

# Le Chantelier's Principle

changes in equilibrium

as a result of a change in concentration, temperature or pressure

**Increasing Concentration**

shift AWAY from substance

extra concentration needs to be used up

**Decreasing Concentration**

shift TOWARDS substance

need to produce more of substance

exothermic reaction

**Increasing Temperature**

AWAY from heat/energy

extra heat/energy must be used up

endothermic reaction

**Decreasing Temperature**

TOWARDS heat/energy

more energy needs to be produced

**Increasing Pressure**

towards FEWER moles of gas

pressure increase = volume decrease (for a gas)

**Decreasing Pressure**

towards MORE moles of gas

pressure decrease = volume increase (for gas)