How Savanna Plants Get Nutrients

This activity focuses on how plants get these three nutrients from their environment.

Carbon
Nitrogen
Phosphorus

Carbon

Source: Carbon dioxide (CO_2) in the air.

Plants use CO_2 during photosynthesis to build organic compounds.

During photosynthesis, light energy is converted into chemical energy and stored in carbon-containing sugar molecules, which are then used to make other molecules such as starch, cellulose, and other organic compounds. These organic compounds are food for all consumers in the ecosystem.

See our animation for more details on photosynthesis: https://www.hhmi.org/biointeractive/photosynthesis

Nitrogen

Source: Ammonium (NH_4^+) and nitrate (NO_3^-) in the soil

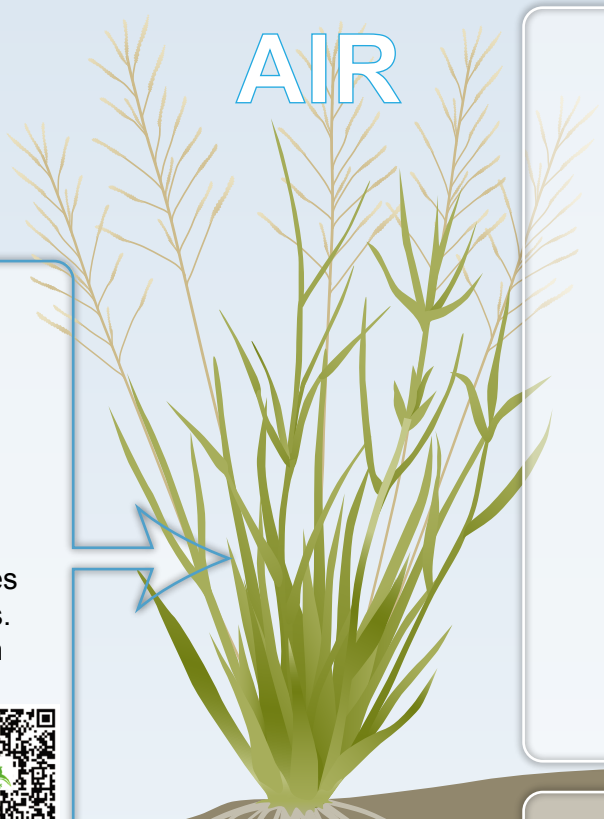
Plant nitrogen is found in amino acids, the building blocks of proteins, and nitrogenous bases, which are components of DNA, RNA, and ATP.

Phosphorus

Source: Phosphate (PO_4^{3-}) in the soil

Plants use phosphate groups to make nucleotides for DNA and RNA, phospholipids for cell membranes, and ATP (energy carrier molecules).

Use the cards to fill in the bubbles and discover how nutrients move through the savanna ecosystem.



DETRITIVORE CARDS

MICROBE CARDS