**Student Worksheet**

**Practical 1: How many moles in your name / Who’s got the biggest mouth?**

**Equipment/materials**

* Chalk
* Plastic cups
* Mass balance

**Objective**

* Be able to measure mass accurately.
* Be able to calculate the number of moles present.

**Safety**

**Data**

The following data is for the calculation:

H = 1.0, Ca = 40.1, O = 16.0, C = 12.0, Fe = 55.8

**Procedure**

**How many moles in your name:**

1. Weigh a piece of chalk, CaCO3.
2. Go outside and write your name on the ground.
3. Reweigh the piece of chalk.

**Who’s got the biggest mouth:**

1. Weigh a cup of water, H2O.
2. Take the biggest mouthful you can.
3. Reweigh the cup of water.

**Questions**

1. What is the chemical formula for chalk?
2. Why does calcium have an Ar of 40.1 instead of 40?
3. What is the % of calcium in CaCO3?

**From the examiner…**

* Record masses to the number of decimal places appropriate for the balance used.
* Consider how many significant figures to use within the calculation.
* Consider how many significant figures to use in your final answer.

**Analysis of results**

* Calculate the mass of chalk use in your name.
* Calculate the Mr of CaCO3.
* Calculate the number of moles of calk, CaCO3 used.
* Calculate the mass of water.
* Calculate the Mr of H2O
* Calculate the number of moles of H2O your mouth can hold.