

Nutrient Cycles

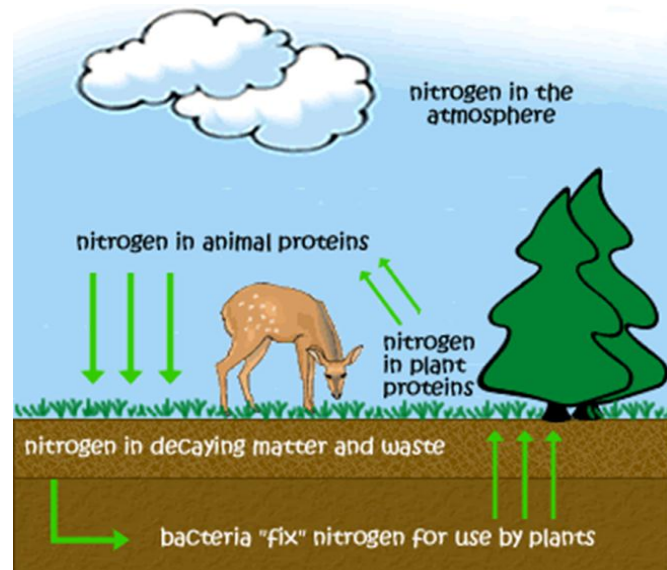
1. Energy Flow and the Law of Conservation

- a. Energy is crucial to an ecosystem, but organisms also need water, minerals, and other compounds to sustain life. In most organisms, 95% of the body consists of four key elements:

_____.

Although these four elements are common on Earth, organisms cannot use them unless the elements are in a chemical form that the cells can take up.

2. **The Nitrogen Cycle** - The nitrogen cycle is a complex biogeochemical cycle in which nitrogen is _____ from its _____ atmospheric molecular form (N_2) into a form that is _____ in biological processes.



- a. Root nodules

- i. _____ (beans and peanuts) have bacteria that live in the roots and "fix" the _____ (N_2) into a form of nitrogen, _____, (NH_3) that plants can use
- ii. The plants are then eaten by _____, transferring the nitrogen.

- b. Why is this important?

- i. Why do we need nitrogen? -

_____.

- ii. What would happen if we removed one part of the Nitrogen cycle?

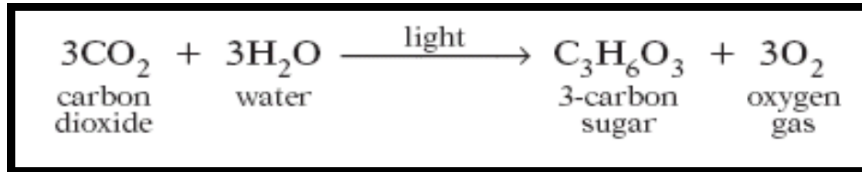
_____.

- iii. What happens when we break part of the cycle?

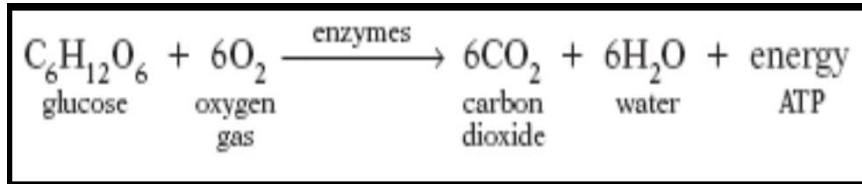
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3. The Carbon Cycle

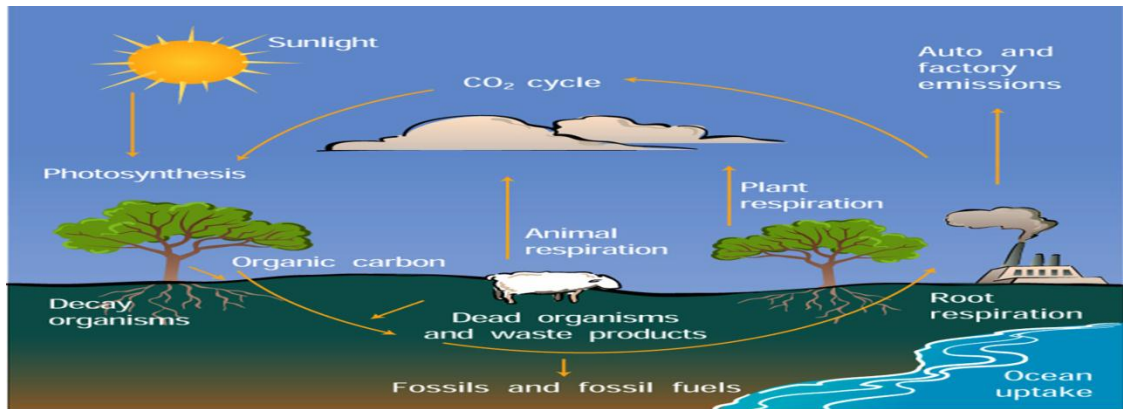
a.



b.



c. As you can see _____ and _____ are cycled back in forth in these two process - photosynthesis in _____ and cellular respiration in _____ organisms



4. Carbon and Oxygen Cycle

- Look at the cycle-Which part of this cycle has changed drastically over the last 200 years? _____
- Why has combustion increased?

- How has increased combustion affected the Earth?

4. What has global warming caused?

5. Looking at the cycle how could we counteract the combustion?
