## SALTERS ADVANCED CHEMISTRY "CHECK YOUR NOTES" : MINERALS TO ELEMENTS

Print the list below and tick the box supplied when you have covered the topic in your notes. If the main source of information is the *Storyline* or an *Activity*, this is indicated.

1	Calculations involving concentrations of solutions.	
2	The classification of elements into s, p and d blocks.	
3	The electronic configuration of atoms from hydrogen to krypton in terms of main energy levels and s, p and d atomic orbitals.	
4	The following physical properties of the halogens: appearance (including state) at room temperature, volatility, solubility in water and in organic solvents.	
5	Assigning oxidation states to the elements in a compound and the use of oxidation states to decide which species have been oxidised and which reduced in a redox reaction.	
6	Redox reactions of s- and p-block elements in terms of electron transfer, using half-equations to represent the oxidation and reduction reactions.	
7	The redox changes which take place when chlorine, bromine and iodine react with other halide ions and the relative reactivity of the halogens.	
8	The redox changes occurring in the extraction of bromine from sea water ( <b>Storyline M1</b> ; <b>Activity M1.2</b> ).	
9	The reaction between halide ions and silver ions.	
10	How a hazardous substance like bromine is handled and transported ( <b>Storyline M1</b> ; <b>Activity M1.4</b> ).	
11	The economic importance of bromine and chlorine and their compounds ( <b>Storyline M1</b> ).	
12	The structure of an ionic lattice, e.g. sodium chloride.	
13	Writing ionic equations to represent precipitation reactions and other reactions involving ionic compounds.	
14	The hydration of ions in aqueous solution.	
15	The major stages in the extraction of a pure metal from its ore (Storyline M2).	
16	The environmental implications of mineral extraction (Storyline M2).	
17	Flow diagrams for chemical processes ( <b>Storyline</b> in general).	
18	Recognising from the balanced equation for a reaction whether it is an acid-base, a redox or a precipitation reaction.	
19	Identification of the proton donor and proton acceptor in an acid base reaction.	
20	The procedure for carrying out an acid-alkali titration and how to work out the results ( <b>Activity M2.4</b> ).	
21	The procedure for vacuum filtration ( <b>Activity M2.3</b> ).	
22	Examples of giant covalent (network) structures, such as diamond and silicon(IV) oxide ( <b>Activity M2.6</b> ).	
23	Interpreting differences in the physical properties of CO <sub>2</sub> and SiO <sub>2</sub> in terms of their different structures ( <b>Activity M2.6</b> ).	