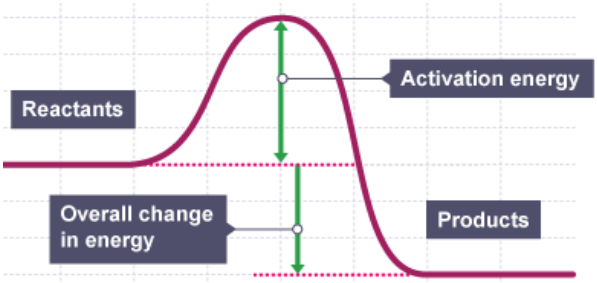
2.4: Chemical reactions and energy

Exothermic reactions

- results in a temperature increase, as energy is transferred to the surroundings
- e.g. combustion and neutralisation
- 

- More energy is released in forming bonds than breaking bonds.

Endothermic reactions

- results in a temperature decrease, as energy is taken in from the surroundings
- e.g. electrolysis
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- Less energy is released in forming bonds than breaking bonds.

Activation energy

- the minimum amount of energy required to start a reaction

Bond energy data

- used to calculate overall energy change
- energy change = 'bond breaking' – 'bond forming'
- If the value for energy change is positive, the reaction is endothermic.
- If the value for energy change is negative, the reaction is exothermic.