

SC12: **Reversible Reactions and Equilibria (Paper 1)**

SC13: **Transition Metals, Alloys and Corrosion (Paper 1)**

Lesson	Objectives Tracker Sheet	Date covered	I know this well	I need to do more work on this
SC12a Dynamic equilibrium	C4.13 Recall that chemical reactions are reversible, the use of the symbol \rightleftharpoons in equations and that the direction of some reversible reactions can be altered by changing the reaction conditions			
	C4.14 Explain what is meant by dynamic equilibrium.			
	C4.15 Describe the formation of ammonia as a reversible reaction between nitrogen (extracted from the air) and hydrogen (obtained from natural gas) and that it can reach a dynamic equilibrium.			
	C4.16 Recall the conditions for the Haber process as: a temperature 450°C b pressure 200 atmospheres c iron catalyst.			
	C4.16 Recall the conditions for the Haber process as: a temperature 450°C b pressure 200 atmospheres c iron catalyst.			
SC13a Transition metals	5.1C Recall that most metals are transition metals and that their typical properties include: high melting point high density the formation of coloured compounds catalytic activity of the metals and their compounds as exemplified by iron.			
SC13b Corrosion	5.2C Recall that the oxidation of metals results in corrosion.			
	5.3C Explain how rusting of iron can be prevented by: exclusion of oxygen exclusion of water sacrificial protection.			
SC13c Electroplating	5.4C Explain how electroplating can be used to improve the appearance and/or the resistance to corrosion of metal objects.			
SC13d Alloying	5.5C Explain, using models, why converting pure metals into alloys often increases the strength of the product.			
	5.6C Explain why iron is alloyed with other metals to produce alloy steels.			
SC13e Uses of metals and their alloys	5.7C Explain how the uses of metals are related to their properties (and vice versa), including aluminium, copper and gold and their alloys including magnalium and brass.			

