

## NUTRIENT CYCLES REVIEW OF IONS AND CHEMICAL FORMULAS

### The Carbon Cycle

$\text{CO}_2$	carbon dioxide
$\text{CaCO}_3$	limestone or calcite – in rock or incorporated into shells of organisms
$\text{CO}_3^{2-}$	carbonate ions (mainly dissolved in seawater)
$\text{C}_6\text{H}_{12}\text{O}_6$	glucose in plants

### The Nitrogen Cycle

$\text{N}_2$	nitrogen gas
$\text{NH}_3$	ammonia
$\text{NH}_4^+$	ammonium ions
$\text{NO}_2^-$	nitrite
$\text{NO}_3^-$	nitrate
$\text{N}_2\text{O}$	nitrous oxide gas (a greenhouse gas)
$\text{HNO}_3$	nitric acid (acid rain)

### The Phosphorous Cycle

$\text{PO}_4^{3-}$	phosphate ions
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### The Sulfur Cycle

$\text{SO}_4^{2-}$	sulfate ions
$\text{FeS}_2$	iron sulfide (pyrite – “fool’s gold”)
$\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$	calcium sulfate (gypsum)
$\text{H}_2\text{S}$	hydrogen sulfide gas
$\text{SO}_2$	sulfur dioxide gas
$\text{H}_2\text{SO}_4$	sulfuric acid (acid rain)