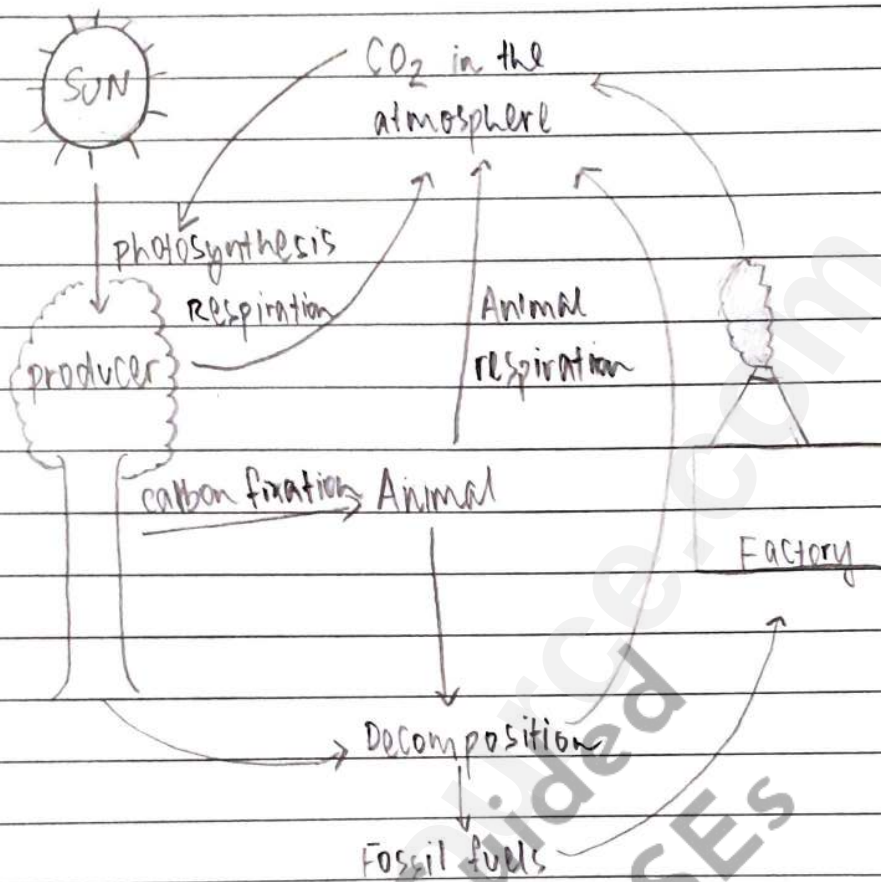




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B13 Human influences on ecosystems



Carbon cycle is the flow of carbon compounds through plants, animals, decomposers and their environment.

Combustion of fossil fuels leads to an increase in CO_2 concentration in the atmosphere, leading to an enhanced greenhouse effect.

Cutting down of forests means less photosynthesis so a decrease in O_2 concentration in the atmosphere.

Effects of deforestation:

habitat destruction

-extinction

-loss of soil

-flooding

-increase in CO_2 concentration in the atmosphere

- Soil erosion occurs when soils that are thin are washed away easily. This causes the loss of plant nutrients. The land eventually becomes a desert.
- More flooding occurs as there are fewer trees to absorb rain water.
- More CO_2 in atmosphere, leading to enhanced greenhouse effect and more global warming, as less trees to absorb.
- Extinction of species could occur by the destruction of habitats and reduction in biodiversity, leading to a disruption in food chains, webs and the ecosystem.

Sources and effects of pollution of water

- Chemical waste: factories
 - Release of toxic substances, resulting in death of aquatic species.
- Discarded rubbish: domestic waste
 - Ingestion of waste by aquatic life can lead to death
 - Leakage of toxics
- Untreated sewage: human and livestock waste
 - reduction of oxygen concentration
- Fertilisers: arable agriculture
 - eutrophication in fresh water

Eutrophication is the enrichment of waters with plant nutrients that can stimulate growth of algae and plants.

1. Increased availability of nitrate ions by leaching.
2. Ions stimulate growth of producers, mainly algae.
3. Algae covers surface so light does not reach plants below.
4. Plants below die.

5. Algae also die due to competition and lack of resources.
6. There is increased decomposition ^{after} death of producers.
7. Decomposers respire aerobically, using dissolved oxygen.
8. Oxygen concentration reduces.
9. Death of organisms that require dissolved oxygen.