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| **8 Chemical Equilibrium** |  |  |  |
| Each topic has a set of boxes which the pupil can tick to show how well they understanding or how well they know the topic. This is useful for revision. **Bold text** indicates Higher Level. |  |  |  |
| **8.1 Chemical Equilibrium (8 class periods)**By the end of this section pupils should be able to  | **Good** | **Fair** | **Poor** |
| explain what is meant by a reversible reactionexplain what is meant by dynamic equilibriumexplain what is meant by chemical equilibriumstate the equilibrium law (Kconly)write expressions for Kc **perform calculations involving equilibrium constants (*K*c)** |  |  |  |
| **8.2 Le Chatelier’s Principle (5 class periods)**By the end of this section pupils should be able | **Good** | **Fair** | **Poor** |
| state Le Chatelier’s principleuse Le Chatelier’s principle to predict the effect (if any ) on equilibrium position of concentration, pressure, temperature and catalystperform simple experiments to demonstrate Le Chatelier’s principle using the following equilibrium mixtures* CoCl42– + 6H20 ⇔Co(H20)62+ + 4Cl–

(to demonstrate the effects of both temperature changes and concentration changes on an equilibrium mixture)* Cr2O72– + H2O ⇔2CrO42– + 2H+
* Fe3+ + CNS**–** ⇔Fe(CNS)2+

(to demonstrate the effects of concentration changes on an equilibrium mixture)discuss the Industrial application of Le Chatelier’s principle in the catalytic oxidation of sulfur dioxide to sulfur trioxide and in the Haber process |  |  |  |