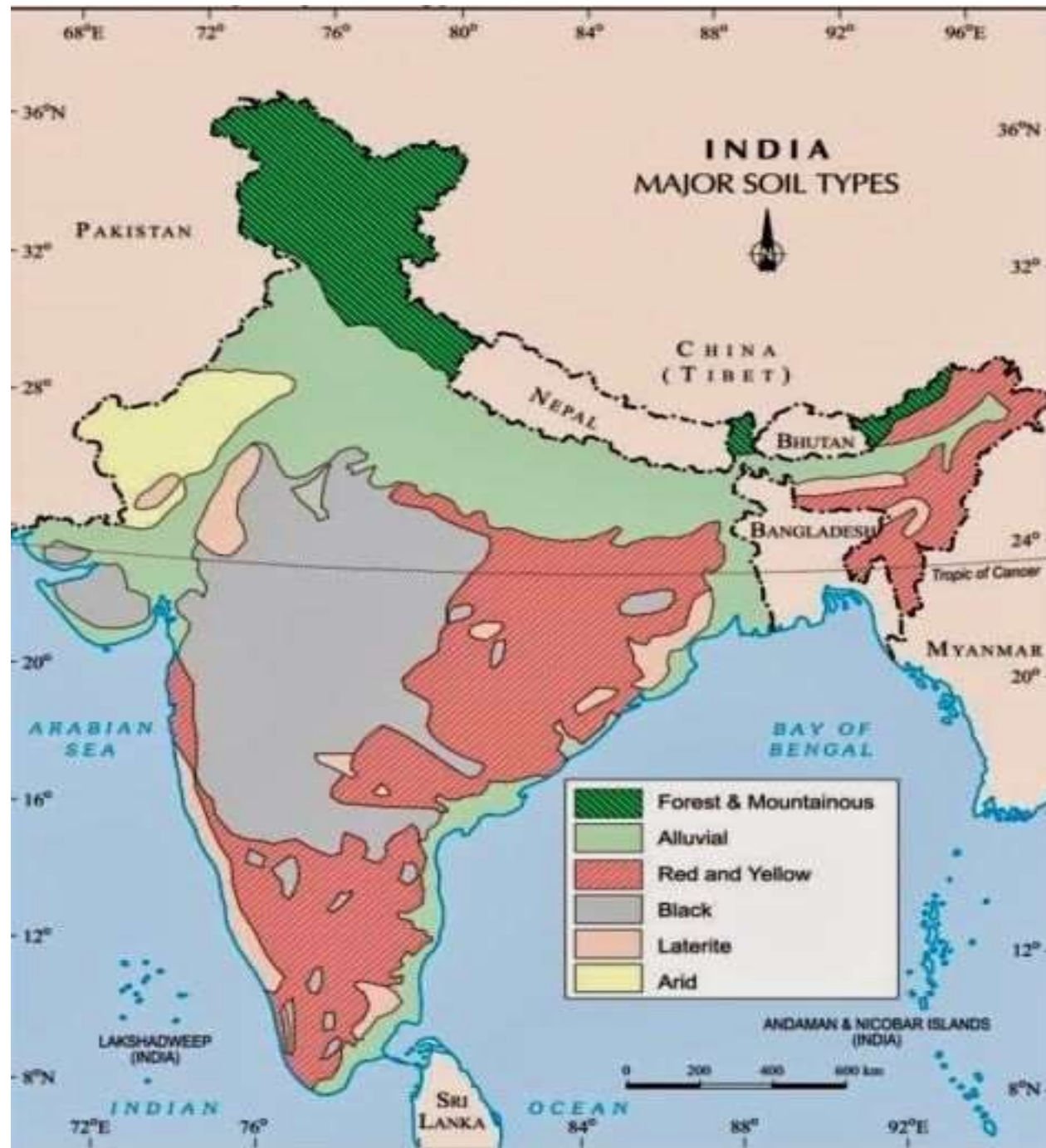
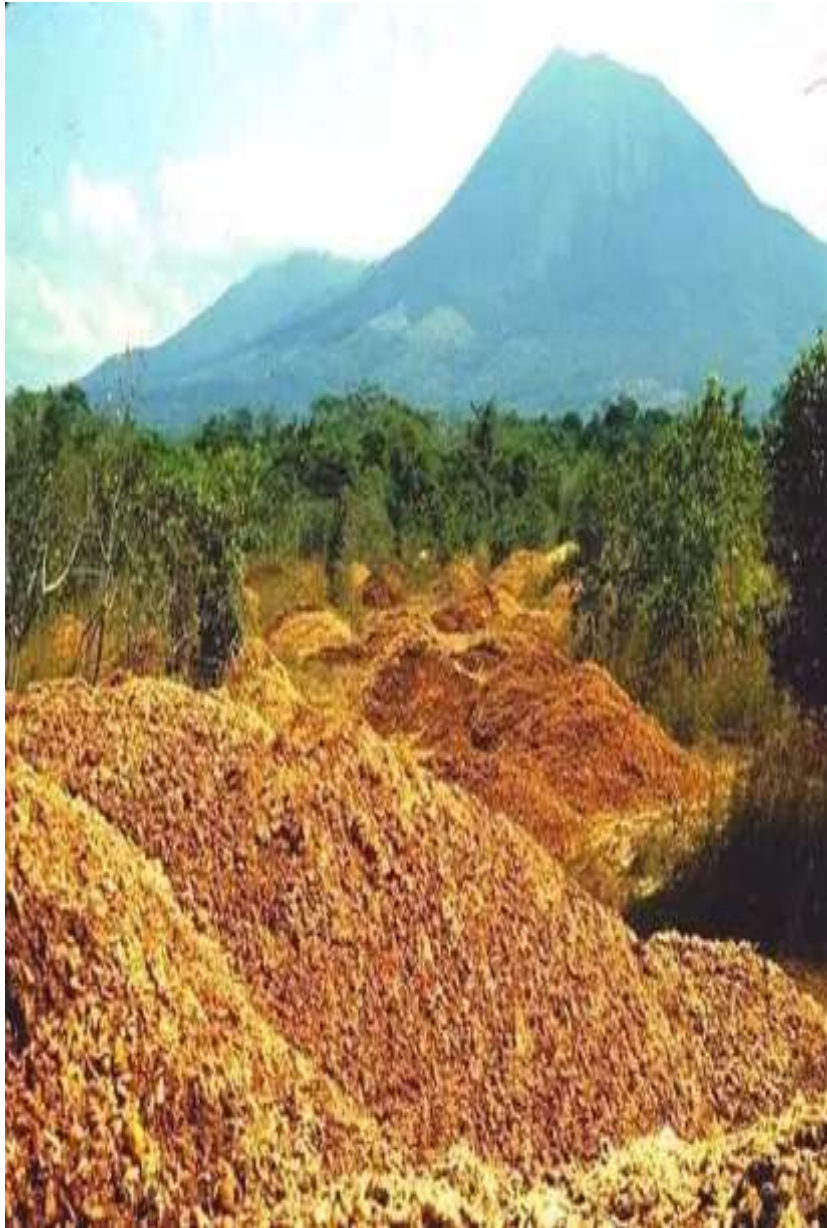
Deficiency in Humus

Dates, Melon, Bajra

Rajasthan, Punjab, Gujrat



FOREST SOILS



TYPES OF INDIAN SOIL :-

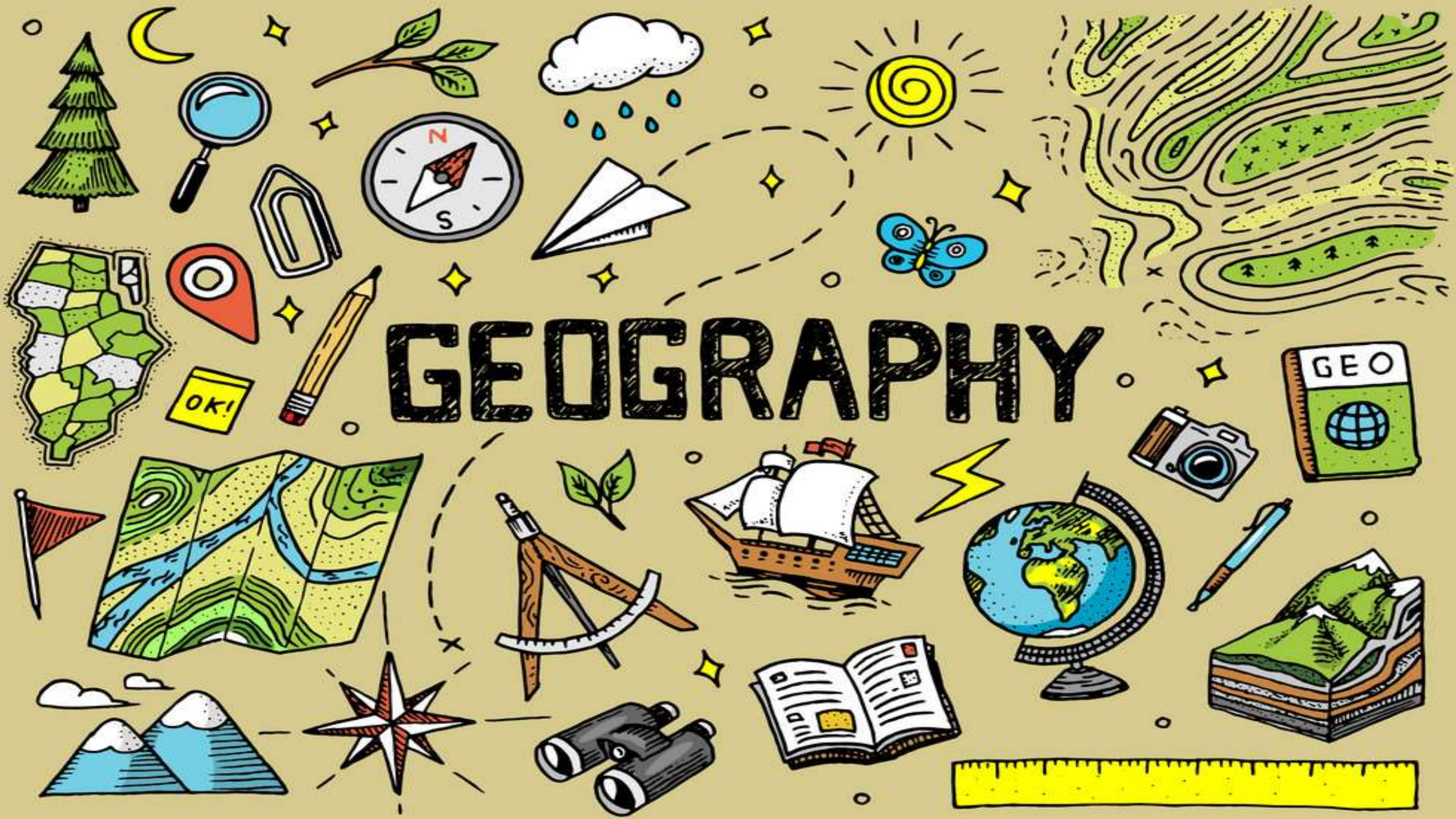
SOIL	FORMATION	FEATURE	AREAS
ALUVIAL SOIL	DEPOSITIONAL ACTION OF RIVERS	MOST FERTILE SUPPORT CULTIVATION	INDO-GANGETIC PLAINS, DELTAIC PLAINS
BLACK SOIL (REGUR/COTTON)	SOLIDIFICATION OF LAVA	SWELLS WHEN WET. DEVELOPES CRACKS WHEN DRY GOOD FOR CEREALS, PULSES, OIL SEEDS, CITRUS FRUITS, VEGETABLES	DECCAN PLATEAU
RED SOIL	DIFFUSION OF METAMORPHIC ROCKS	SANDY, RED IN COLOUR (PRESENCE OF IRON-OXIDES) LESS FERTILE IN UPLANDS	ODISHA, MP, TN, TELANGANA, AP, KERALA
LATERITE SOIL	INTENSE LEACHING (WATER WASHES OUT SOIL NUTRIENTS)	NEED FERTILISERS FOR CULTIVATION USED FOR BRICK MAKING, JUTE, MILLETS, FODDER CROP	MAHARASTRA, KARNATAKA, KERALA, ODISHA, TN, WB
ARID/ SANDY SOIL	DRY REGION, LACK MOISTURE	LOW MOISTURE, LACK VEGETATION COVER, IRRIGATION HELPS IN CULTIVATION	WESTERN RAJASTHAN
PEATY/FOREST SOIL	NATURAL OCCURING FOREST AND REGIONS OF DENSE VEGETATION	RICH IN HUMUS, ORGANIC MATTER,	UTTARANCHAL, J&K, JHARKHAND, BIHAR, N-E States

Home Assignment

1. Mention various soil found in India?
2. Give three features of alluvial soil.
3. Write the distribution of laterite soil in India?
4. Which soil is also known as Regur Soil? Mention features of the same.

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GEOGRAPHY





CLASS-VIII

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CHANGING YOUR TOMORROW



Learning Outcomes:-

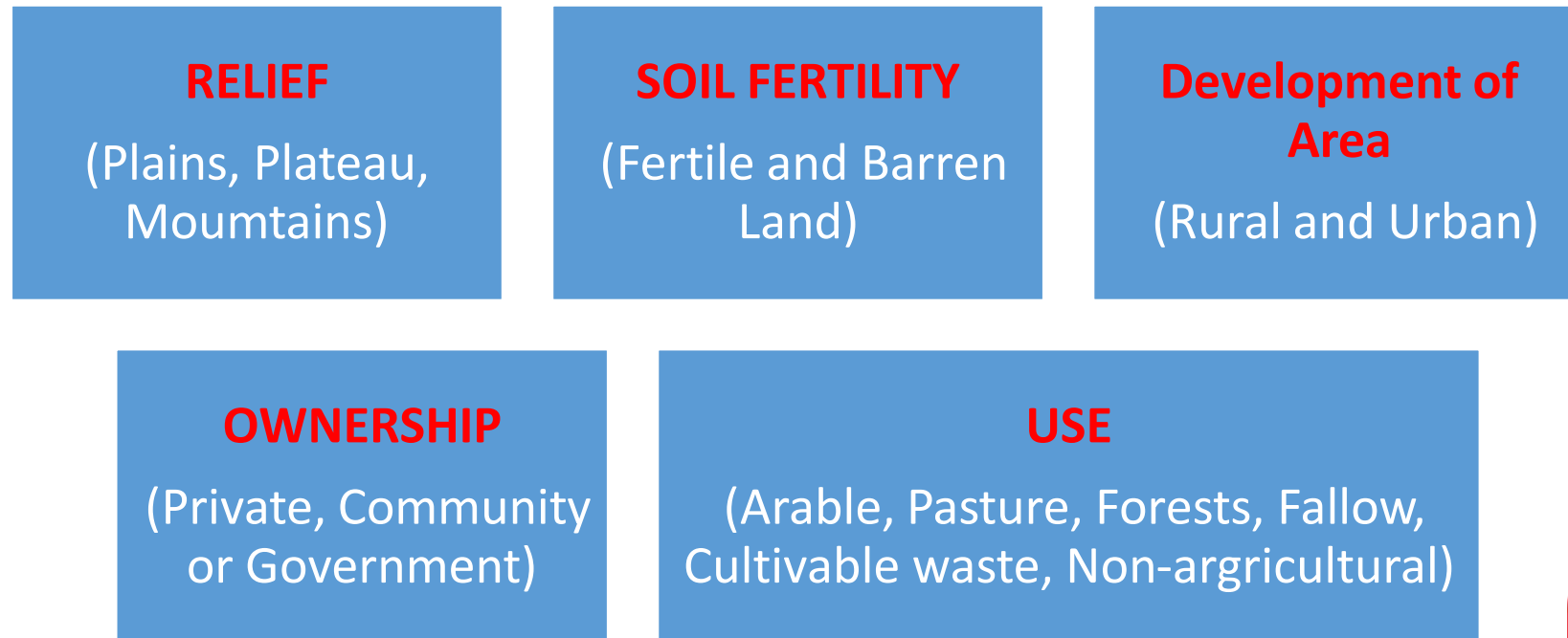
- To be able to know the meaning of resources, their variety, location and distribution.
- To be able to understand the significance of resources & types of land resources, their distribution and utility.

CONTENTS:-

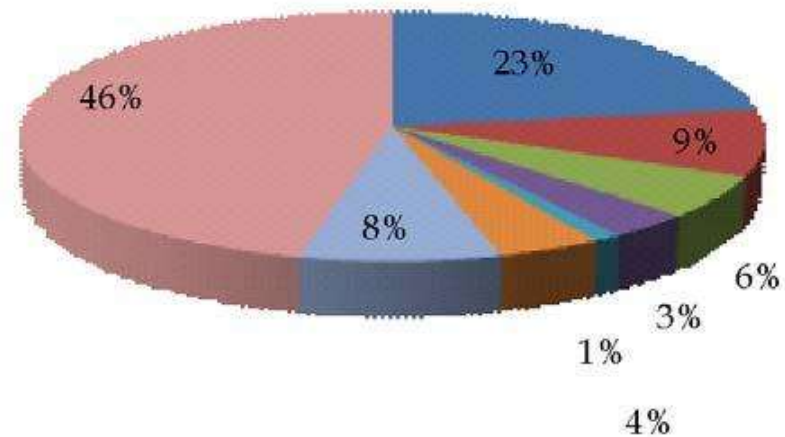
- LAND RESOURCES
- CLASSIFICATION OF LAND
- LAND USE
- LAND DEGRADATION
- CONSERVATION OF LAND RESOURCES

- **Land** is one of the most important Natural resources although it covers only 30% of the total area of the earth's surface.
- Water is the most important natural resource for all life, but only 1% of water is directly useful to humans.
- The growth of vegetation depends mainly on temperature and moisture.
- Soil is closely linked to land, and its formation and use depend on many local factors.
- All plants and animals, big or small, are important to maintain balance in the ecosystem.

- **Land as a Resource.** Land is a very valuable **resource**. It provides food, fiber, wood, medicine and other biological materials needed for food. Land is used for constructing buildings and industries.
- **Classification of Land**



LAND USES :-

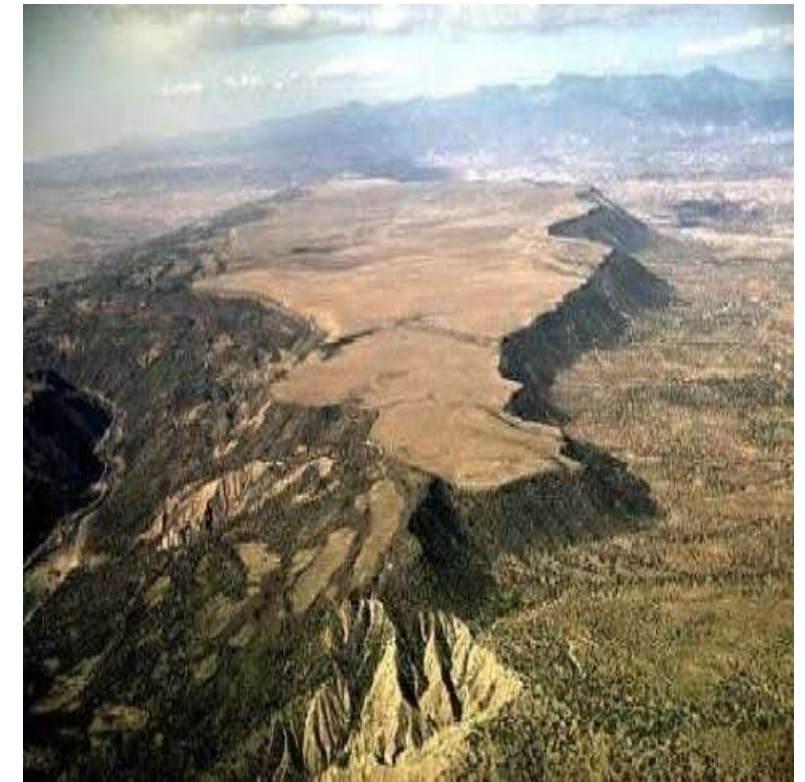


- Forest
- Area Under Non agricultural Uses
- Barren & Unculturable Land
- Permanent Pasture & other Grazing Land
- Under Miscellaneous Tree Crops & Groves
- Culturable Waste Land
- Fallow Lands
- Net Area Sown

- We use LAND in different ways :



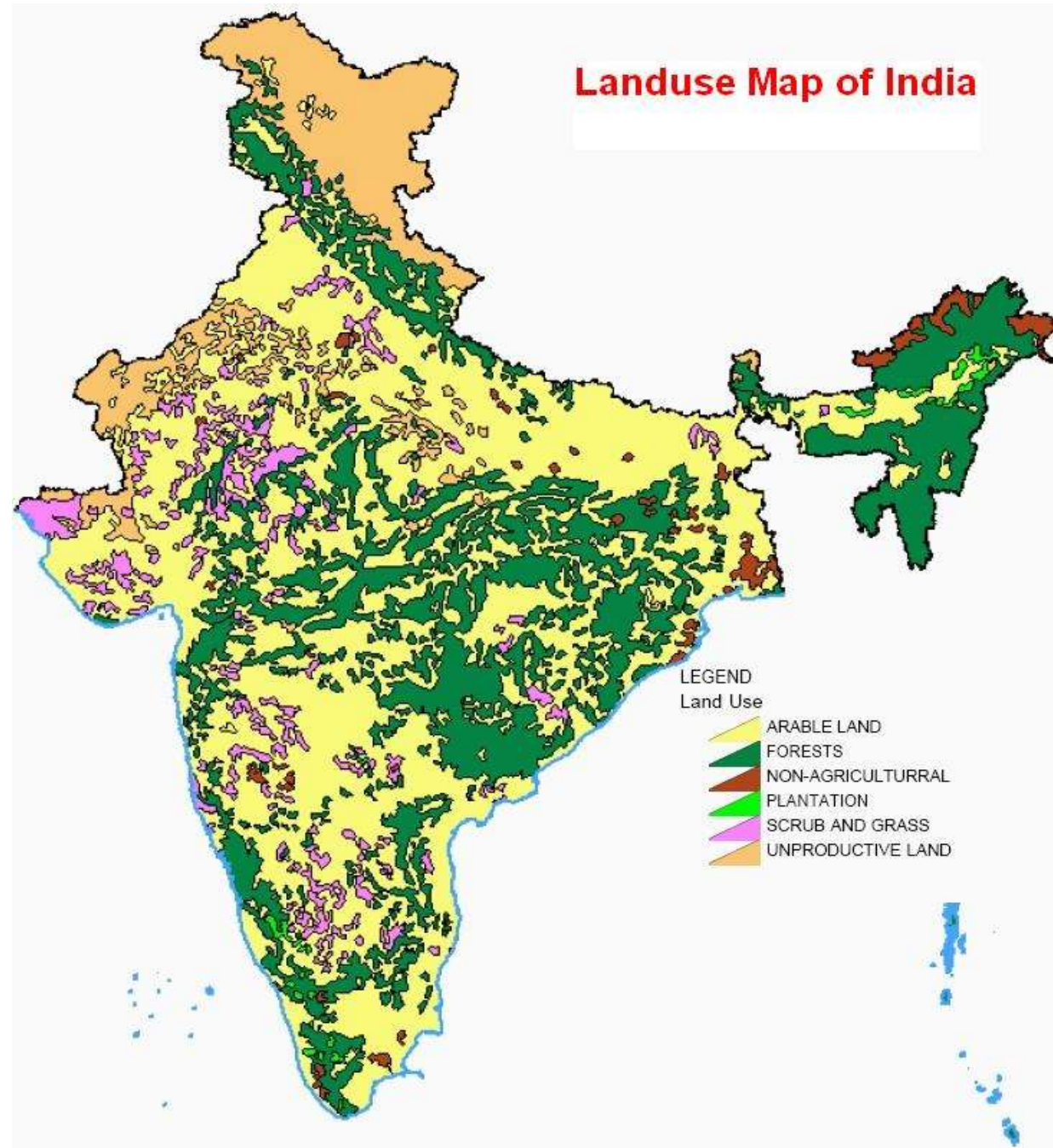
- In India 43% plain land area provides facilities for agriculture and industry, 30% Mountains area of the country and ensure perennial flow of some rivers, provide facilities for tourism and ecological aspects, 27% plateau region are rich reserves of minerals, fossil fuels and forests.



- Land resources are used for the following purposes:

1. Net Sown Area: 46.6%
2. Forested Land: 22.6%
3. Permanent Pasture: 3.6%
4. Cultivable Wasteland: 4.5%
5. Land not available for cultivation: 13.5% (non-agricultural uses)

Land Use Pattern of India

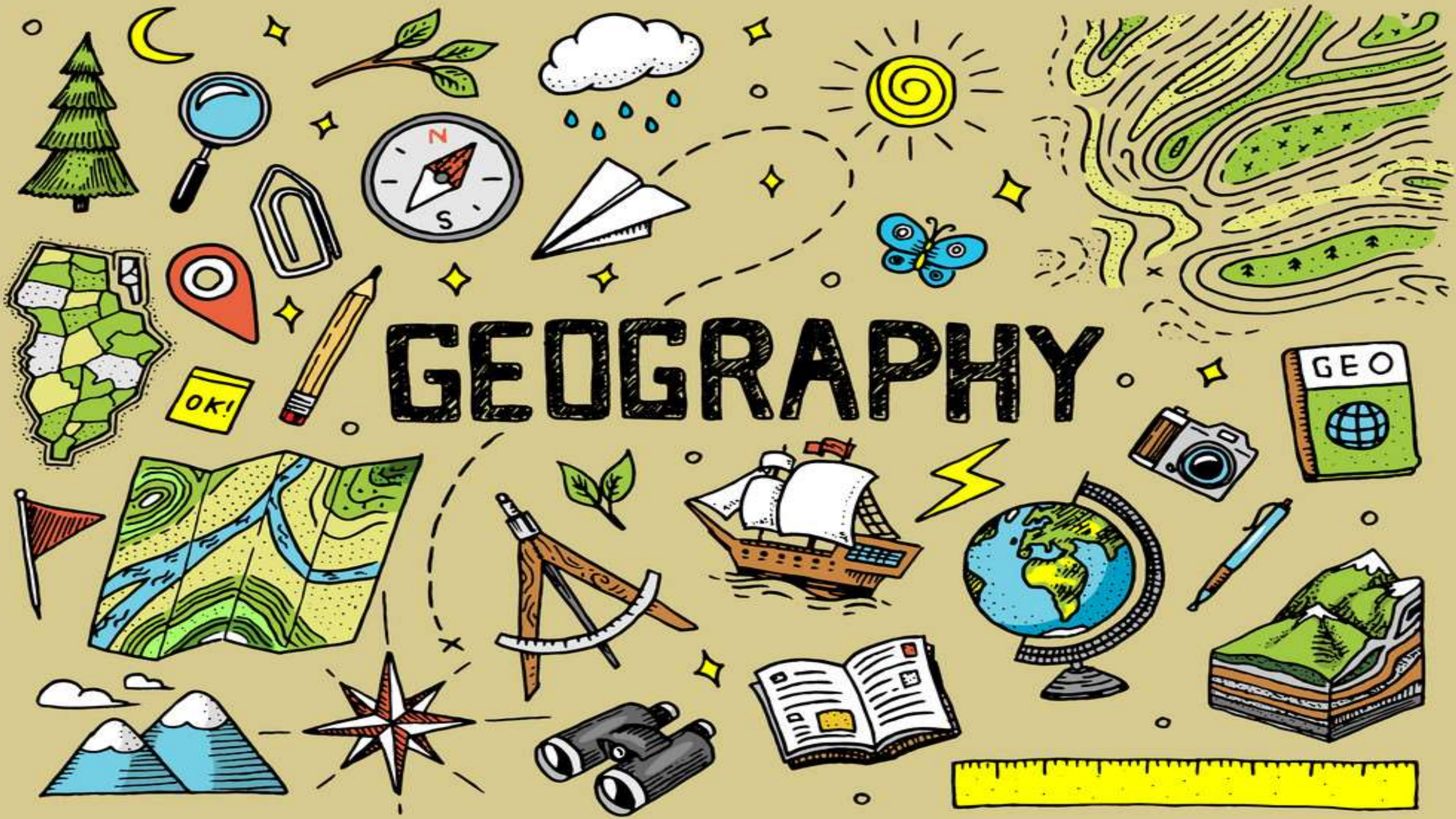


Home Assignment

1. What do you mean by land as resource?
2. Mention different land use.
3. Differentiate between land classification on the basis of ownership.

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GEOGRAPHY





CLASS-VIII

WATER RESOURCES

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Learning Outcomes:-

- To be able to understand distribution of water.
- To be able to understand the significance of water resources & types of water resources in India.
- To know different ways of water conservation.

CONTENTS:-

- Water Resources
- Water Resources in India
- Multi-Purpose River Projects
- Water Pollution
- Water Conservation

WATER

Distribution of Surface water

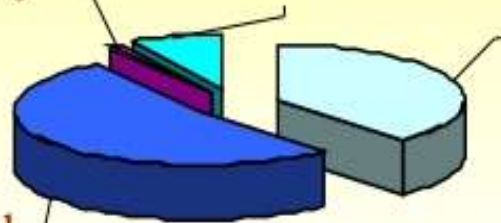
Moisture
in Air
(Humidity)

8%

Rivers
1%

Moisture
in Soil
38%

Tanks and
Reservoirs
53%



SOURCES OF FRESH WATER



Pond



Glacier

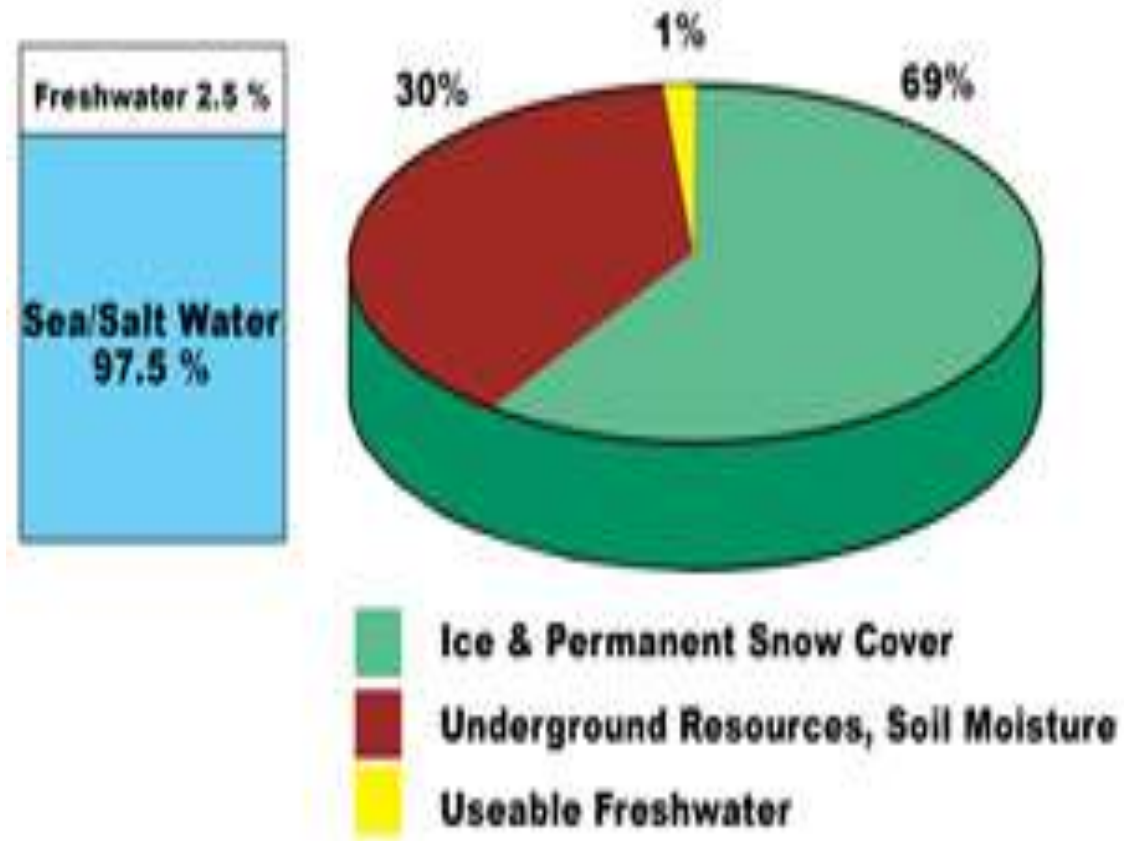


Ground
Water

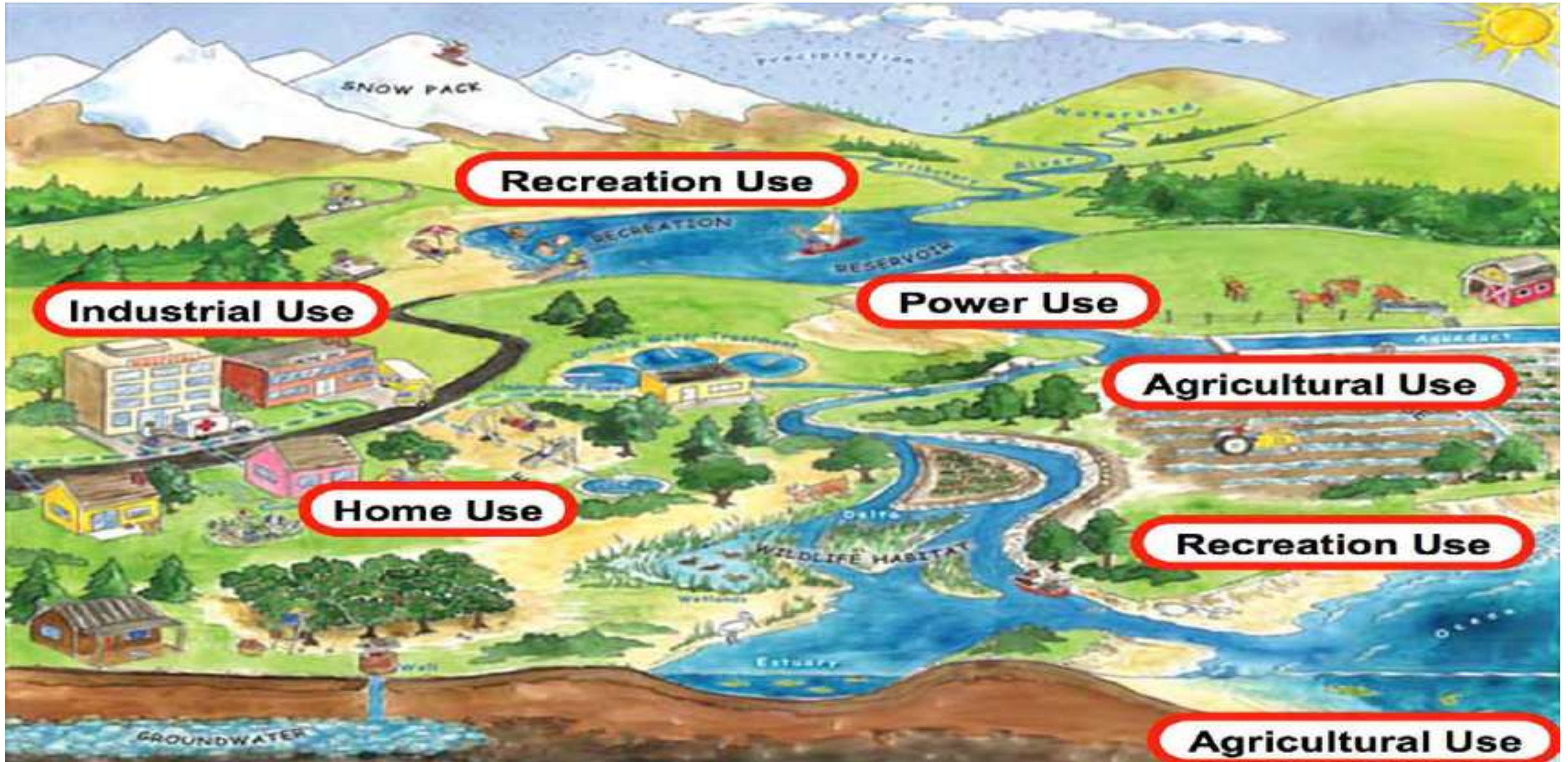


Springs

WATER DISTRIBUTION



USES OF WATER



WATER RESOURCES OF INDIA (MAP)



India has abundant water resources.

- Perennial Rivers
- Seasonal Rivers
- Irrigation

MULTIPURPOSE PROJECTS

Multi purpose project is a project which can do many works at a time.

OR

A project which serves more than one project is called multi purpose project. For example, water project is planned for various purpose like irrigation, hydropower generation, water supply for drinking, etc.

1.Irrigation

2.Public health and sanitation

3.Hydroelectric power development

4.Flood control and river training

5.Soil conservation

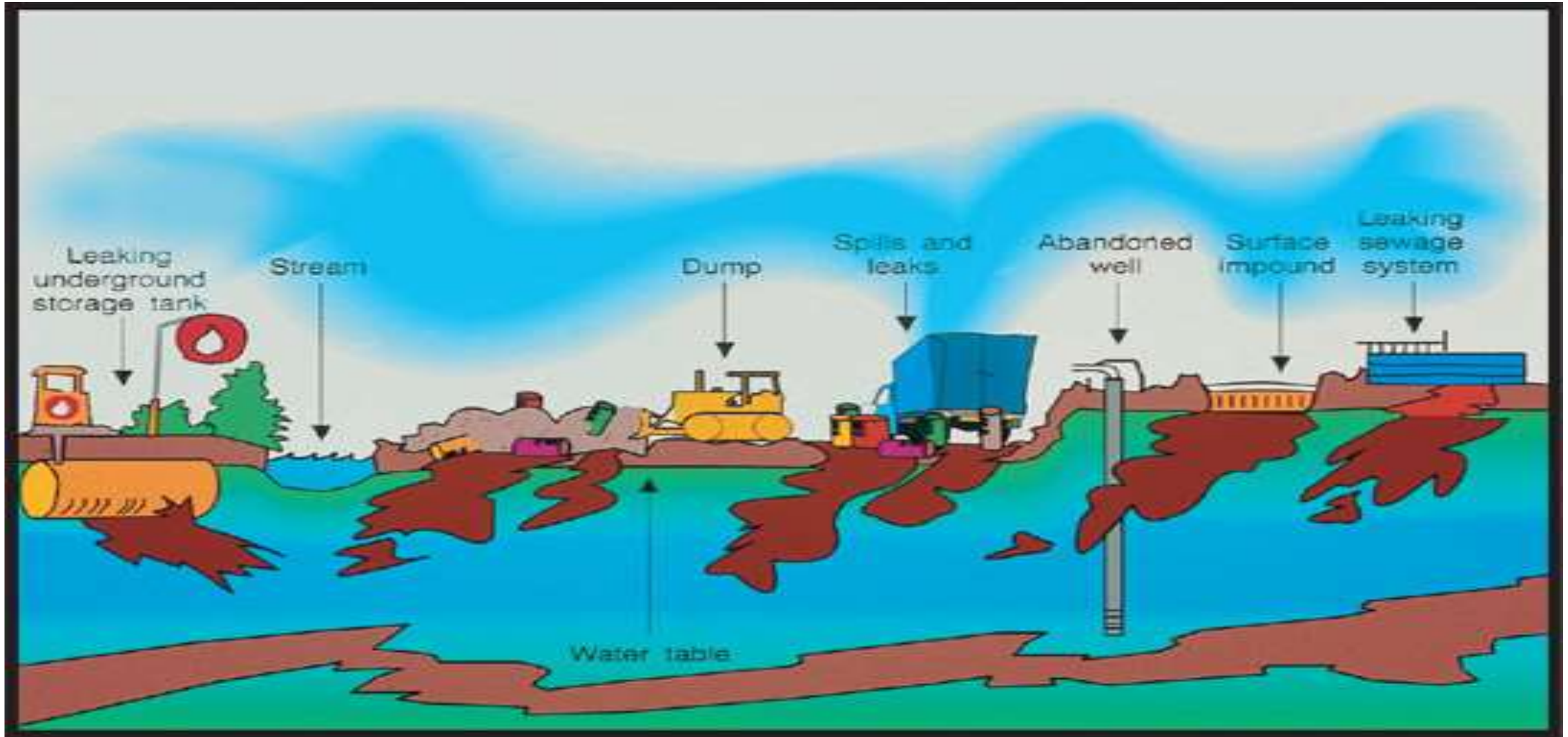
6.Inland navigation

7.Fish culture

MULTIPURPOSE PROJECTS



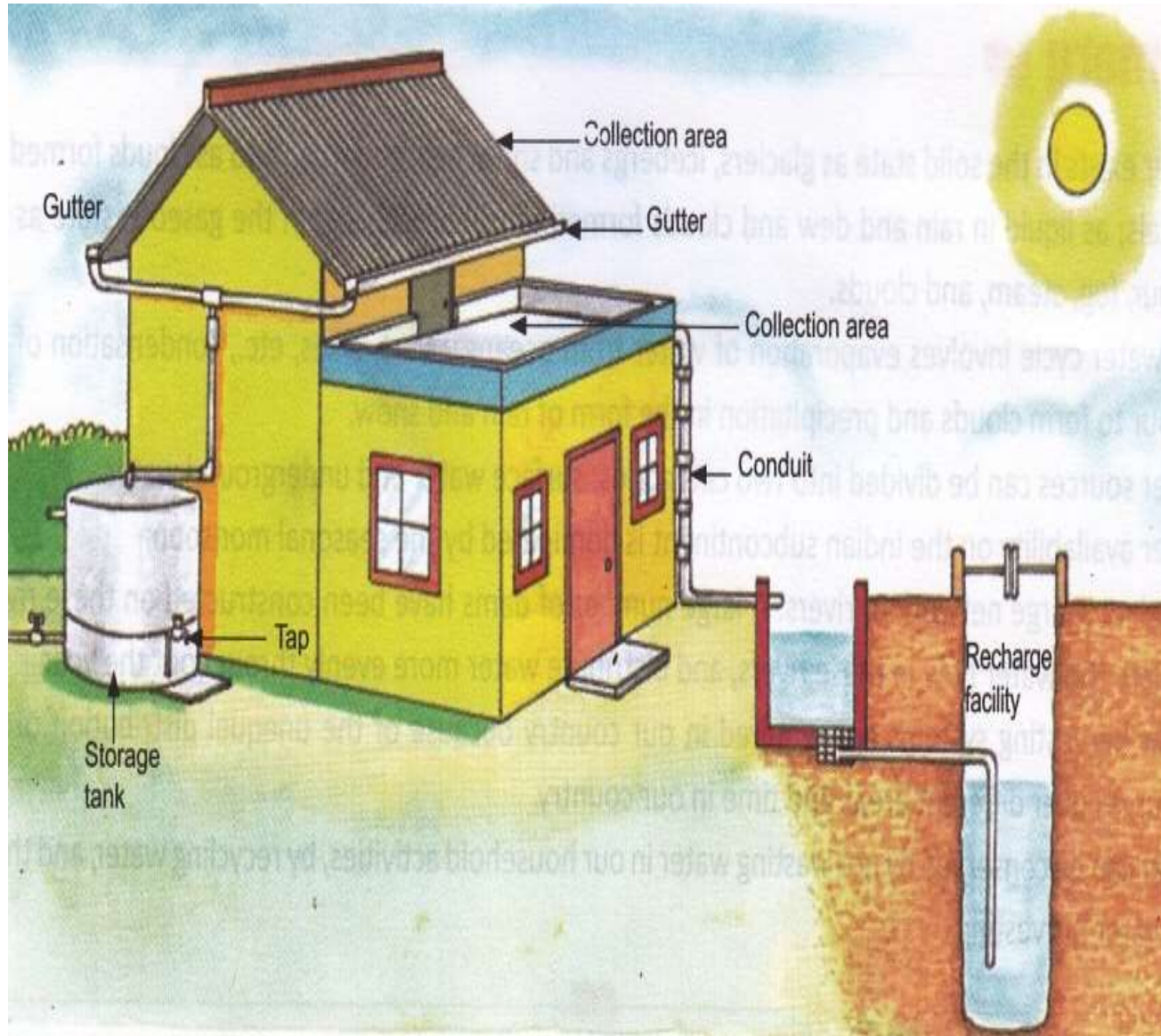
WATER POLLUTION



REASONS TO CONSERVE WATER

- Scarcity of water
- Increase in population, increase in demand for water.
- Drying up of water sources
- Water pollution
- Variation in seasonal and annual precipitation.
- Over-exploitation
- Wastage of water

WAYS OF WATER CONSERVATION







TIPS ON WATER CONSERVATION



Use a water efficient flush toilet.



Find and repair leaks.



Take a quick shower.

Convert to water and energy saving faucets.



Avoid wasting running water as possible.



Use an energy efficient washing machine.



Water plants during the coolest part of day.

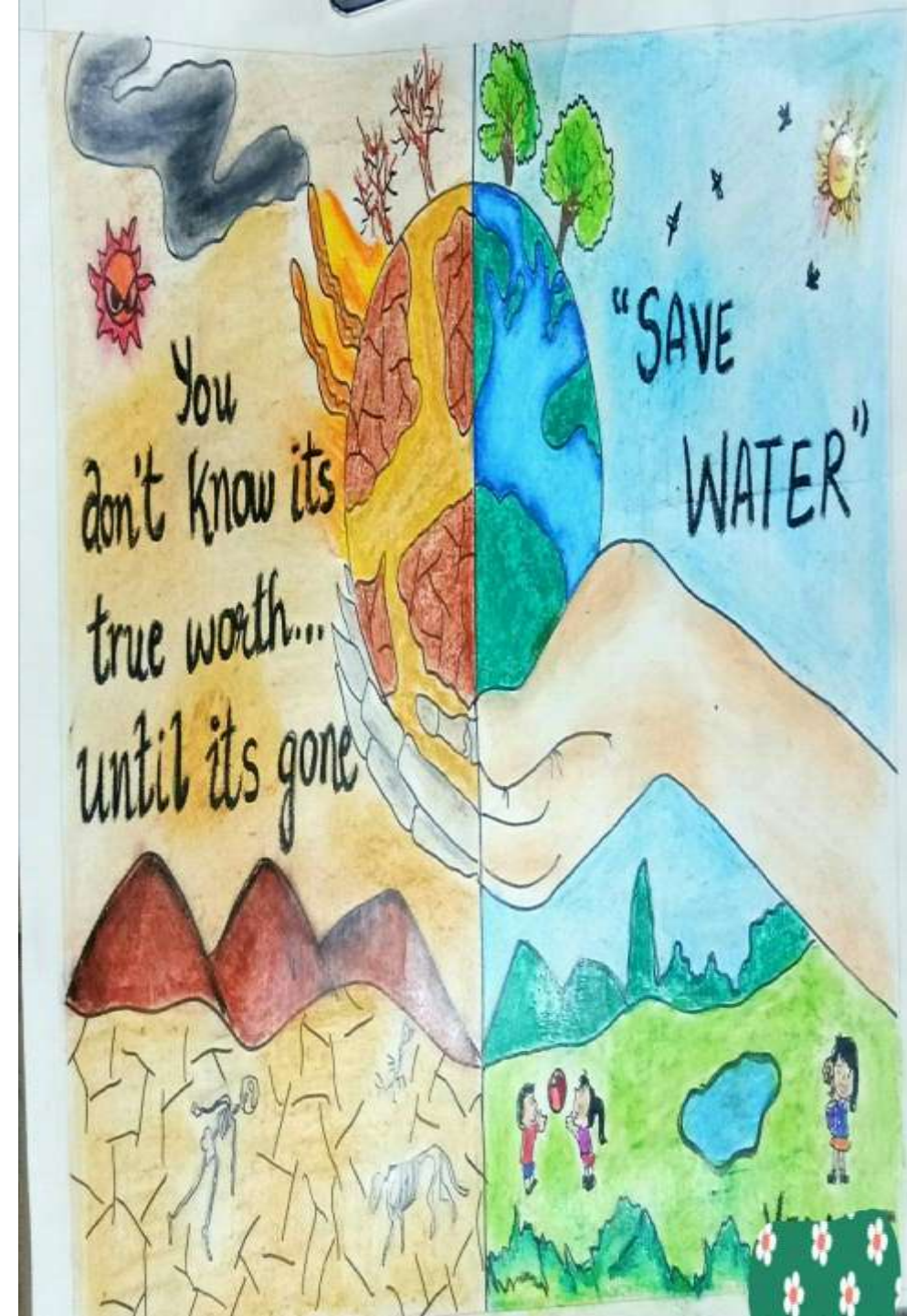


Clean driveways and sidewalks with a broom instead of hose.



ACTIVITY

- DRAW A POSTER ON ANY OF THE FOLLOWING TOPIC:-
 - SOIL CONSERVATION
 - WATER CONSERVATION



Home Assignment

1. Differentiate between perennial and season rivers of India.
2. Mention uses of water.
3. What are different ways of water conservation?

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Learning Outcomes:-

- To be able to know consequence of soil erosion.
- To be able to understand the significance of methods of soil conservation.

CONTENTS:-

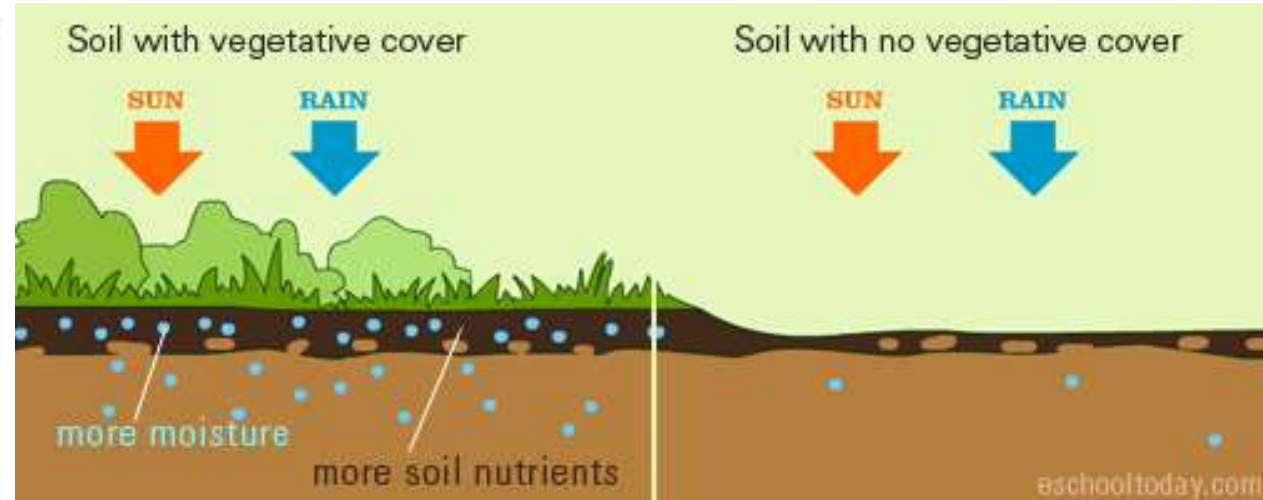
- Soil Erosion
- Methods of Soil Conservation

SOIL EROSION

- Soil erosion is the removal of top soil.
- SOIL DEGRADATION : Depletion of soil.
- It is a vital resource which is responsible for the sustenance of all plants, animals and human beings.

<https://www.youtube.com/watch?v=qNTOq1uEObc> **SOIL EROSION**

Soil Erosion



SOIL CONSERVATION

- 1. Ploughing along the contour lines decelerate the flow of water down the slopes. This is called contour ploughing.
- 2. Terrace cultivation restricts erosion. This type of agriculture practice is done in western and central Himalayas.
- 3. When a large field is divided into strips and strips of grass are left to grow between the crops. Then, this breaks up the force of the wind. This method is known as strip cropping.
- 4. Planting lines of trees to create shelter helps in the stabilization of sand dunes and in stabilizing the desert in western India. Rows of such trees are called shelter belts.

https://www.youtube.com/watch?v=uo_ntewAemw

MULCHING



COUNTOUR BUNDING



PLUGGING



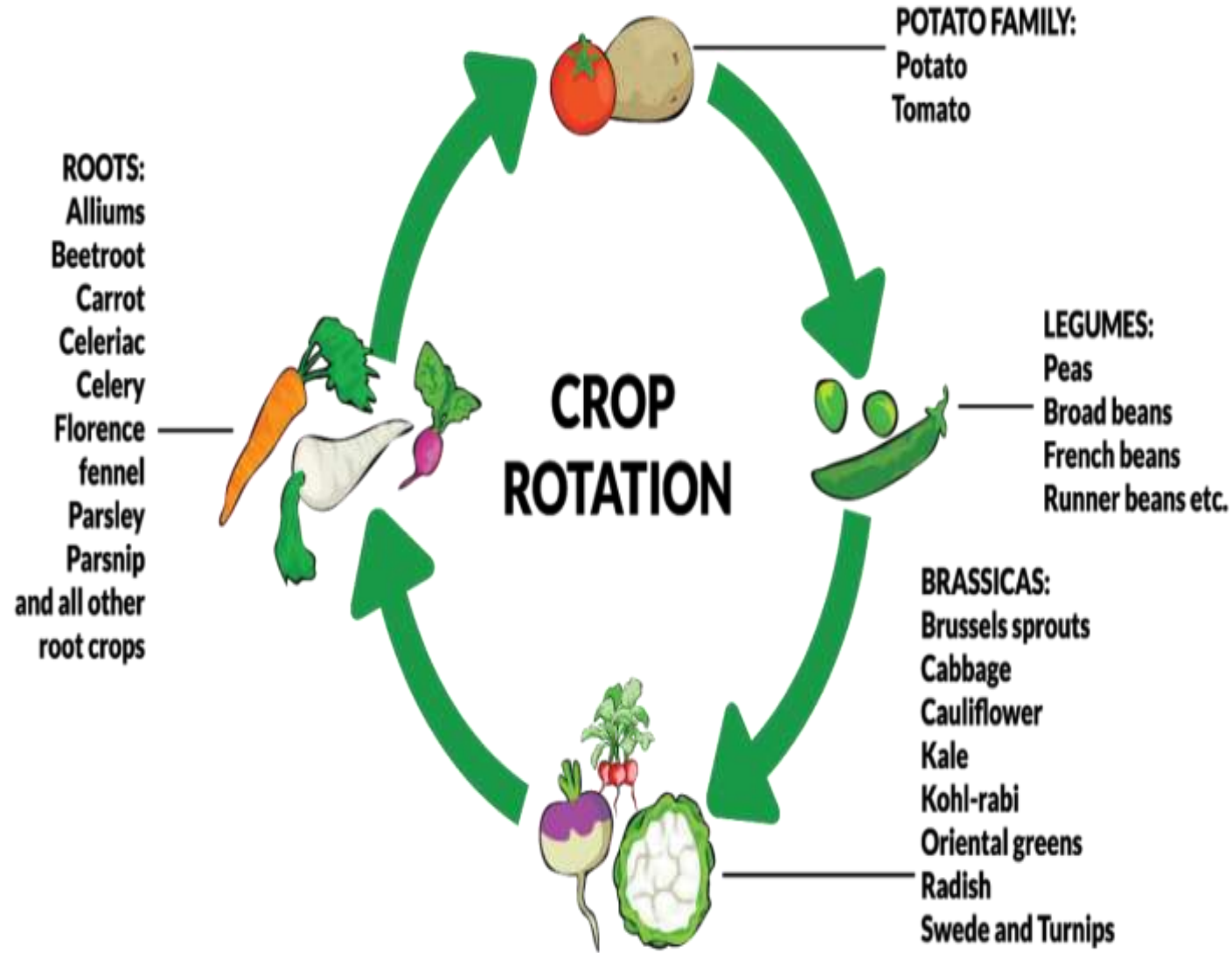
TERRACE FARMING



INTERCROPPING

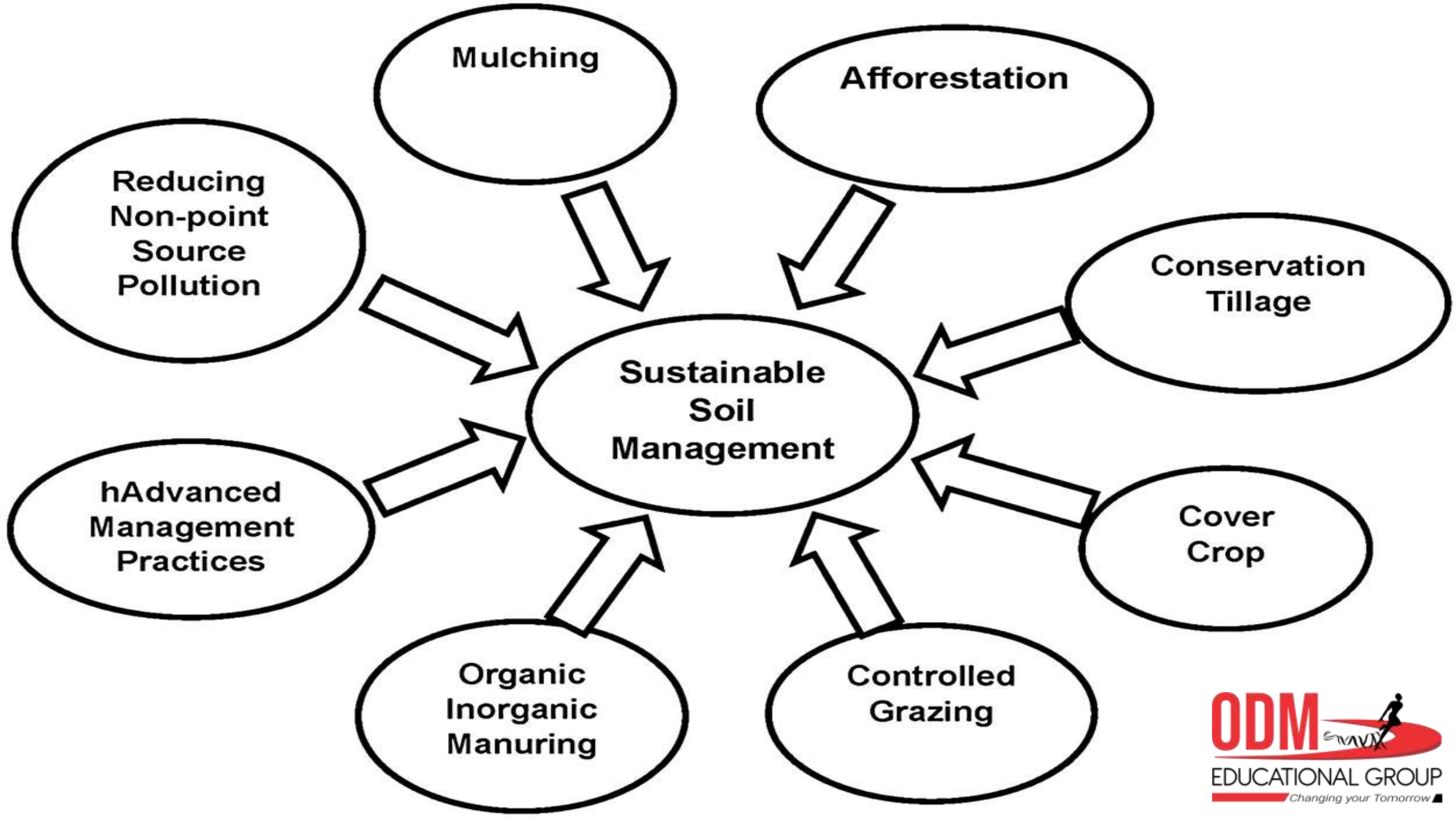


CROP ROTATION



SHELTER BELTS



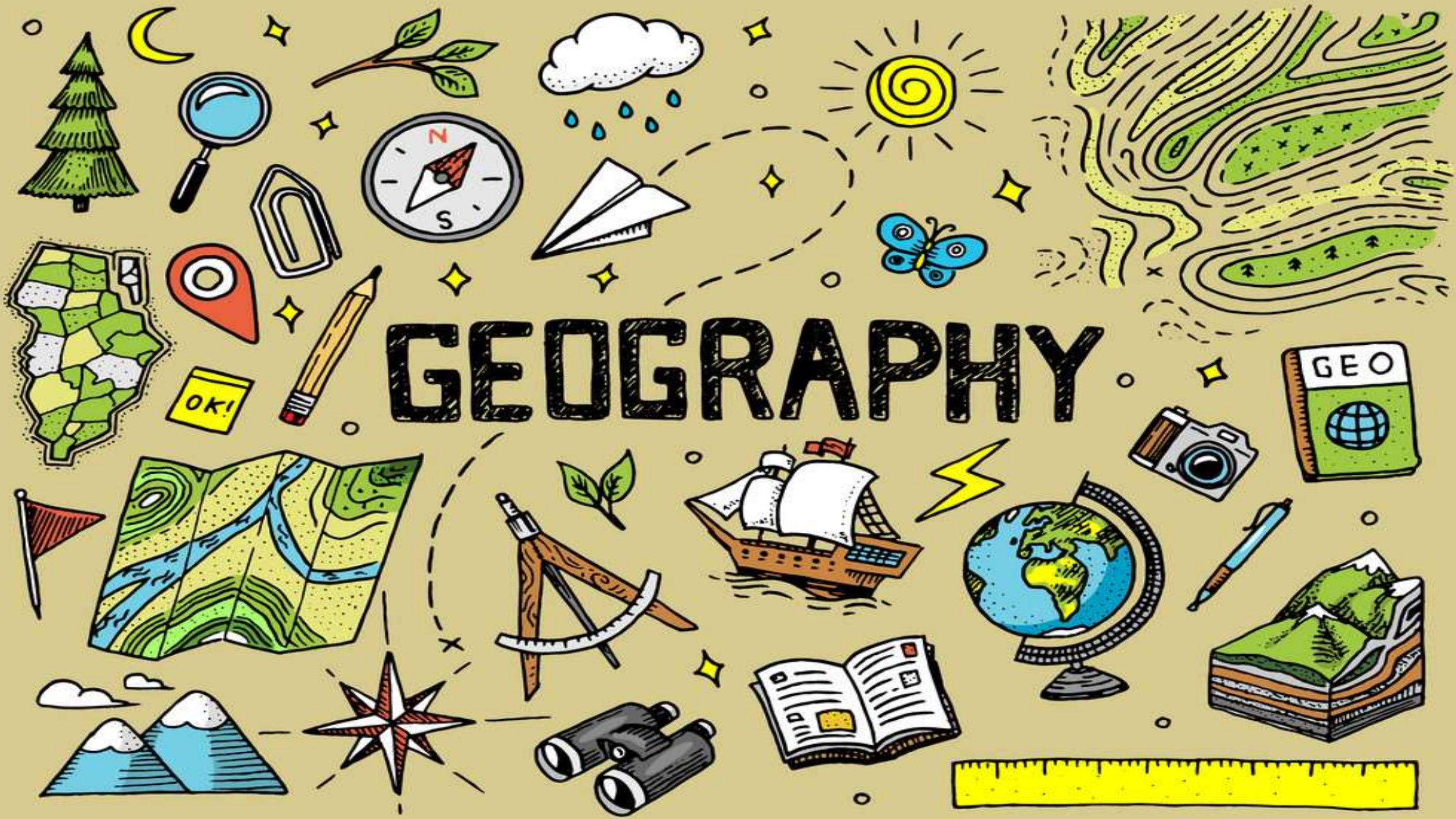


Home Assignment

1. What is soil erosion?
2. Mention methods to conserve soil in the hilly regions.
3. What can be done to conserve soil in the coastal regions?

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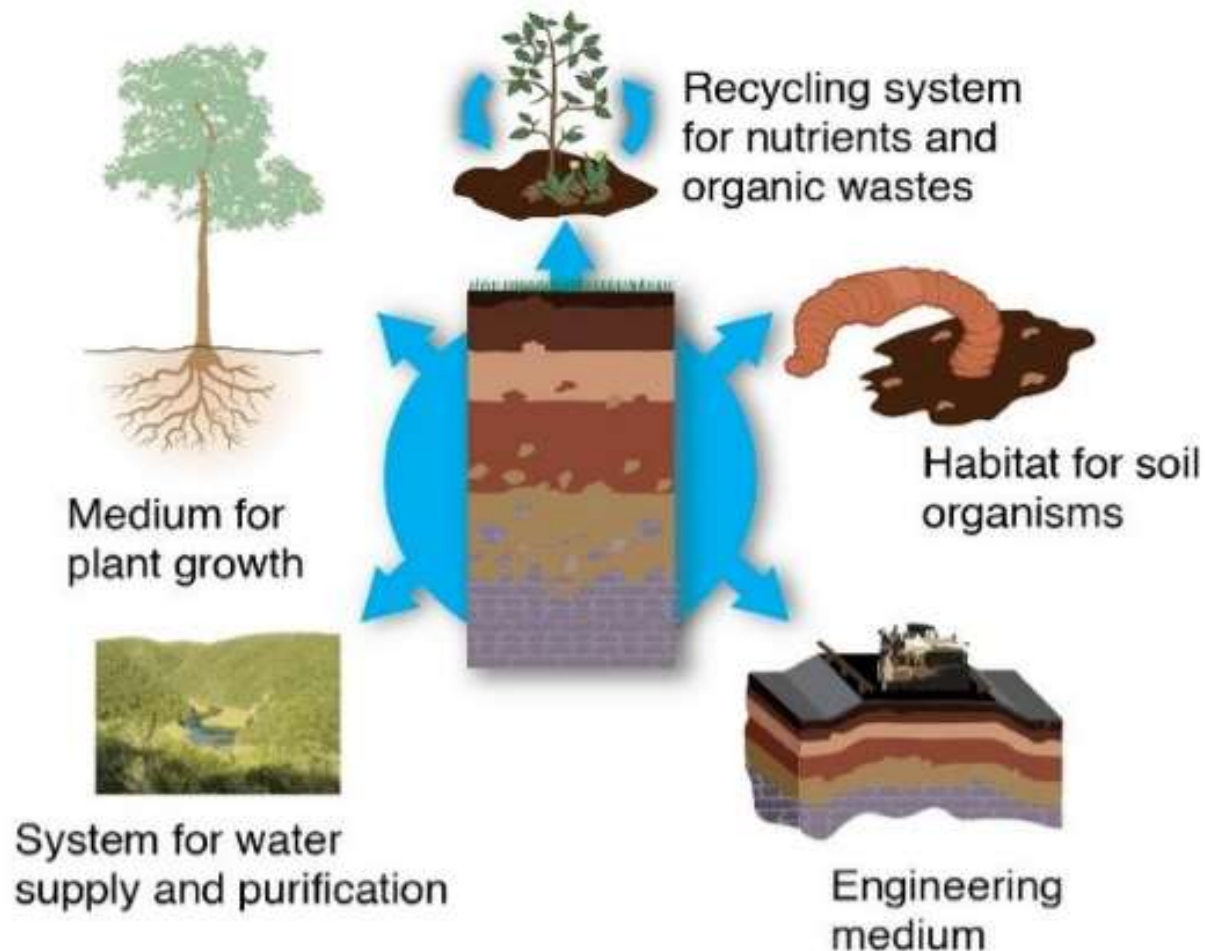
- To be able to know the meaning of soil resources, their variety, location and distribution.
- To be able to understand the significance of soil as resources.
- To be a sensible citizen respecting natural resources and utilizing them properly.

CONTENTS:-

- SOIL AS RESOURCE
- CLASSIFICATION OF SOILS
- SOIL EROSION
- CONSERVATION OF SOIL
- DISCUSSION – QUESTION/ANSWER

SOIL AS A RESOURCE

Soil is the unconsolidated (or loose) covering of fine rock particles that covers the surface of the earth.



<https://www.youtube.com/watch?v=8kZXuLobA8> SOIL

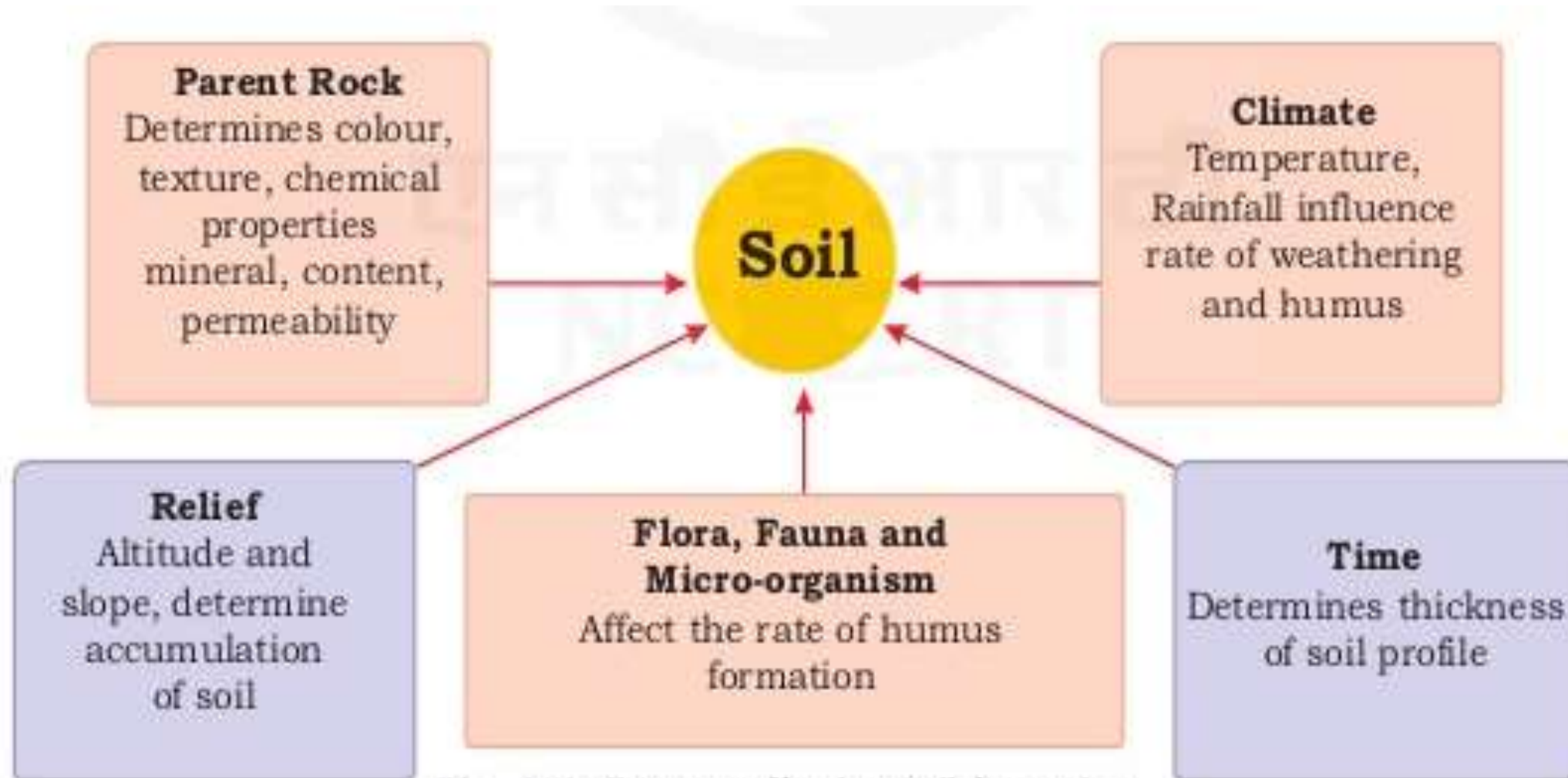
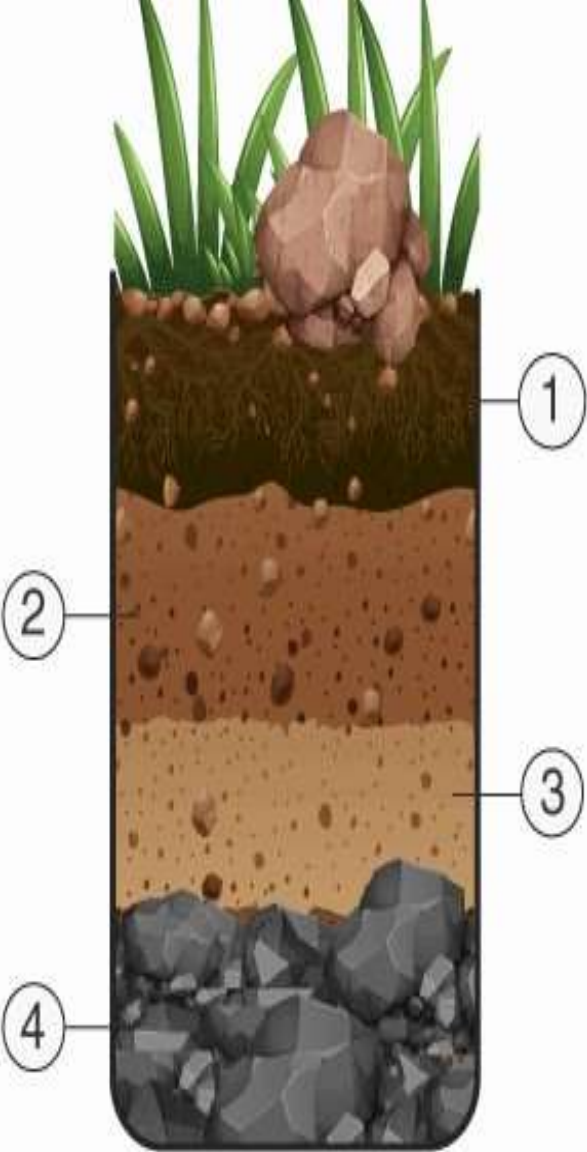


Fig. 2.4: Factors affecting soil formation



SOIL PROFILE

- A soil profile is a vertical cross-section of the soil, made of layers running parallel to the surface. These layers are known as soil horizons.

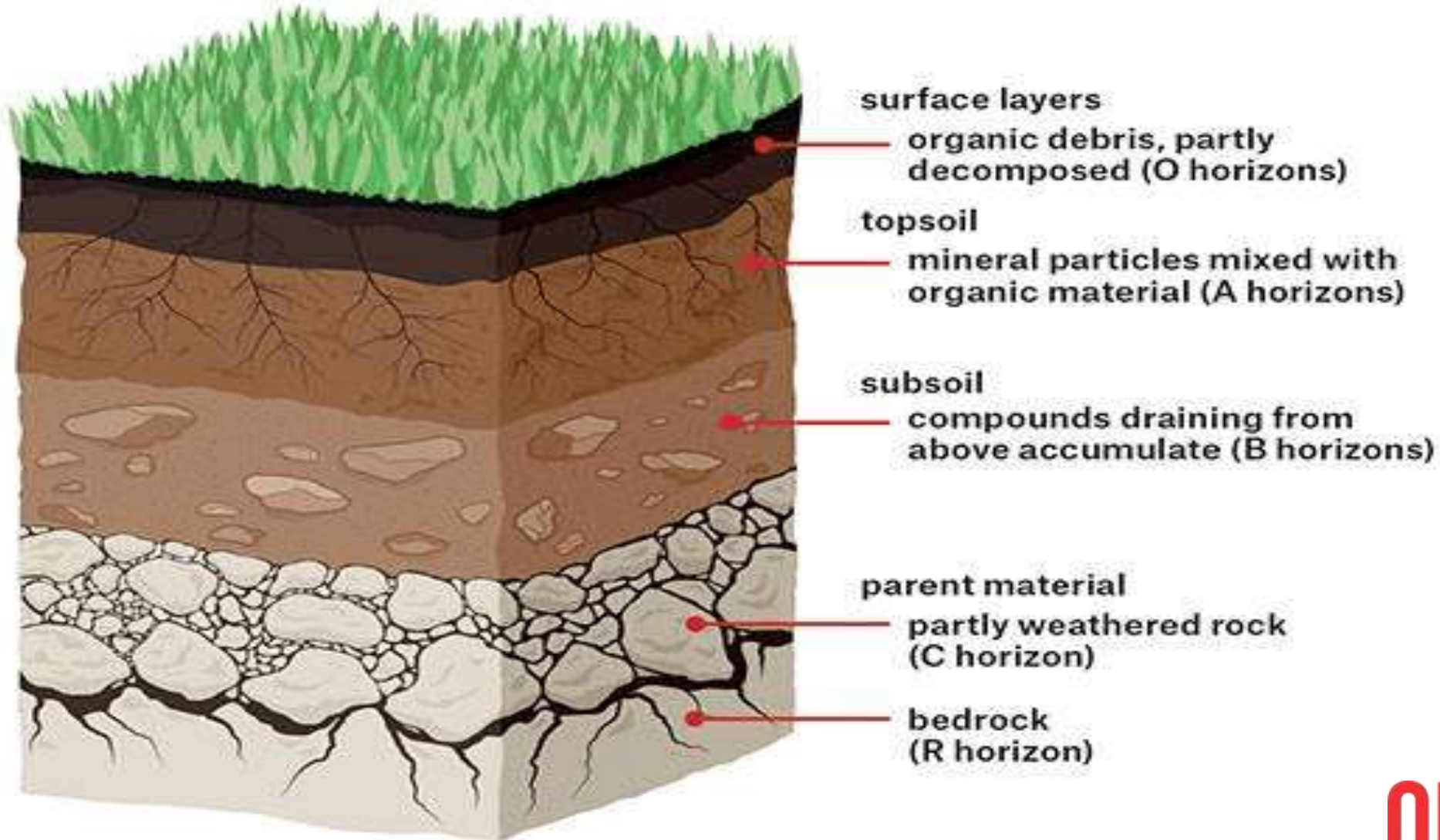
1 The O-Horizon (Organic)

2 The A-Horizon or Topsoil

3 The B-Horizon or Subsoil

4 The C-Horizon or Bedrock

The different **LAYERS OF SOIL** are:



Home Assignment

1. Define Soil.
2. What are different factors that are responsible for the formation of the soil?
3. Which layer of the soil supports vegetation and why ?

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Learning Outcomes:-

- To be able to know the meaning of land degradation and methods to conserve land degradation.
- To be able to understand the significance of land conservation.

CONTENTS:-

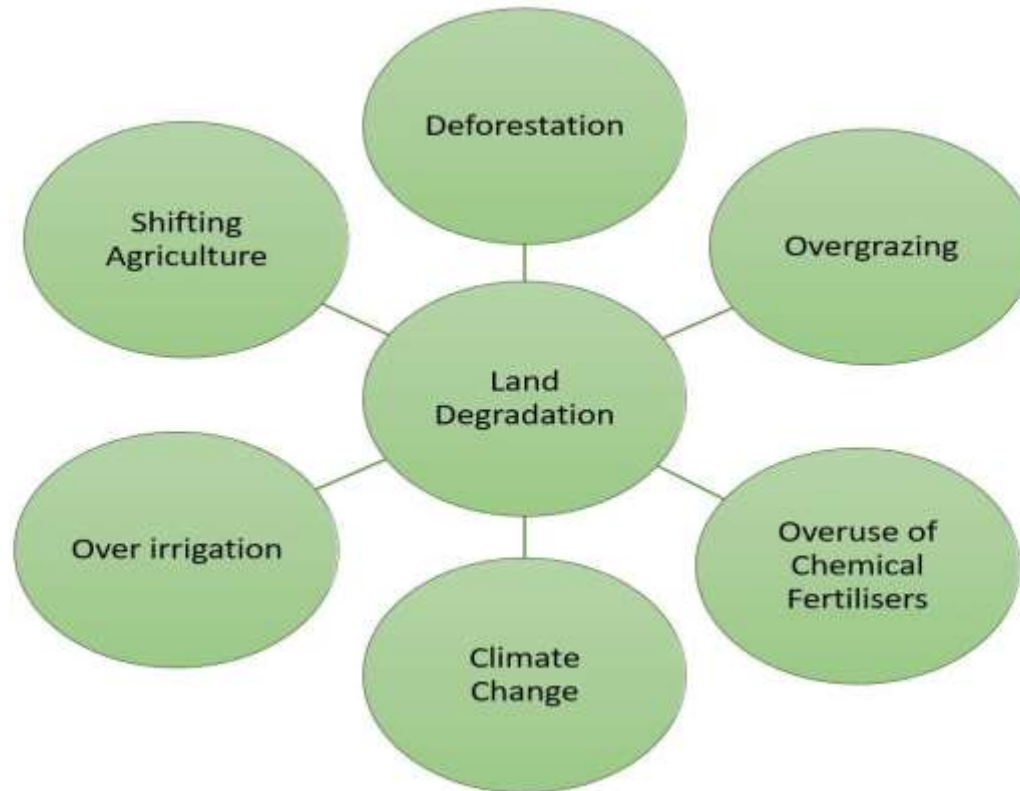
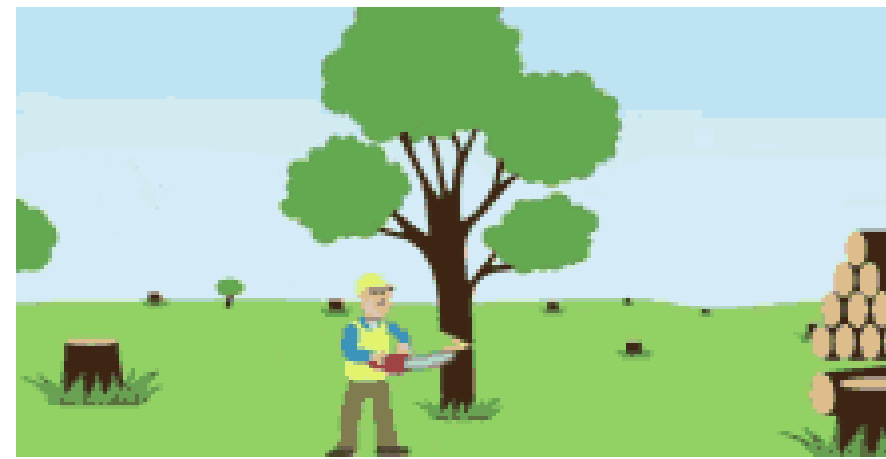
- Land Degradation
- Reasons of Land Degradation
- Methods of conservation

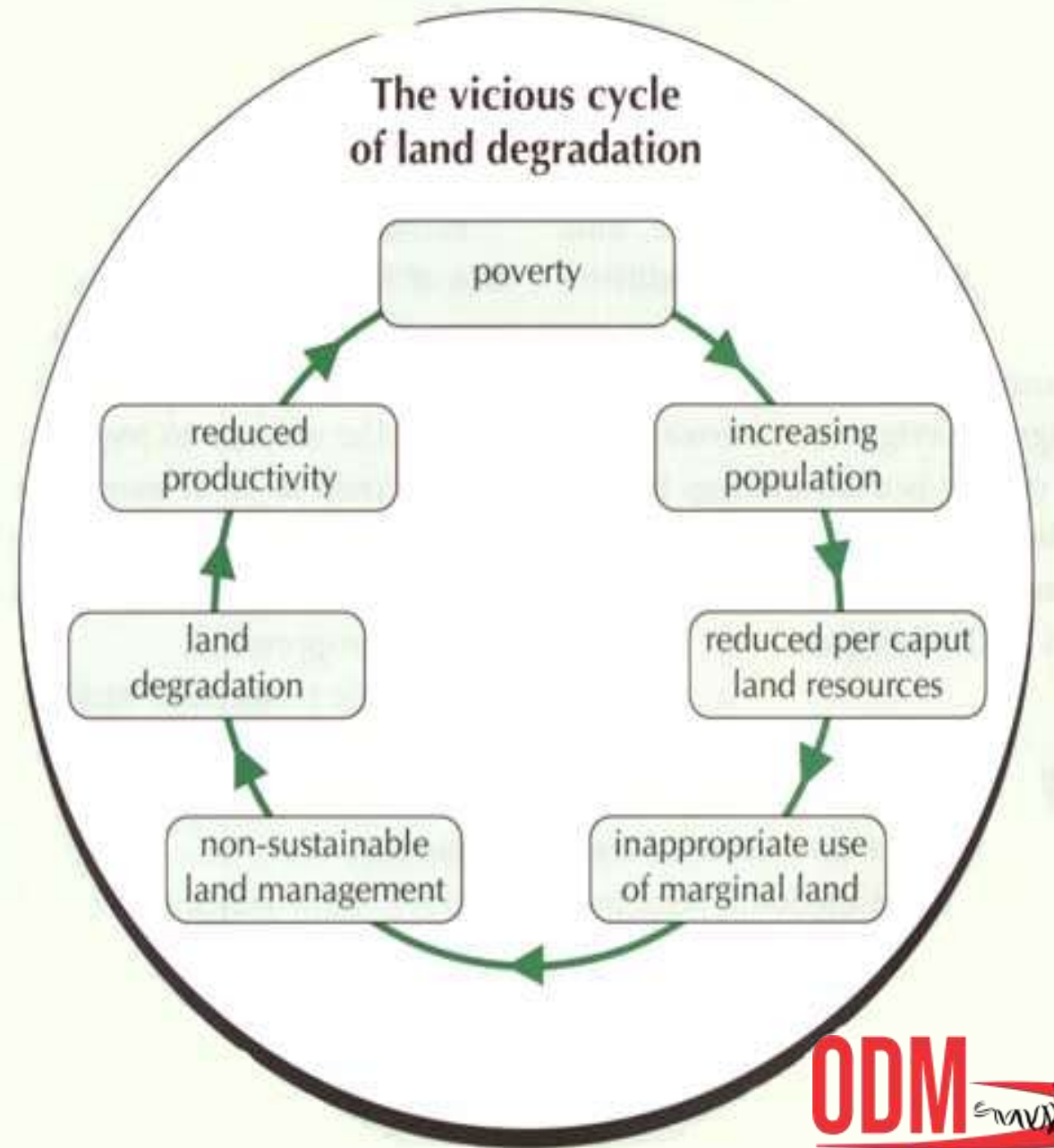
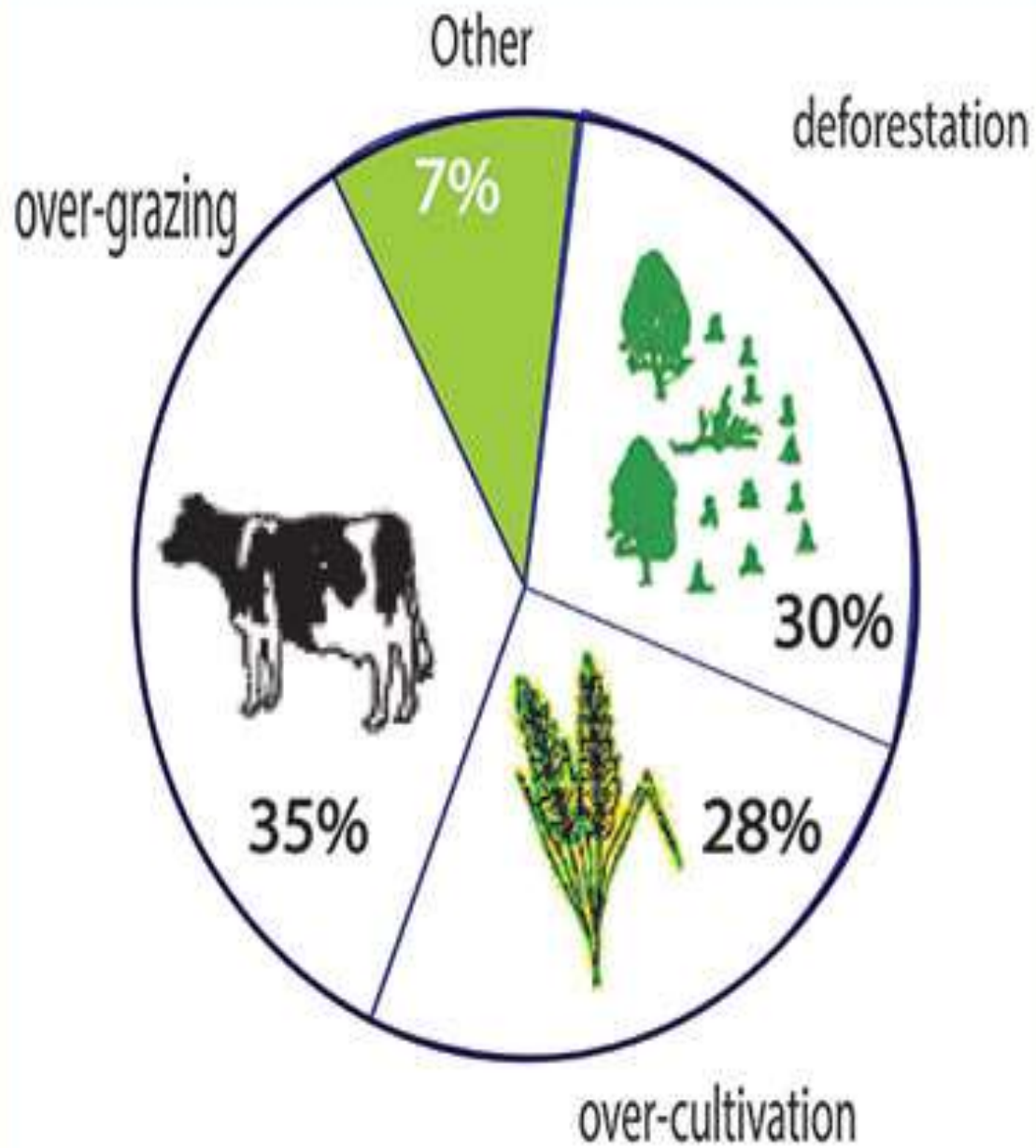
Land Degradation



LAND DEGRADATION : It refers to the decline in productivity of cultivated land or forest land . It results from unsuitable and unscientific land use.

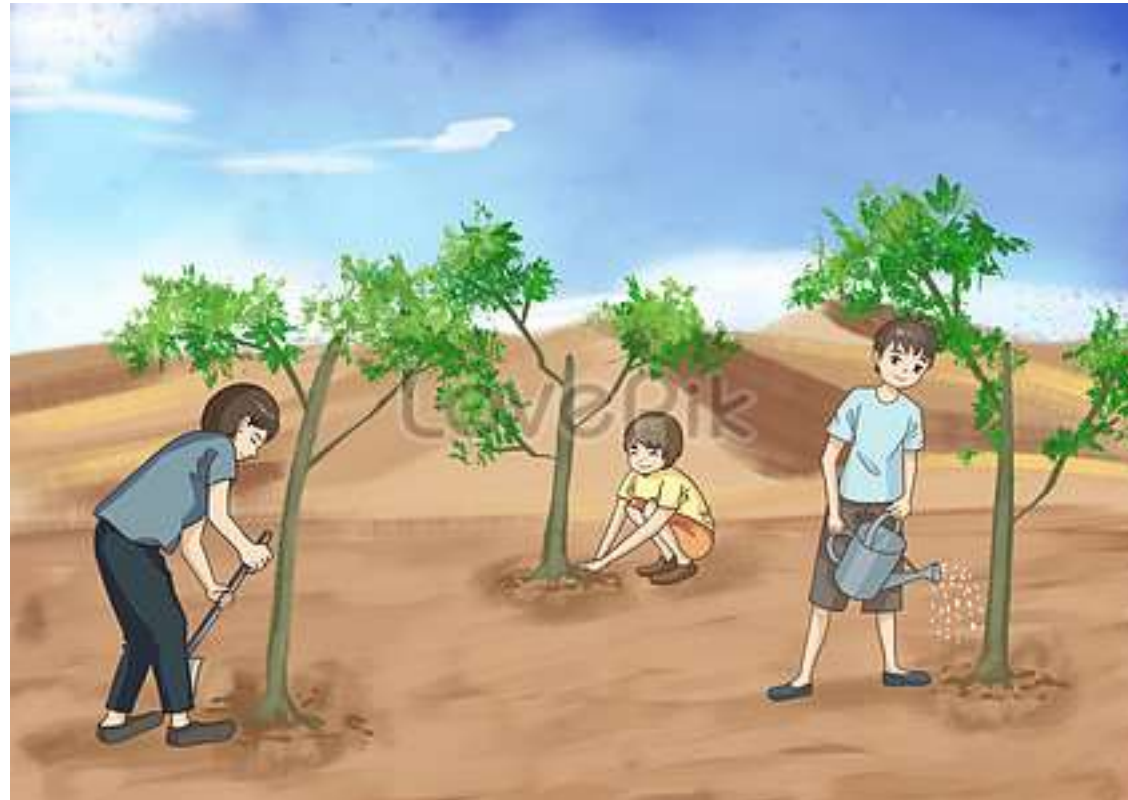
CAUSES :-



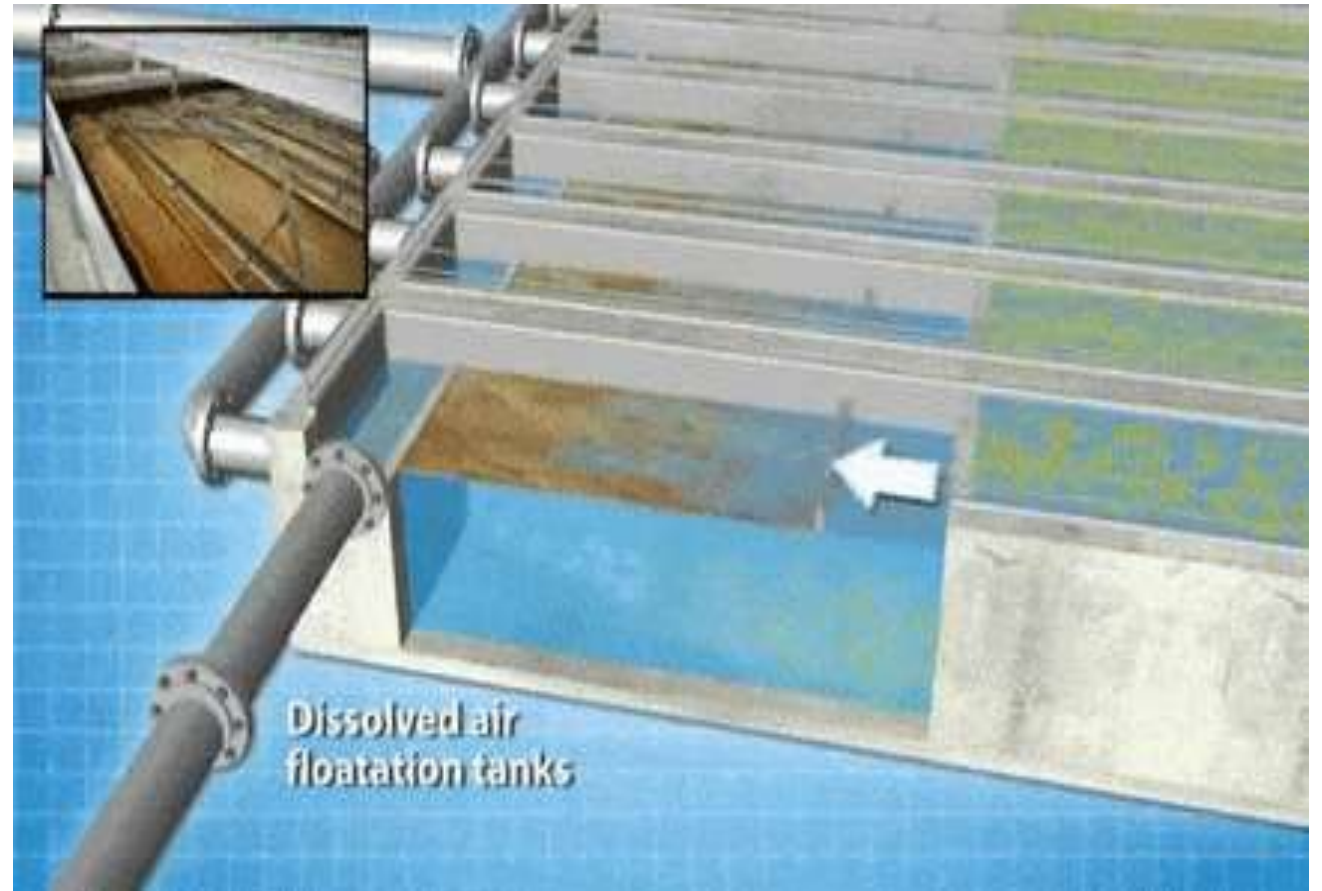
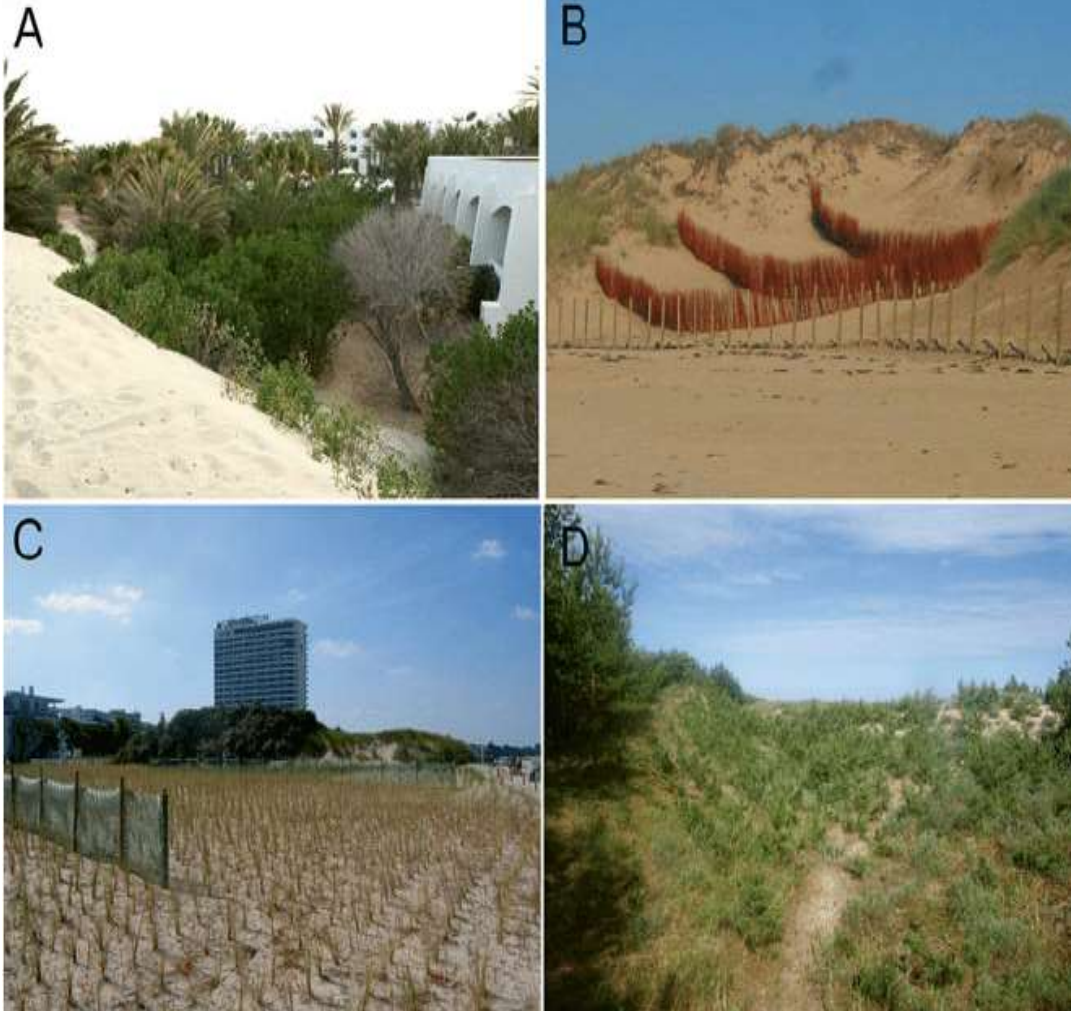


LAND CONSERVATION

- Afforestation and proper management of grazing.
- Planting of shelter belts of plants.
- Control on over grazing.



- Stabilization of sand dunes to check land degradation.
- Proper discharge and disposal of industrial effluents and wastes after treatment.



HOME ASSIGNMENT

1. What do you mean by land degradation?
2. What are the causes of land degradation?

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