

Year 10 Science Assessment 1: Practical investigation - INSTRUCTIONS

Last Term our context was "Leave no man behind" and we were learning about Chemical reactions and chemical warfare.

Today you are going to be performing a number of investigations to decide whether a **chemical or physical reaction** has taken place or not.

You will be graded on your results table and conclusion where you will be noting down your observations

Instructions:

1. Following the instructions below. (DO NOT mix things together that have not been instructed)
2. Carry out the experiments described below. In each case, you should:
 - look carefully at what happens and write down your observations
 - decide if a reaction has taken place
 - see if any changes are reversed when you stop heating or leave the tube to stand
 - decide if a chemical reaction has taken place
 - record your results in a table.
3. Record your results in a table (that has been labelled scientifically)
4. Decide if there has been a reaction or not and JUSTIFY (explain) your answer

Apparatus

- Bunsen burner
- Heatproof mat
- Test Tube Rack
- Thermometer
- Eye Protection
- Test tube holder
- Test Tubes
- Chemicals



Make sure you are Wearing eye protection for all these experiments.

Be especially careful with the hydrochloric acid and the ammonia solution.

Method – experiment 1

Place two spatulas of sugar (sucrose) in a test tube. Heat the tube gently. Leave the hot tube in a rack to cool down.

Method – experiment 2

Fill a test tube about one-quarter full with copper sulphate solution. Add ammonia solution drop by drop to the copper sulphate until the tube is about three-quarters full.

Method – experiment 3

Half fill a test tube with dilute hydrochloric acid. Measure the temperature of the acid. Add a spatula of magnesium carbonate. Leave the tube to stand. Measure the temperature when the reaction has finished.

Method – experiment 4

Put about 2 cm depth of sodium carbonate solution into a test tube. Add an equal volume of iron chloride solution.

Method – experiment 5

Put two spatulas of zinc oxide in a test tube and heat with a roaring Bunsen flame. Observe what happens. Leave the test tube to cool in a test tube rack on the heatproof mat. Observe what happens again.

Method – experiment 6

Half Fill a test tube with copper sulphate solution. Put a little iron wool into the copper sulphate solution. Watch what happens.

