Chemical Equilibrium
Check out TED ED

If molecules were people... - George Zaidan and Charles Morton

- Equilibrium – 'state of balance'
- Dynamic equilibrium - two opposing motions balance each other- going backwards on an escalator

Chemical equilibrium

- Some chemical reactions have a forward and back reaction.
- The reaction goes to completion when the concentration of reactants and products are the same. This is known as dynamic equilibrium.
- Chemical equilibrium is a state of dynamic balance where the rate of the forward reaction equals the rate of the reverse reaction.
- Le Chatelier's principle
- If a stress is applied to a system at equilibrium, the system readjusts to relieve the stress applied.

The equilibrium constant

- Kc gives us an indication of how far the reaction has gone forwards.
- The bigger the Kc the reaction lies to the RHS.

The smaller the Kc the reaction the reaction lies to the LHS.

The temperature is always stated for a particular Kc.

For the Leaving Cert. Units don't matter.

The equilibrium constant

- $N_2 + 3H_2 \rightleftharpoons 2NH_3$

- $Kc = \dfrac{[NH_3]^2}{[N_2][H_2]}$

Square brackets essential

This question comes up regularily in Q4 OL

Exam questions for ThursdayOL

- 2014 Q.10 (c)
- 2013 Q.4 (i)
- 2012 Q.4(b)
- 2011 Q.4(g)
- 2010 Q.4(i)
- 2009 Q.4 (j)
- 2008 Q4 (h)
- 2008 Q10 (c)
- 2007 Q.4 (e)
- 2006 Q.4 (h)
- 2005 Q.4 (i)
- 2004 Q.4 (i)

Exam questions to be done for Easter holidays

- 2014 Q.9
- 2013 Q.9
- 2012 Q.11 (b)
- 2011 Q.9 (b) not on syllabus anymore
- 2010 Q.7
- 2009 Q.11(a)
- 2008 Q.7
- 2007 Q.10(a)
- 2006 Q.11 (b) not on syllabus anymore
- 2005 Q.9
- 2004 Q.9
- 2003 Q.10 (c)