

S3 Chemistry Unit 1 Metal Reactions and Extractions

**Homework 2 – Extraction of Copper**

1. Write up the experiment you carried out to extract copper metal from the oxide ore. You should include

**Aim**

**Equipment list**

**Method – what you did**

**Labelled diagram**

2. Explain the purpose of the carbon in this experiment
3. Write a word equation for the extraction of copper from the oxide by heating with carbon
4. What is the name of the chemical reaction that occurs when copper is extracted from its ore?
5. Write word equations for the extraction of two different metals that can also be extracted from their oxide ore by heating with carbon
6. Why was the hot copper cooled quickly in cold water and not left to cool gradually in the test tube?
7. Different ores of copper exist. Covellite ( $\text{CuS}$ ) and Malachite ( $\text{Cu}_2\text{CO}_3$ ) are two common ores. a) Calculate the gram formula mass of both of these ores.  
b) write the chemical formulae for BOTH ions found in Covellite ore