

Balancing Redox Reactions

Redox Reactions involve the transfer of electrons from one molecule to another. A helpful mnemonic is **OIL RIG**: **O**xidation **I**nvolves **L**oss and **R**eduction **I**nvolves **G**ain.

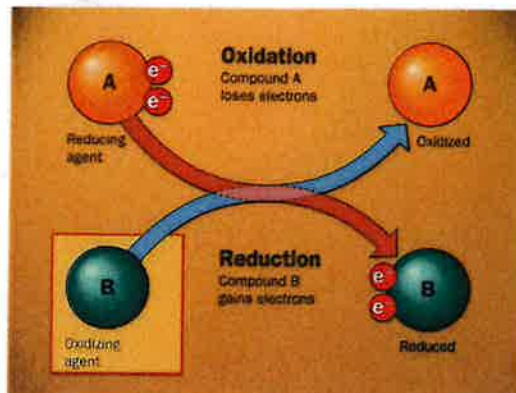
Terminology

Reduction: when a molecule gains electrons.

Oxidation: when a molecule loses electrons

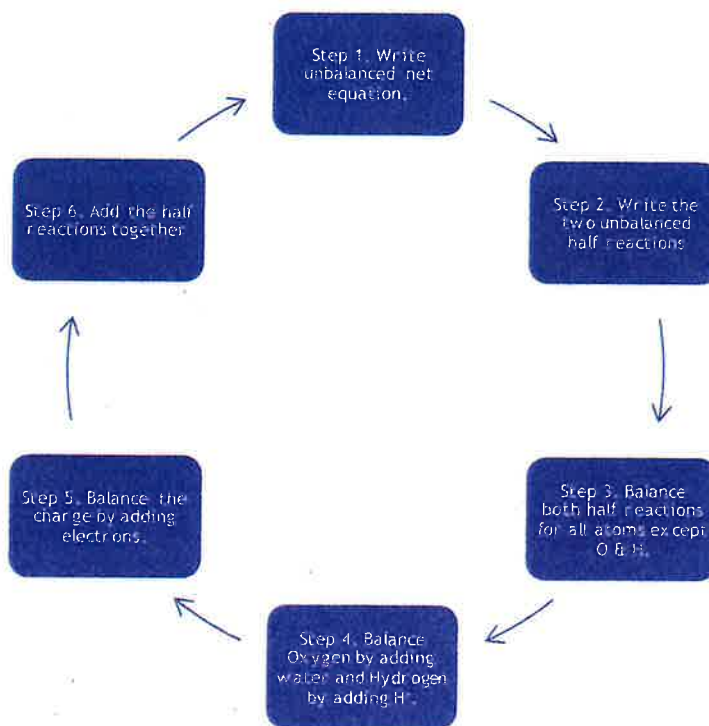
Oxidizing agent: gains electrons during reaction

Reducing agent: loses electrons during reaction



Balancing by the Half Reaction method

Key: A redox reaction can be broken into two parts (two half reactions). One half of the reaction will describe the oxidation part of the process and the other reaction will describe reduction.



- Note: On step 5 be sure to multiply by a suitable number to make the electron count the same in both reactions. On step 6 be sure to cancel the electrons and anything else that appears on both sides of the reaction equation.