Hampshire County Council
Improvement and Advisory Service

HIAS MOODLE OPEN RESOURCE

# Revision priorities for students targeting grade 77+

## AQA Combined Science (Trilogy)

Richard Wilson
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Final version

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## AQA Combined Science (Trilogy)

Based on the recurring Higher Tier emphasis across papers.

### Biology Revision Priorities

**1. Genetics and Inheritance**

- Punnett squares with probability
- Mutations and protein synthesis
- Evaluating genetic evidence

**2. Homeostasis**

- Hormonal pathways (ADH, insulin, negative feedback)
- Thermoregulation
- Kidney function and ultrafiltration

**3. Advanced Ecology**

- Trophic levels, biomass calculations
- RP: quadrats and transects – statistics and assumptions
- Evaluating environmental impacts

**4. Enzymes and Bioenergetics**

- Rate graphs
- Limiting factors in photosynthesis
- Aerobic vs anaerobic respiration

## Chemistry Revision Priorities

### 1. Quantitative Chemistry

- Moles equations, balancing, limiting reactants
- Concentration and titration-style problems
- Percentage yield and atom economy

### 2. Bonding and Structure

- Explaining properties using bonding models
- Intermolecular forces
- Polymers and giant structures

### 3. Electrolysis

- Half-equations
- Predicting products
- Required practical interpretation

### 4. Rate of Reaction

- Interpreting graphs and calculating gradients
- Collision theory and detailed explanations

### 5. Organic Chemistry

- Homologous series
- Reaction pathways
- Isomerism (where applicable in Trilogy pathways)

## Physics Revision Priorities

### 1. Electricity

- Charge, current, resistance, power
- Rearranging equations
- Interpreting I-V graphs

### 2. Energy and Particle Model

- SHC, SLH, density calculations
- Energy transfer pathways
- Efficiency

### 3. Forces

- Resultant forces
- Velocity-time and distance-time graphs
- Momentum and stopping distances

### 4. Waves

- Wave equation
- RP: ripple tank — measurement, errors
- Interpreting wave diagrams

### 5. Magnetism and Induction

- Fleming’s rules
- Electromagnets in applications
- Induced potential / generators

# Science

Richard Wilson richard.wilson2@hants.gov.uk

Emma Cooper emma.cooper3@hants.gov.uk

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htlcdev@hants.gov.uk

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