

Topic	Required practical name
Practical skills	Errors and uncertainty
Biology - Cell Biology	Use a light microscope to observe, draw and label a selection of plant and animal cells. A magnification
Biology - Cell Biology	Investigate the effect of a range of concentrations of salt or sugar solutions on the mass of plant tissue.
Biology - Organisation	carbohydrates, lipids and proteins. To include: Benedict's test for sugars; iodine test for starch; and Biuret reagent for protein.
Biology - Organisation	Investigate the effect of pH on the rate of reaction of amylase enzyme.
Biology - Bioenergetics	investigate the effect of light intensity on the rate of photosynthesis using an aquatic organism such as pondweed.
Chemistry - Chemical changes	Preparation of a pure, dry sample of a soluble salt from an insoluble oxide or carbonate, using a Bunsen burner to heat dilute acid and a water bath or electric heater to evaporate the solution.
Chemistry - Chemical changes	Investigate what happens when aqueous solutions are electrolysed using inert electrodes. This should be an investigation involving developing a hypothesis.
Chemistry - Energy changes	Investigate the variables that affect temperature changes in reacting solutions such as, eg acid plus metals, acid plus carbonates, neutralisations, displacement of metals.
Physics - Energy	An investigation to determine the specific heat capacity of one or more materials. The investigation will involve linking the decrease of one energy store (or work done) to the increase in temperature and subsequent increase in thermal energy stored.
Physics - Electricity	Use circuit diagrams to develop and construct appropriate circuits to investigate the factors affecting the resistance of electrical circuits. This should include: the length of a wire at constant temperature
Physics - Electricity	Use circuit diagrams to develop and construct appropriate circuits to investigate the factors affecting the resistance of electrical circuits. This should include: combinations of resistors in series and parallel.
Physics - Electricity	Use circuit diagrams to construct appropriate circuits to investigate the I–V characteristics of variety of circuit elements including a filament lamp, a diode and a resistor at constant temperature.

Physics - The particle model of matter

Use appropriate apparatus to make and record the measurements needed to determine the densities of regular and irregular solid objects and liquids. Volume should be determined from the dimensions of regularly shaped objects and by a displacement technique for irregularly shaped objects. Dimensions to be measured using appropriate apparatus such as a ruler, micrometer or Vernier callipers.

Paper practical mark: Video link for support

All papers [Errors & Uncertainties - GCSE Science Practical Skills](#)

Biology Paper 1 [Microscopy - How to use a microscope - GCSE Science Required Practical](#)

Biology Paper 1 [Osmosis - GCSE Science Required Practical](#)

Biology Paper 1 [Food Tests - GCSE Science Required Practical](#)

Biology Paper 1 [Enzymes - GCSE Science Required Practical](#)

Biology Paper 1 [Rates Of Photosynthesis - GCSE Science Required Practical](#)

Chemistry Paper 1 [Making Salts - GCSE Science Required Practical](#)

Chemistry Paper 1 [Electrolysis - GCSE Science Required Practical](#)

Chemistry Paper 1 [Temperature Changes - GCSE Science Required Practical](#)

Physics Paper 1 [Specific Heat Capacity - GCSE Science Required Practical](#)

Physics Paper 1 [Resistance of a Wire - GCSE Science Required Practical](#)

Physics Paper 1 [Resistors in Series & Parallel - GCSE Science Required Practical](#)

Physics Paper 1 [Testing Components \(I-V Characteristics\) - GCSE Science Required Practical](#)

