

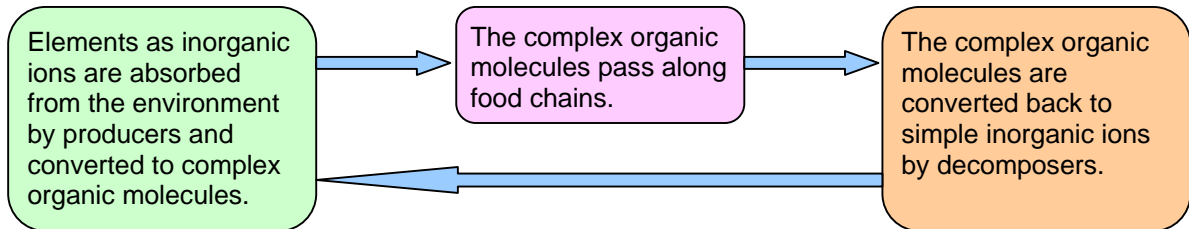
# Nitrogen Cycle

## Extension material – HL only

### ❖ The Nitrogen Cycle

#### Biogeochemical Cycles

All chemical elements occurring in organisms are part of biogeochemical cycles and these cycles involve water, land and the atmosphere.



#### Autotrophs and Chemoautotrophs

- ◆ Autotrophs are organisms (green plants, some protists and some bacteria) that obtain their energy from the sun and use this to fix carbon dioxide. This is photosynthesis.
- ◆ Chemoautotrophs obtain their energy (ATP) by oxidising inorganic substances and use some of that energy to fix carbon dioxide, eg. nitrifying bacteria such as *Nitrobacter*.

Chemoautotrophy is only found amongst prokaryotes.

#### Nitrogen Cycle

