Required practical in science exams

Biology paper 1

- Using a light microscope and calculating magnification
- Investigating osmosis in plant tissues at different concentrations
- Food tests for carbohydrates, lipids, proteins and sugars
- Investigating the effect of pH on the enzyme amylase
- Investigating the effect of light intensity on the rate of photosynthesis

Single science

 Investigating the effects of antiseptics or antibiotics on bacteria using zones of inhibition

Chemistry paper 1

- Preparing a soluble salt from an insoluble oxide or carbonate
- Aqueous electrolysis
- Investigate variables that effect temperature changes e.g acid plus metal, carbonate, alkalis.

Single science

 Determination of reacting volume or concentration between an acid and an alkali using titration

Physics paper 1

- Determining the specific heat capacity of a solid or liquid
- Using circuit diagrams to test for factors effecting resistance in circuits
- IV characteristic for the filament lamp, diode and fixed resistor
- Identifying density of regular and irregular solids and liquids
- Investigating the relationship between force and extension of a spring
- Investigating the effect of force and mass on acceleration (Newton's 2nd law)

Single science

 Investigate the effectiveness of different materials as thermal insulators

Biology paper 2

- Plan and carry out an investigation into human reaction time.
- Measure population size in a habitat using sampling techniques- quadrats and transect lines

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Single science

- Investigate the effect of light or gravity on newly germinated seedlings
- Investigate the effect of temperature on the rate of decay for fresh milk by measuring pH change

Chemistry paper 2

- Investigate rate of reaction measuring volume of gas, mass lost, colour change or turbidity
- Chromatography
- Analysis of water using pH testing, dissolved solid testing and distillation

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Single science

 Using chemical analysis to identify ions in a compound – flame tests, sodium hydroxide tests, sulphate tests, halide tests

Physics paper 2

- Using the ripple tank to measure frequency, wavelength and wave speed
- Investigating how the infra-red absorbed or emitted depends on the surface of the object

Single science

 Investigating reflection and refraction