



**Leaving Cert Agricultural
Science**

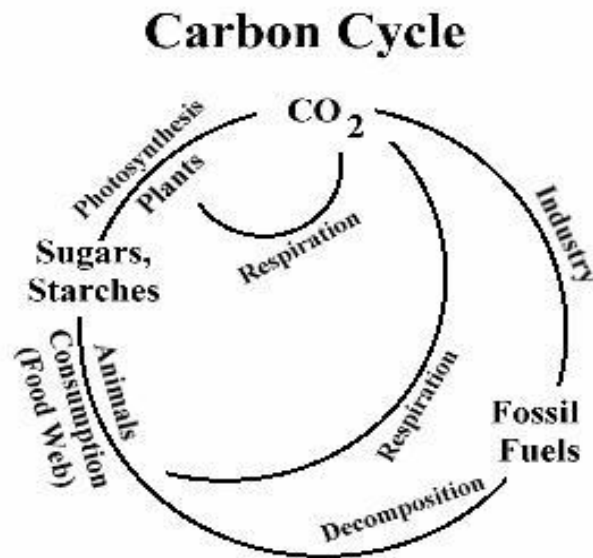
Free Notes

The Carbon Cycle

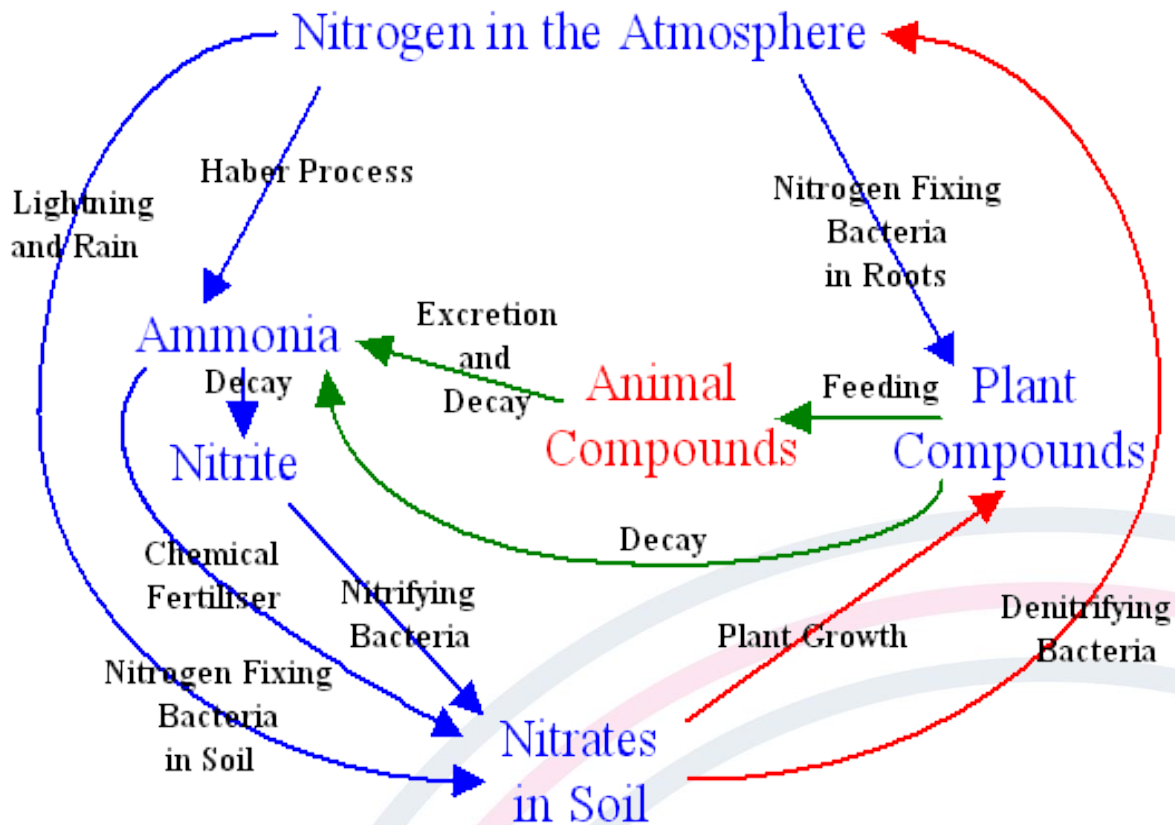


The Carbon Cycle:

- This is one of the most important cycle of events in which a plant and soil undergo.
- Involved in the process of photosynthesis i.e. the plant uses CO_2 to make O_2 and food for the environment.
- The reverse reaction to photosynthesis is respiration, i.e. animals that respire plants use the carbon source to make oxygen and carbohydrate (glucose).



The Nitrogen Cycle;



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- Nitrogen makes up almost 80% of air on earth.
- Plants cannot use this atmospheric nitrogen in this form
- Soil organisms convert this into nitrates and nitrites for the plant to use and make protein to help the plant undergo photosynthesis.
- Enzymes within the plant are made up of these proteins.
- Chlorophyll production also occurs in this process.
- Ammonia that enters the soil is also converted by the soil organisms (Nitrifying bacteria) into nitrites as well.
- This converts into nitrates after.
- Protein can be applied from a source of beet tops or green manure. This resists leaching.
- Disadvantage: time consuming. Urea in soil is obtained from animals, it is soluble in air and can scorch soil and is easily leached.
- Ammonia is not readily available originally in soil, as a result it isn't as easily leached as urea.

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