**Year 10 Chemistry - semester 2**

**Activity 1 - Preparation of copper chloride from copper carbonate**

**Aim** to use your knowledge of chemical reactions to convert copper carbonate to copper chloride.

**Materials:** crucible, clay pipe triangle, copper carbonate, (2g), matches, hydrochloric acid (20 mL of 2M), filter paper

**Method**:

1. Place a tiny amount of copper carbonate in the bottom of a test tube and add a few drops of acid and observe what happens. Discard this.
2. Take about 2 g of copper carbonate and heat it in a crucible to decompose it.
3. Allow the crucible to cool then add 1 drop of acid to the powder. If there is bubbling it shows you need to further heat the copper carbonate.
4. Slowly add acid until all of the solid has dissolved.
5. Filter the solution into an evaporating basin and heat it to reduce the volume of liquid.
6. Allow the remaining liquid to cool and evaporate

**Results**

Record you observations of the copper compound:

* before heating
* after heating
* after acid was added
* the final crystals.

**Questions**

Write balanced equations that show what happened when:

* Acid was added to copper carbonate.
* Copper carbonate was heated
* Acid was added to the black powder