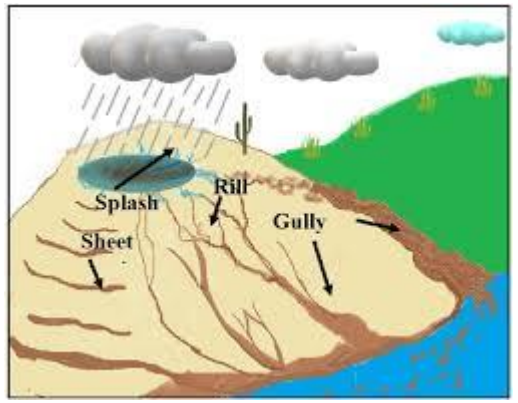
BY TEACHER DAVIS SULPHITE

SENIOR TWO TERM 1
2025



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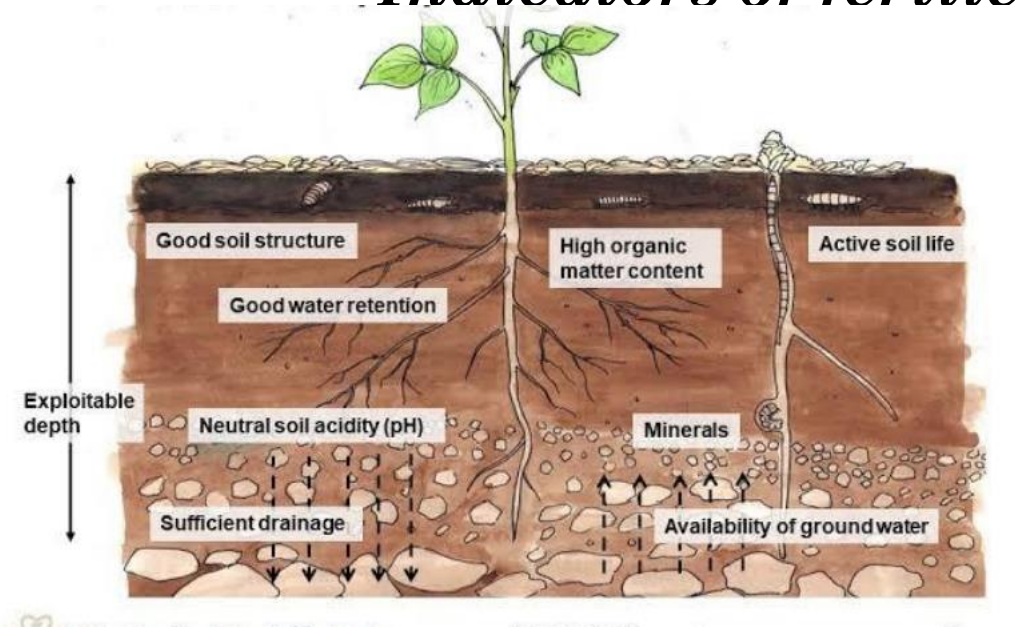
FERTILE SOIL

WHAT DO YOU THINK IS FERTILE SOIL

do you think soil fertility is important?

Indicators of fertile soil



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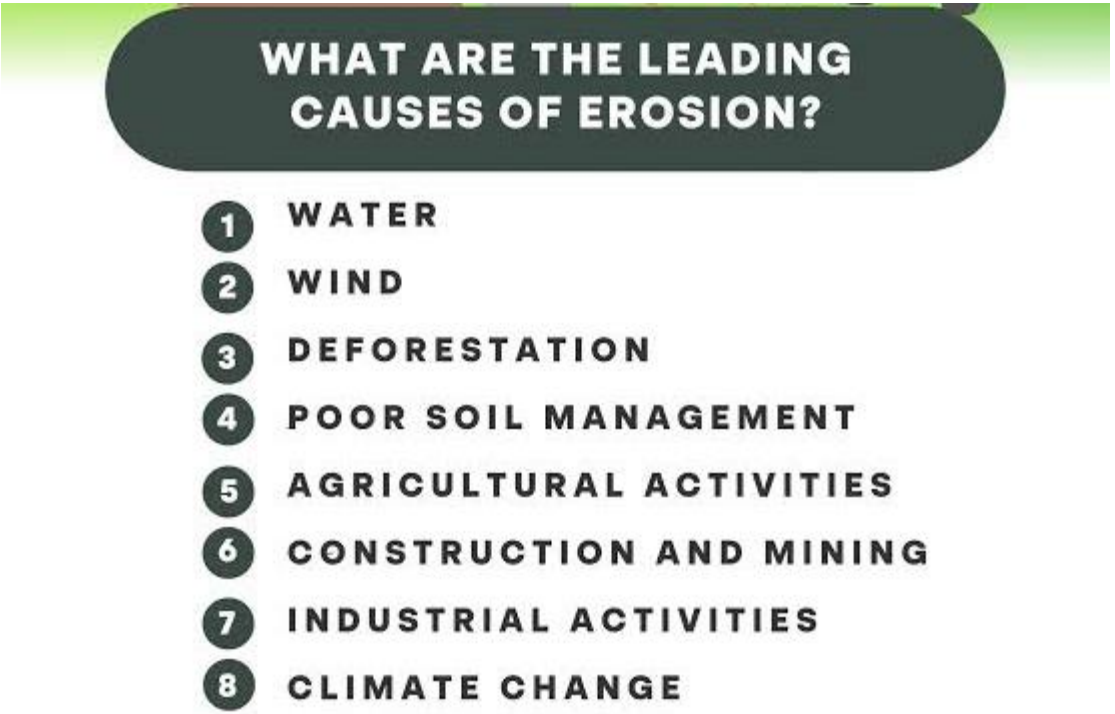
Soil erosion

- **What is soil erosion?**

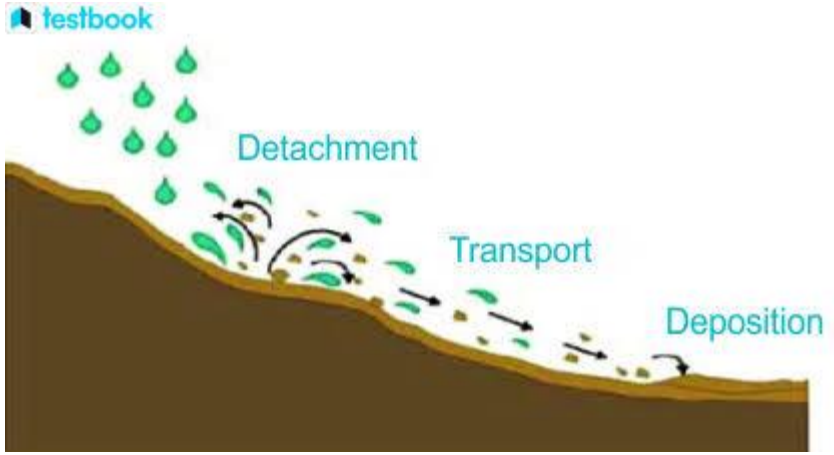
Causes of soil erosion

- Explain how each of the following contributes to the process of soil erosion



PROCESS OF SOIL EROSION

- Involve two major stages
- **Detachment** :breaking of the soil particles by agents of soil erosion
- **Transportation**: the detached particles are then moved by the agents of erosion
- They are the deposited in a given area



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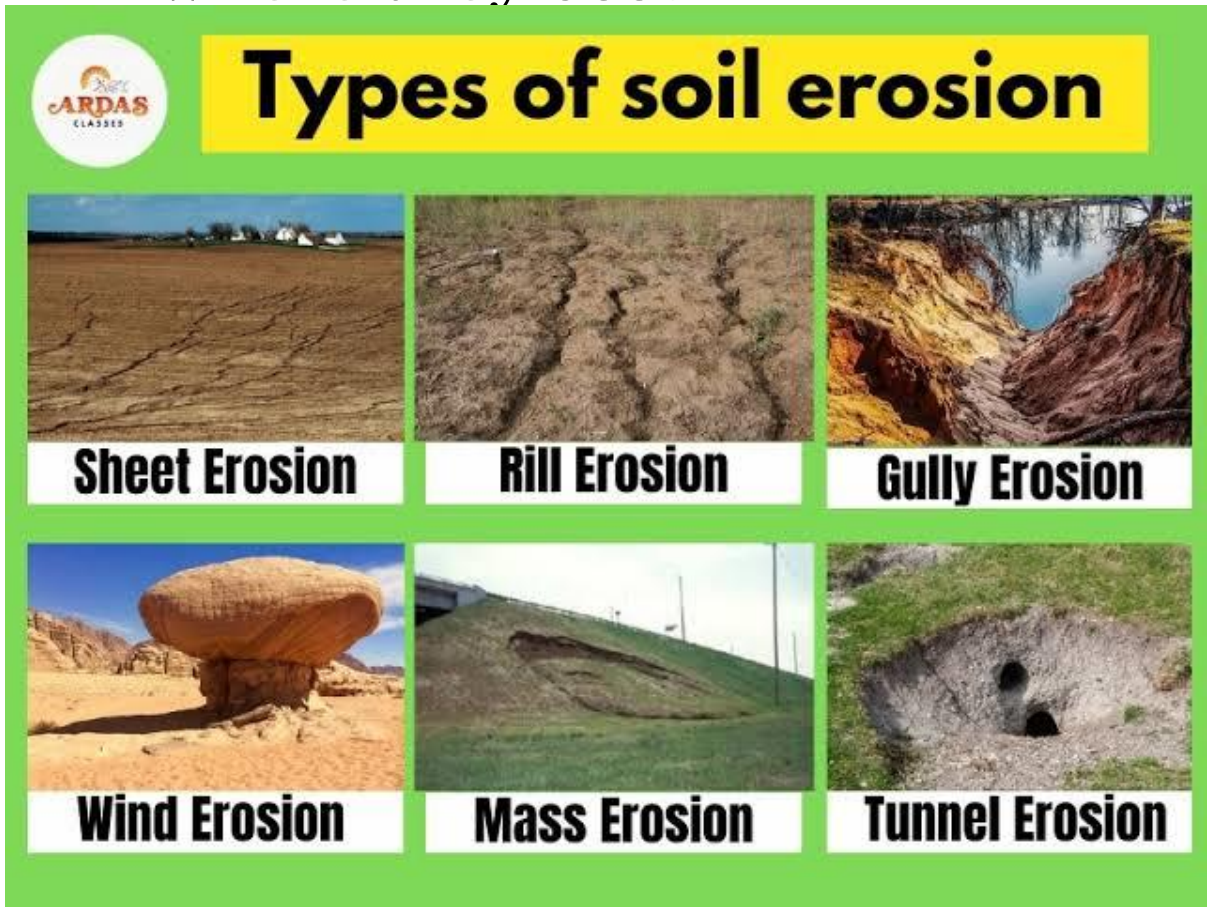
TYPES OF SOIL EROSION

- **Define the following types of soil erosion and state the areas where they occur**



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Problems caused by soil erosion:

1. Loss of valuable topsoil.
2. Burying valuable topsoil.
3. Damage to fields.
4. Plant productivity decline.
5. Desertification.

METHODS OF CONTROLLING SOIL EROSION/SOIL CONSERVATION PRACTICES

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Reduction of soil fertility

- ***Explain how each of the following activities reduce soil fertility***

Trampling of animals and moving vehicles 	Soil erosion 	Use of artificial fertilizers 
Sand mining 	Polyethene dumping every where 	Bush burning 
 deforestation	 charcoal burning	 monoculture/estate growing of crops

Having found out about the different causes of loss of soil fertility, suggest ways of maintain soil fertility in the following regions

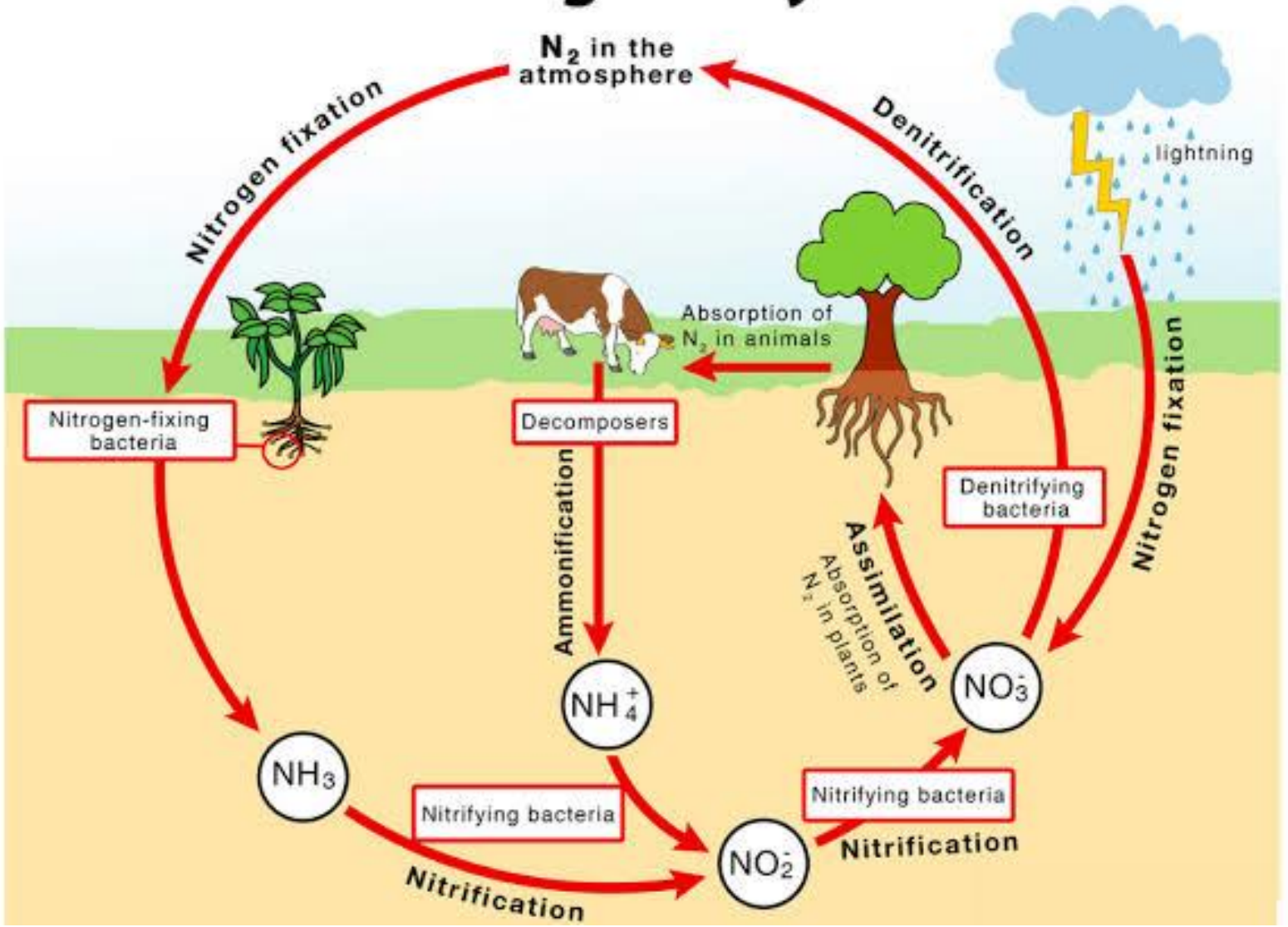
- Lake Victoria basin
- Kigezi highlands
- Karomoja region

NITROGEN CYCLE

- Nitrogen is the most abundant element in the atmosphere making up to ___% but much of it is not used because it has a triple bond between its atoms which requires a lot of energy to be broken down thus it requires a lot of conversions.
- **Research about five importances of nitrogen towards the plants?**
- the nitrogen cycle describes processes involved in the interconversions of nitrogen in the different forms
- **The processes involved include:**
- **Nitrogen fixation**
- **Nitrification**
- **Ammonification**
- **Denitrification**
- **assimilation**

CAREER POWER
AN IIT/IIM ALUMNI COMPANY

Nitrogen Cycle



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Processes in the nitrogen cycle

- **Nitrogen fixation**

This takes place during lightening, using artificial fertilisers , by nitrogen fixing bacteria like *Rhizobium spp ,death and decomposition by living organisms and other sources as seen in the diagram above*

- ***Ammonification***

This is the conversion of organic compounds into ammonia. The organic compounds are usually as a result of death and decay.

- ***Nitrification***

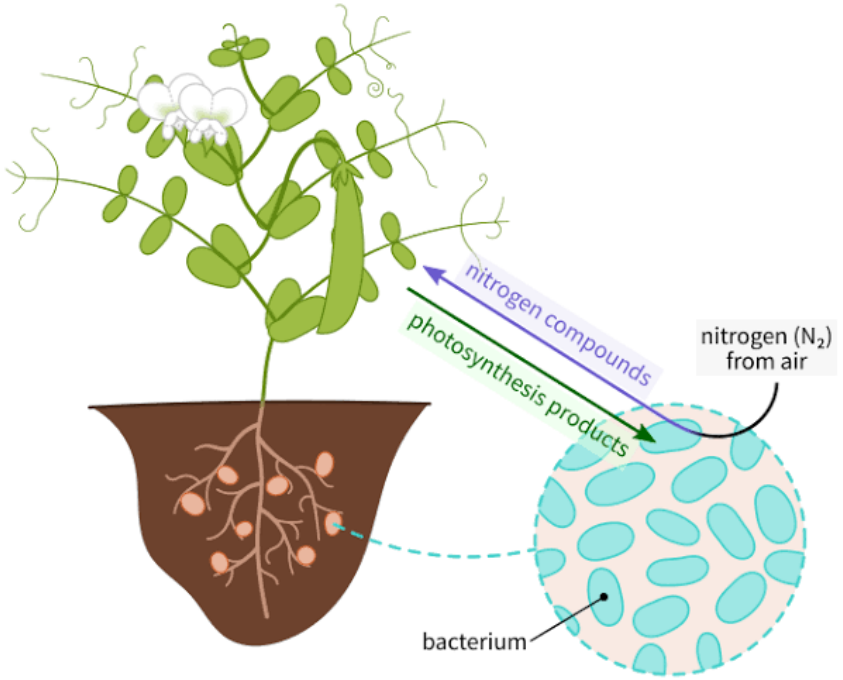
This is the conversion of ammonia into nitrites and then the nitrites are converted into nitrates which are taken up by plants through a process called ***assimilation.***

Denitrification

Loss of nitrogen to the atmosphere.

Micro organisms in root nodules

- When bran or any other **leguminous plant** is uprooted, there are swellings called root nodules. They contain micro organism that can convert atmospheric nitrogen into other forms that can be taken up by the plant.



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EFFECTS OF HUMAN ACTIVITIES ON THE NITROGEN CYCLE

Explain of the effects of the above activities towards the nitrogen cycle

 harvesting of crops	 felling of trees	weeding 
Cattle rearing 	Spraying using chemicals 	Bush burning 

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SL SCIENCE LECTURES

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