# Curriculum Map: AQA Applied Science; Examined Units

THE KING'S ACADEMY
Emmanuel Schools Foundation

AQA's **Level 3 Applied General** qualification in **Applied Science (Extended Certificate)** combines content from across biology, chemistry and physics and is assessed through coursework and modular exams. Along with building knowledge, students develop in practical science and build transferable skills such as problem-solving, research, and communication.

AQA Unit Exam

Rehearsal examination

Unit Link

**Exams**

Continuation of Coursework Units;

Opportunities for Unit 1, 3, 4 Exam Resits

*Unit 4 Exam*

*Spring*

Unit 4, Musculoskeletal System

Unit 4, Nervous System & Brain

How do joints, the skeleton, and muscles function?

How is oxygen transported?

How are the nervous system and brain structured?

What chemical and electrical processes are responsible for nerves and synapses?

Why do the conditions Alzheimer's, Parkinson's, and depression occur?

How is the digestive system adapted for its functions?

*Autumn*

Unit 4, Oxygen Transport

*Unit 1, 1c*

Unit 4, Nerve Impulses

*Unit 4 Rehearsal*

Unit 4, Digestive System & Diet

Unit 1, 3c Dynamics (Phys)

**Year 13**

*Unit 1 Exam*

*Progression Week*

How are formulae used to calculate energy and power?

How can motion be represented graphically?

How do Newton's laws predict motion and interaction?

Evaluate energy generation sources

*Unit 1 Rehearsal*

*Unit 1, 2e*

Unit 1, 3a Energy & Efficiency (Phys)

What is energy and how is efficiency calculated?

Unit 1, 2a Atomic Structure (Chem)

Unit 1, 2b Periodic Table (Chem)

Unit 1, 2d Bonding & Structure (Chem)

*Summer*

*Unit 4*

Unit 1, 1c The Heart (Bio)

How does the heart work? Why is homeostasis important?

How are substances absorbed into cells?

How are atoms structured and how is the periodic table organised?

How does chemical bonding influence properties?

How is enthalpy measured and calculated?

Unit 1, 2e Enthalpy (Chem)

*Unit 1, 3a*

*Unit 3 Exam*

Unit 1, 1d Homeostasis (Bio)

Unit 1, 2c Amount of Substance (Chem)

*Unit 4*

*Unit 2 Coursework*

*Unit 2 Coursework*

*Spring*

Unit 1, 1b Transport Mechanisms (Bio)

Unit 1,1e Breathing & Respiration (Bio)

Unit 1, 3b Electricity

**Year 12**

*Autumn*

What are the roles and responsibilities of scientists?

How is scientific information best communicated to the public?

What is the biochemistry behind photosynthesis and respiration?

How are key calculations in electronics carried out?

How are cells structured and observed?

*Unit 3 Rehearsal*

Unit 3, Science in the Modern World

Unit 1, 1f Photosynthesis & Food Chains (Bio)

*Unit 2 Coursework*

Unit 1, 1a Cell Structure (Bio)

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Required practical
NEA/coursework deadline
Unit Link

## Year 12

### Autumn

Unit 2, Applied Experimental Techniques

How can chemists quantitatively analyse solutions?

How do you carry out an accurate titration?

What are the principles behind colourimetry?

How can respiration and photosynthesis rates be measured?

How and why does resistivity vary?

*Unit 1, 2c*

*Titration Deadline*

*Unit 1, 3b*

*Colourimetry Deadline*

### Spring

What is specific heat capacity?

*Unit 1, 1f*

*Unit 1, 1e*

*Unit 1, 3a*

Why is SHC important in industry?

How are portfolios of practical write-ups best presented?

How can we choose reliable sources for background research?

Why is referencing important, and what is best practice?

*Photosynthesis Deadline*

*Respiration Deadline*

### Summer

*Specific Heat Capacity Deadline*

*Resistivity Deadline*

*Progression Week*

Continuation of Taught Examined Content;

Unit 2 Coursework Corrections & Compilation

*Unit 2 Coursework Submission*

*Unit 2 Coursework Final Draft Deadline*

## Year 13

### Autumn

Unit 5, Investigating Science

Unit 6b Medical Physics

How do electrochemical cells work?

How is physics used in the diagnosis and treatment of patients?

How do you plan, record, conclude, and evaluate an investigation?

How do imagine technologies (X-ray, CAT, PET, MRI, ultrasound) work?

What is half-life and how is it measured?

*Unit 5 Coursework Pt 1 Deadline*

*Unit 5 Coursework Pt 2 Deadline*

*Unit 6b Coursework P01 Deadline*

### Spring

How are radioisotopes used safely?

*Unit 6b Coursework P02 & PO3 Deadline*

How do optical fibres and lasers work?

*Unit 5 Coursework Submission*

*Unit 5 Coursework Final Draft Deadline*

*Unit 6b Coursework Submission*

*Unit 6b Coursework Final Draft Deadline*

*Unit 6b Coursework P04 Deadline*

Exams

NEA/coursework deadline

Unit Link