

Nutrient Cycles

Biology

Carbon and nitrogen, and the processes that move each.

The key processes in each cycle.

Cycle	Processes
Carbon	Photosynthesis, respiration, decomposition, combustion
Nitrogen fixation	$N_2 \rightarrow$ ammonia, by bacteria or lightning
Nitrification	Ammonia $\rightarrow$ nitrite $\rightarrow$ nitrate
Assimilation	Plants take up nitrate
Ammonification	Decomposers release ammonia
Denitrification	Nitrate $\rightarrow N_2$, anaerobic

Nitrogen is 78% of the atmosphere and unusable by plants as N_2 .
Fixation by bacteria is the bottleneck for all life.