MANOR SCHOOL
SPORTS COLLEGE

Year 11 into 12 Transition Task Two

Subject	Chemistry

This work is intended to support your ability to successfully make the transition to A Level study. You **do not** need to send this work to us.

Tasks

1. Go through each of the videos in this playlist. It is suggested that you go through them in order. The first five do not have any voiceover on them. It is suggested that you create notes as you go through them using the Cornell note system, but this is not essential. You will probably not be able to go through them all in one go so return to follow on from where you left off.

2. There are several common compounds from your GCSE studies that have names that do not help to work out their formulas. For example, water is H_2O.
   What are the formulas of the following compounds?
   a. Methane
   b. Ammonia
   c. Hydrochloric acid
   d. Sulfuric acid
   e. Sodium hydroxide
   f. Potassium manganate(VII)
   g. Hydrogen peroxide

3. Chemical reactions never create or destroy atoms. They are only rearranged or joined in different ways.
   The reactants and products in this reaction are known and you can't change them. The compounds can't be changed and neither can the subscripts because that would change the compounds. So, to balance the equation, a number must be added in front of the compound or element in the equation. This is a coefficient. Coefficients show how many atoms or molecules there are.
   Write balanced symbol equations for the following reactions. You'll need to use the information on the previous pages to work out the formulas of the compounds. Remember some of the elements may be diatomic molecules.
   a. Aluminium + oxygen → aluminium oxide
   b. Methane + oxygen → carbon dioxide + water
   c. Aluminium + bromine → aluminium bromide
   d. Calcium carbonate + hydrochloric acid → calcium chloride + water + carbon dioxide
   e. Aluminium sulfate + calcium hydroxide → aluminium hydroxide + calcium sulfate

   Harder:
   f. Silver nitrate + potassium phosphate → silver phosphate + potassium nitrate

   More challenging:
   g. Potassium manganate(VII) + hydrochloric acid → potassium chloride + manganese(II) chloride + water + chlorine

If you have any questions, please science@manor.school