Kinetics Knowledge organiser

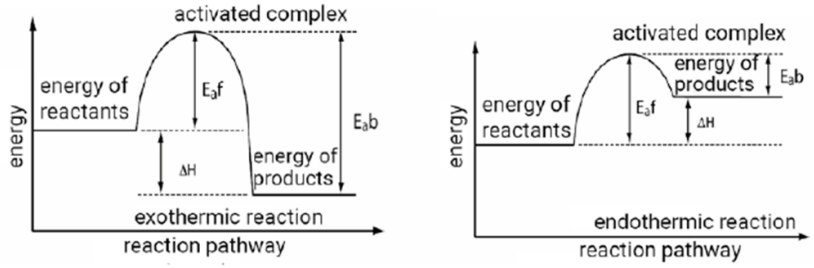
1. Vocabulary

Collision theory	For a reaction to occur the reactants have to collide with sufficient energy and in the correct orientation
Activation energy	The minimum energy needed for a collision to create a successful reaction
Rate of reaction	The amount of product made or reactant used up in a given time

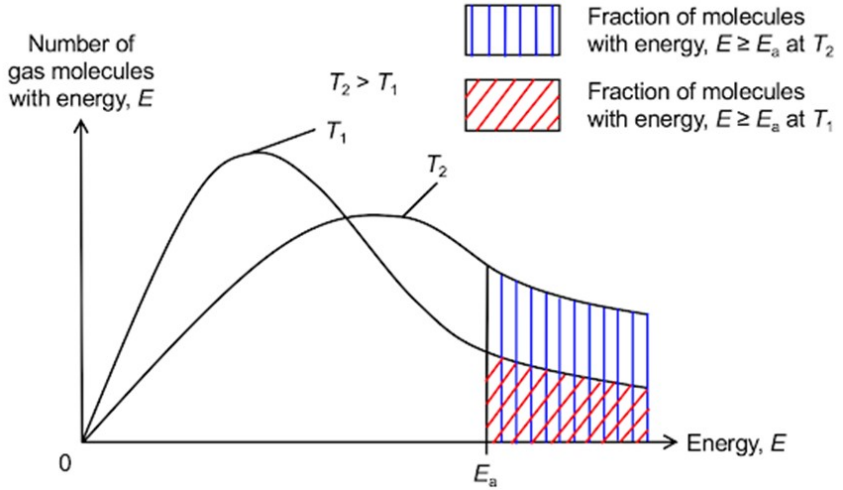
2. Factors the increase the rate of reaction

concentration	More particles in a given spec so more collisions and increased rate
Pressure	More particles in a given spec so more collisions and increased rate
Surface area	High surface area increases the number of particles available to collide so increases rate
Temperature	Increases the kinetic store of the particles so they collide more frequently and with a greater proportion above the activation energy
Catalyst	Speed up reaction by providing an alternative route with a lower activation energy

3. Reaction profiles



4. Maxwell-Boltzmann distribution



Line starts at origin	No particles have no energy
Asymptotic	some particles have infinite energy
Area under the curve	Number of particles
Height of curve	Most probable energy

4. Catalysts