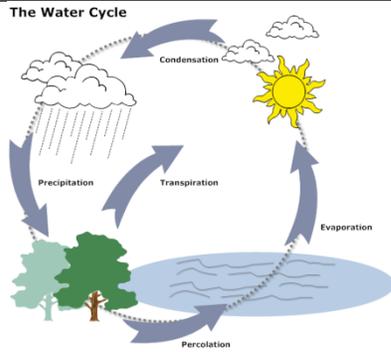


Environment Ready Reckoner 2020



Carbon Cycle

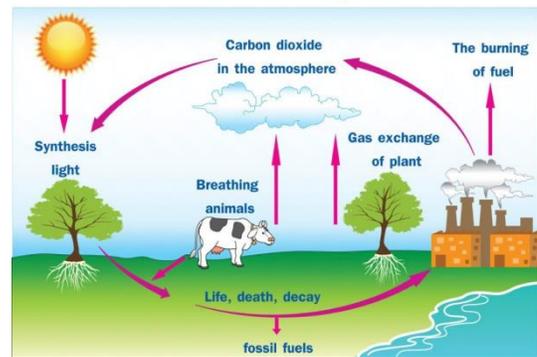
Taking Carbon out of the Atmosphere:

- Nature is constantly taking carbon out of the atmosphere. These processes are sometimes called carbon sinks.
- **Photosynthesis** - Plants use photosynthesis to make energy and grow. They take carbon dioxide (CO₂), sunlight, and water and turn it into oxygen and sugar. Large areas of plants like the rainforest help to remove lots of carbon from the atmosphere.
- **The ocean** - Ocean water does a lot to remove excess carbon from the atmosphere. Carbon dioxide in the air reacts with the sea water to make **carbonic acid** in the ocean. If there is too much carbonic acid, it may lead to **acid rain**. However, **some** carbonic acid is **good** as it is used by sea organisms to make their **shells**. These shells will eventually become sedimentary rock like limestone.

Moving Carbon into the Atmosphere:

- At the same time that some processes of nature are removing carbon from the air, other processes are adding more carbon to the air. These processes are called sources.
- **Decay** - When plants and animals die they decay. When this happens, the carbon in their body will either be released into the atmosphere or stored in ground as fossil fuels.
- **Respiration (breathing)** - Every time you breathe you turn oxygen into carbon dioxide. This is true of every animal on Earth.
- **Combustion (burning)** - When plants, trees, or fossil fuels are burned, carbon is released into the atmosphere.

Carbon cycle



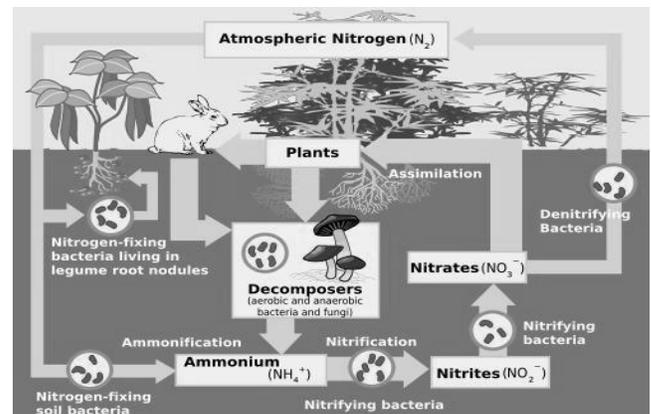
Nitrogen Cycle

Why is nitrogen important to life?

Plants and animals could not live without nitrogen. It is an important part of many **cells and processes** such as **amino acids, proteins, and even our DNA**. It is also needed to make **chlorophyll** in plants, which plants use in photosynthesis to make their food and energy.

Process of Nitrogen Cycle:

This picture shows the flow of the nitrogen cycle. The most **important** part of the cycle is **bacteria**. Bacteria help the nitrogen change between states so it can be used. When nitrogen is absorbed by the soil, different bacteria help it to change states so it can be absorbed by plants. Animals then get their nitrogen from the plants.



Processes in the Nitrogen Cycle:

- **Fixation** - Fixation is the first step in the process of making nitrogen usable by plants. Here bacteria change nitrogen into ammonium.
- **Nitrification** - This is the process by which ammonium gets changed into nitrates by bacteria. Nitrates are what the plants can then absorb.