



# **5. Soil and Its Conservation**

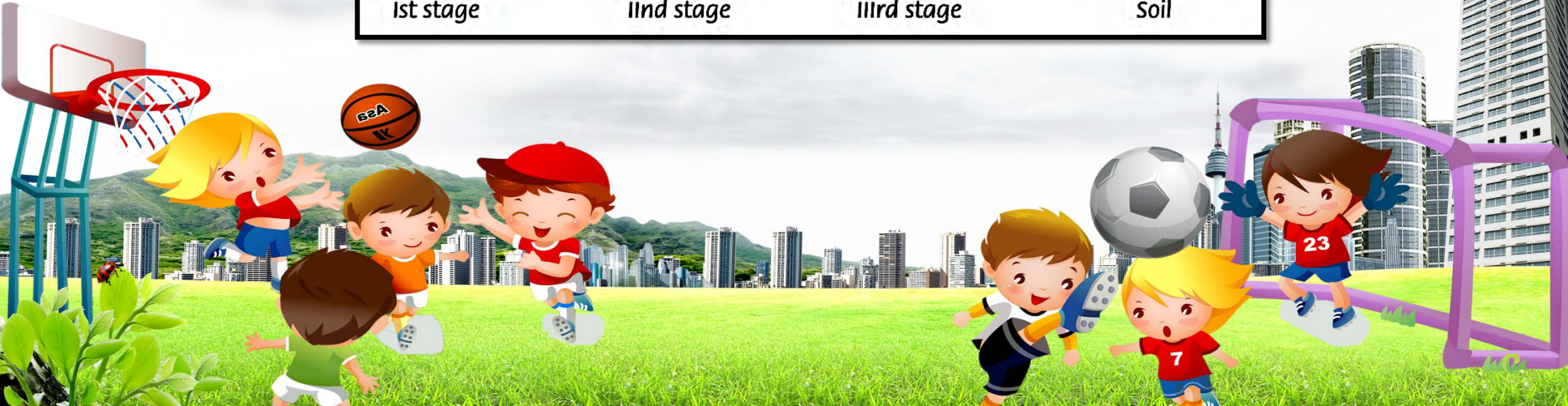
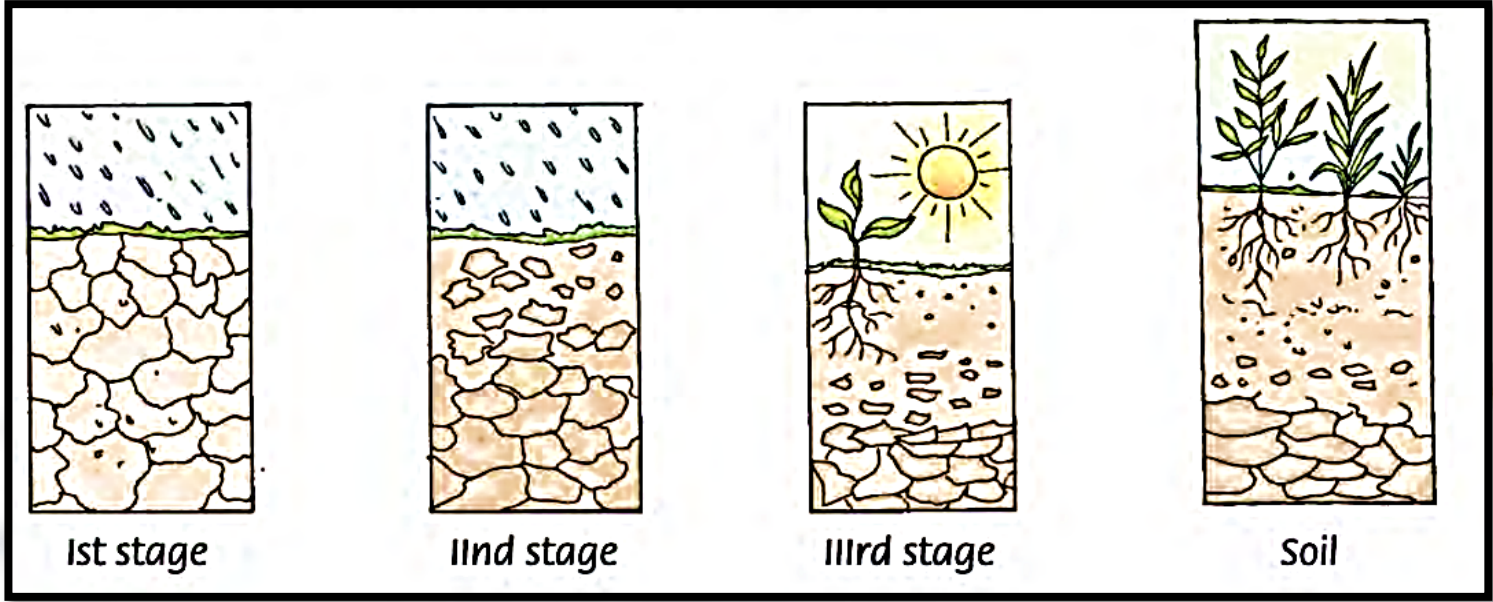
## **CLASS 5 E.V.S**



**Soil is the upper-most layer of the earth's surface. It is composed of particles of broken rocks that have been created by chemical and environmental process viz. weathering and erosion. Soil is a mixture of mineral and organic constituents, that are in solid, gaseous and aqueous states. Soil is commonly referred to as dust.**



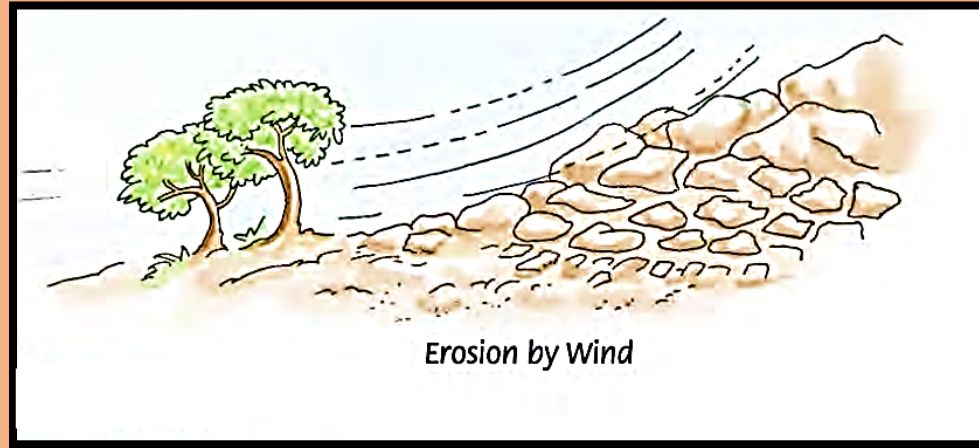






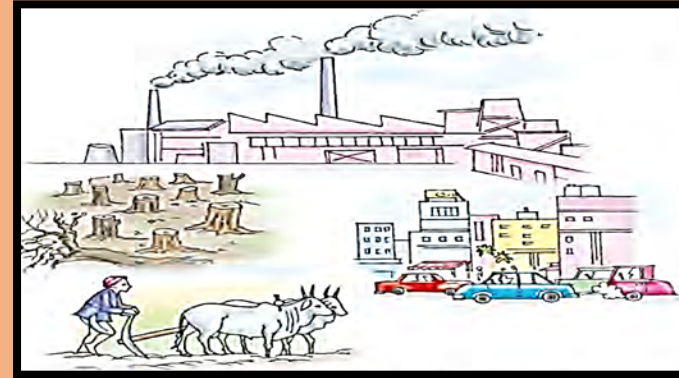
## SOIL EROSION

The wearing away, detachment and transportation of soil from one place to another by moving water, blowing wind or other causes is called **soil erosion**.





**Soil erosion is common in areas with steep slopes, where trees have been felled, in droughts because of poor crop and in areas which are overpopulated.**



**Human Factors of Soil Erosion**





**Though erosion is a natural process, human beings and activities like industrial growth, agriculture, deforestation and urbanisation also cause erosion. Land that is used for industries and agriculture generally experiences a**





**greater erosion than that land which is under natural vegetation, or land used for sustainable agriculture practices. Reduction in vegetation cover on the surface of soil disturbs the soil structure.**

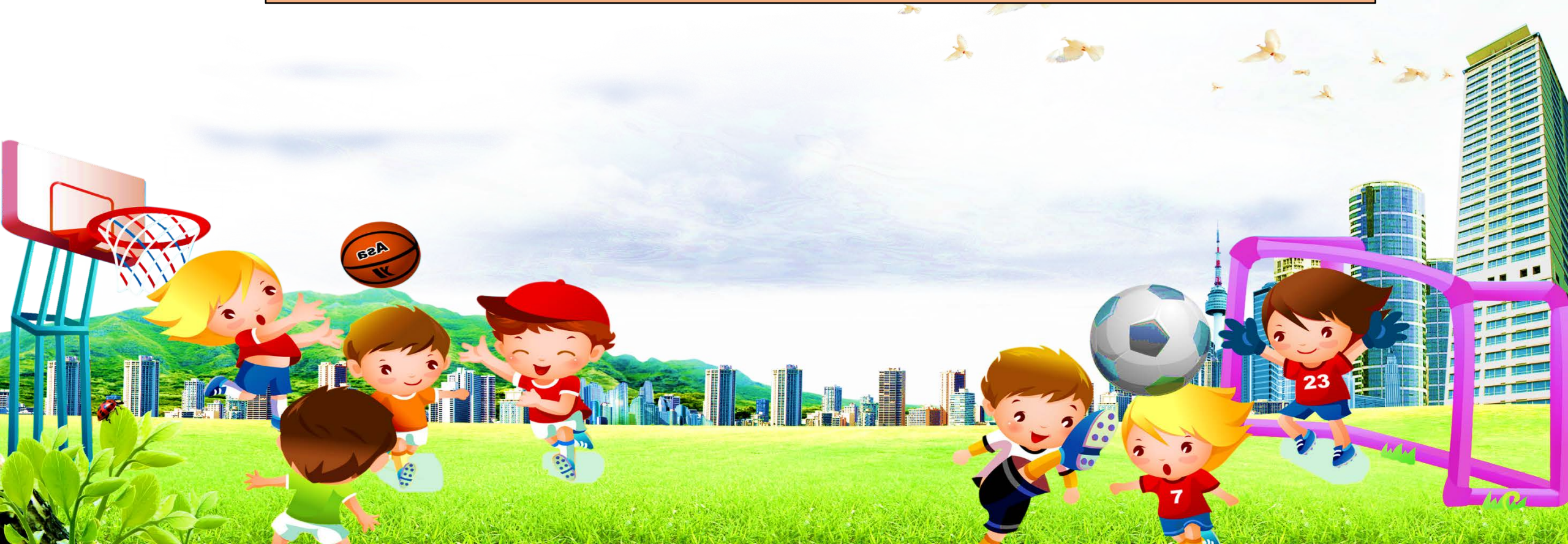






## Causes of Soil Erosion

There are many causes of soil erosion. Let us discuss about them.

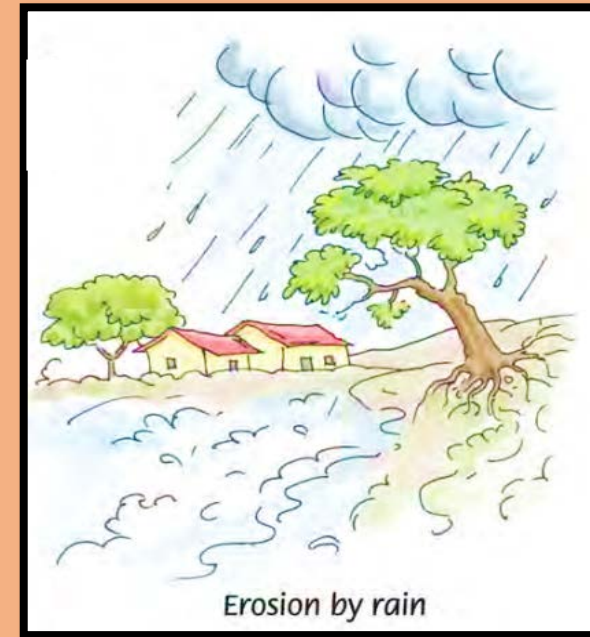




## Natural factors:

### Water

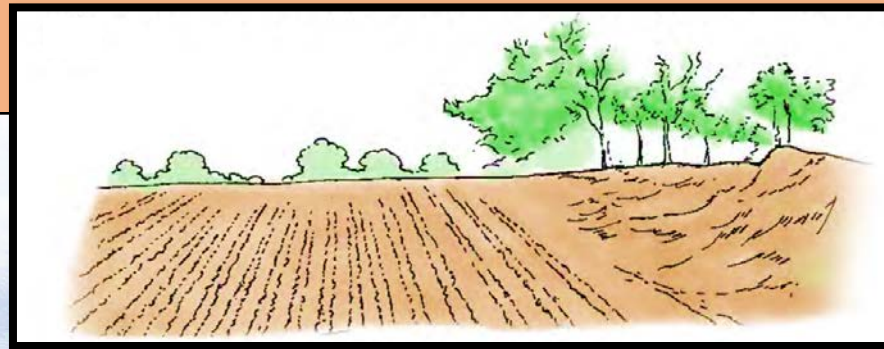
- Rain-splash dislodges soil particles that initially fly through the air (saltation).
- Rain-flow wash off the upper most layer of the soil.
- Wave motion in streams, rivers and lakes cause slumping of soil.





## Wind

- Wind velocity dislodges loose soil particles that become air-borne until velocity reduces. Soil erosion by wind generally happens in open lands and deserts. Wind blows away the upper most layer of soil.



Wind dislodging the soil





## Human factors:

- **Human induced changes in soil increases erosion rate. Fast urbanisation and deforestation, are the major cause of soil erosion.**

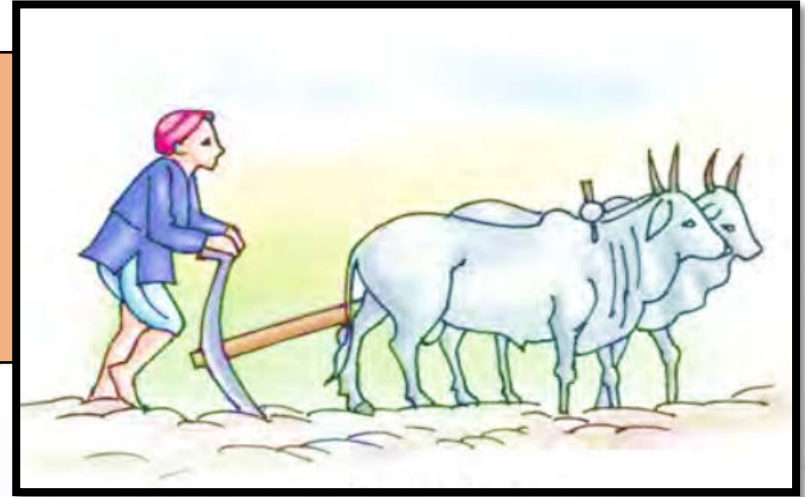


## Deforestation





- **Tillage and other mechanical influences like ploughing is also responsible for soil erosion.**

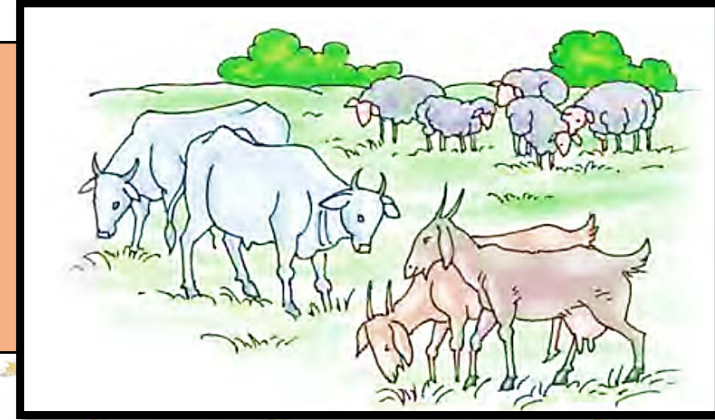


**Ploughing**





- **Overgrazing of cattle and farming also leads to erosion of the soil.**



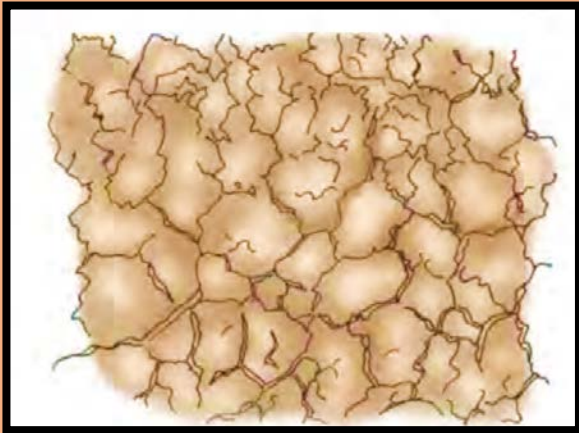
**Cattle grazing**





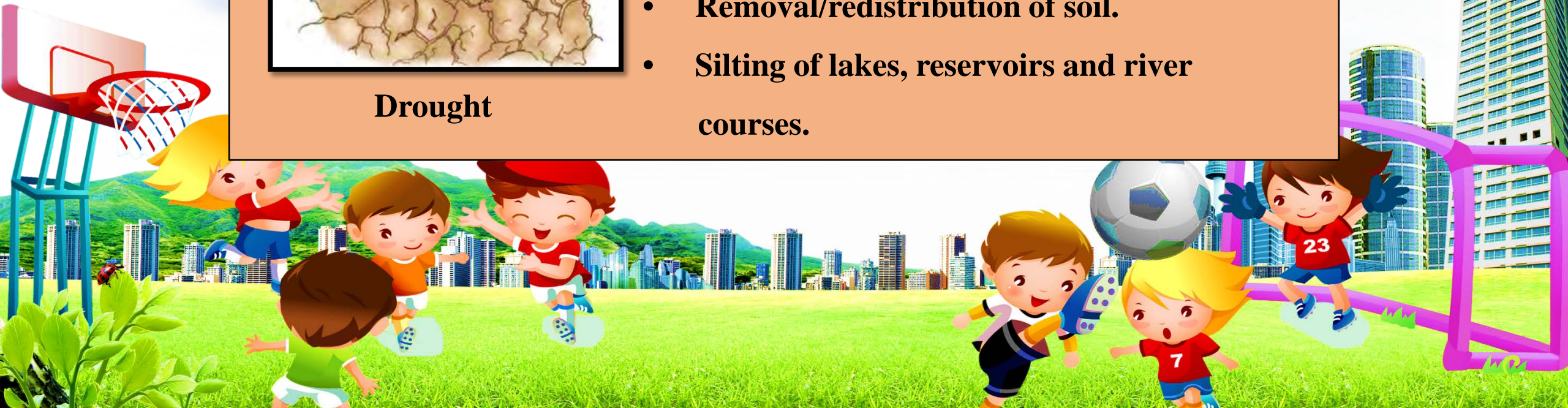
## Consequences of Soil Erosion

- Soil loses its fertility when the upper level of soil gets washed away.



Drought

- Growing the same crop repeatedly on the same piece of land will deplete a particular nutrition in soil.
- Removal/redistribution of soil.
- Silting of lakes, reservoirs and river courses.





- **Pollution of soil and water by contaminants and nutrients.**
- **Destruction of habitat.**



**Habitat destruction**





## Prevention of Soil Erosion

Adopting various methods and practices, for making the soil healthy, is called **soil conservation**. The aim of soil conservation is, to prevent erosion, overuse and contamination of soil. There are several methods to reduce soil erosion:





**1. Building terraces on hillsides.**



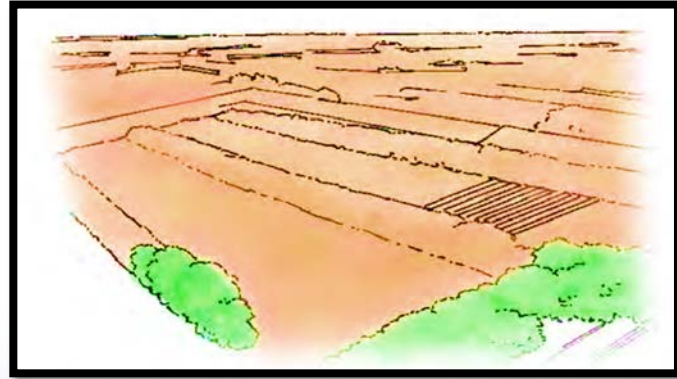


**2. Planting more trees to bind the soil together.**





3. Make wind brakes.





**4. Using fertilisers in overpopulated areas to make the soil more fertile.**





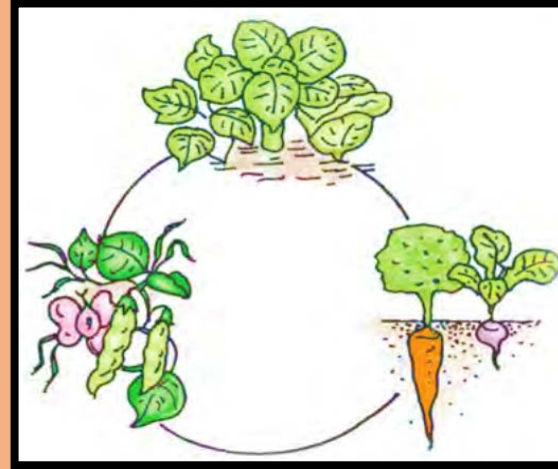
## SOIL CONSERVATION

- **Planting Vegetation:** By planting trees, grass and plants, soil erosion can be greatly prevented. Plants help to stabilize the properties of soil and trees also act as a wind barrier and prevent soil from being blown away. Roots of trees hold the soil tightly and do not allow the wind and water to carry away the soil.






- **Crop Rotation Practice:** Crop rotation is the soil conservation method where a series of different crops are planted one after the other in the same soil area. This is done to prevent the accumulation of pathogens and depletion of nutrients.







• **Terracing:** Terracing is one of the best soil conservation methods. In this method cultivation is done on a terrace leveled section of land. In terracing, farming is done on a unique step like structure and the possibility of water running off is slowed down.





## Fact File

- **Soil is a natural substance consisting of layers of mineral constituents of variable thickness.**
- **In deserts, wind build hills of sand, which are called sand dunes.**

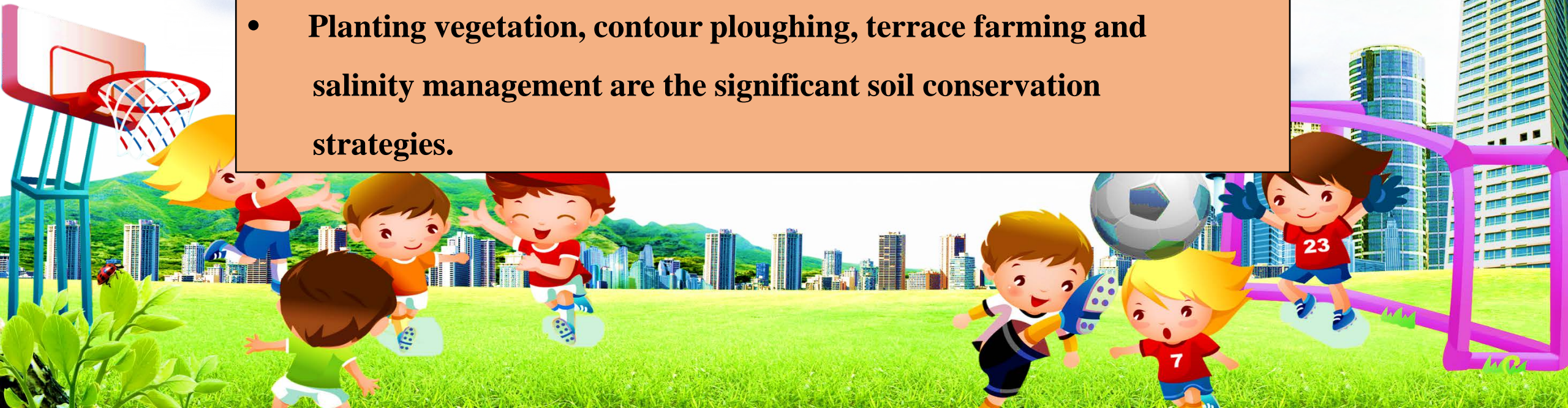






## Things to Remember

- **Both the natural and human factors cause soil erosion.**
- **Hwang-ho river is known as China's sorrow .**
- **The aim of soil conservation is to prevent soil erosion, overuse and contamination from chemicals.**
- **Planting vegetation, contour ploughing, terrace farming and salinity management are the significant soil conservation strategies.**





A scenic landscape featuring a dirt path leading through a green field towards a traditional half-timbered house and a windmill. The sky is bright blue with scattered white clouds. In the foreground, there are white daisies with yellow centers. The overall scene is bright and cheerful.

**THANK  
YOU**