SALTERS ADVANCED CHEMISTRY

"CHECK YOUR NOTES" : ASPECTS OF AGRICULTURE

Print the list below and **tick the box supplied when you have covered the topic in your notes**. Most of the points are covered in the ***Chemical Ideas***, with supporting information in the ***Storyline*** or ***Activities***. However, if the main source of information is the ***Storyline*** or an ***Activity***, this is indicated.

1	The ways in which chemists can help food production, including providing extra nutrients, controlling soil pH and controlling pests (the **Storyline** in general).	☐
2	The effect of temperature on the rate constant of the reaction.	☐
3	The redox reactions involved in the interconversion of the following species in the nitrogen cycle: nitrogen gas, nitrate(V) ion, nitrate(III) ion, ammonium ion, dinitrogen oxide (N_2O), nitrogen monoxide (NO), nitrogen dioxide (NO_2) (**Storyline AA3**; **Activity AA3.2**).	☐
4	An outline of the manufacture of ammonia by the Haber Process, including essential conditions (**Storyline AA3**).	☐
5	Why the conditions in the Haber Process are chosen, including the effect the conditions have on the position of equilibrium and on the rate of reaction (**Storyline AA3**).	☐
6	The expression for the equilibrium constant, K_p, for reactions involving gases (in terms of partial pressures).	☐
7	How values of K_p, together with given data on partial pressures, are used to carry out calculations concerning the composition of equilibrium mixtures.	☐
8	The trends in reactions of the elements, and the properties of their compounds, across a period in terms of structure and bonding, including: the reactions of the elements with oxygen, chlorine and water; the acid-base character of oxides; the behaviour of chlorides towards water.	☐
9	The relationship between the structure and bonding of a substance and its properties.	☐
10	The partition equilibrium that occurs when a solute is distributed between two immiscible solvents.	☐
11	The design of pesticides that combine maximum efficacy with minimum environmental damage (**Storyline AA4**).	☐