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Thank you for joining today's event

Introducing Cambridge Advanced Nationals (AAQs) in Applied Science & Human Biology

- The session will begin at 4pm
- If you have any questions for us, please type them into the chat window

Scan me

Check out the specs and SAMs here

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Book a meeting with us:

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Introducing Cambridge Advanced Nationals (AAQS)

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What are Alternative Academic Qualifications (AAQs)?

Designed for students aged 16 to 19 years, AAQs are Level 3 qualifications that can be combined with A Levels, or with themselves, as part of a post-16 study programme.

Cambridge Advanced Nationals, our AAQs, encourage students to:

develop subject specific key knowledge, understanding, and skills

think creatively, innovatively, analytically, logically, and critically

develop valuable communication skills that are important in all aspects of further study and life

develop transferable skills, such as evaluation, planning, presentation, and research skills

develop independence and confidence in applying their knowledge and skills

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Where do they fit in a post-16 study programme?

Students who don't want to study only A Levels (or a T Level), can choose a mixed study programme. With the rules of combination being relaxed, students can combine a variety of qualifications with no minimum number of A Levels

Cambridge Advanced Nationals are designed to complement other existing qualifications, including A Levels, and provide flexibility for students, allowing them to choose subjects that best align with their abilities and goals

Cambridge Advanced Nationals are currently available as a Certificate or Extended Certificate

The Certificate is equivalent to an AS Level and the Extended Certificate is equivalent to an A Level.

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Examples of qualification combinations

These can be taken alongside complementary qualifications to create a study programme. Here are some examples of possible combinations:

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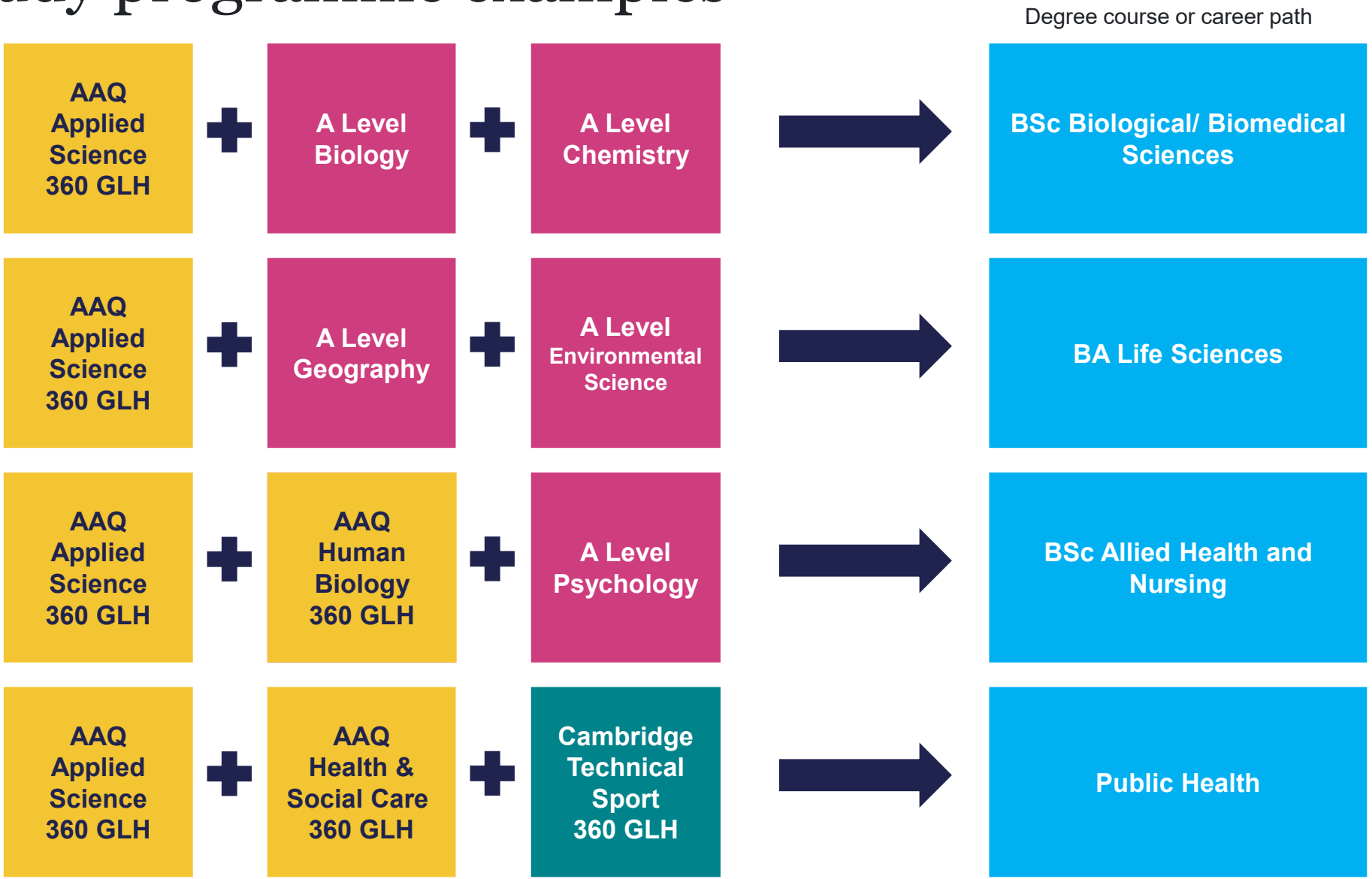
Study programme examples



Post-16 mixed study programme examples based on:

- 1 AAQ + 2 A Levels
- 2 AAQs + 1 A Level
- 3 AAQs
- 2 AAQs + 1 Cambridge Technical

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How are Cambridge Advanced Nationals assessed?

Cambridge Advanced Nationals are assessed holistically and have a simple and intuitive assessment model, comprising:

externally assessed units, which focus on subject knowledge and understanding

applied or practical non-exam assessment units (NEA)

optional NEA units to provide flexibility

Subject	Qualification	Size	External assessment	NEA
Applied Science	Certificate	180 GLH	50%	50%
Human Biology	Certificate	180 GLH	40%	60%
Applied Science Human Biology	Extended Certificate	360 GLH	40%	60%

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UCAS tariff points and Higher Education support

Cambridge Advanced Nationals are worth UCAS Tariff points and our qualifications are on the UCAS Tariff points calculator.

Certificate		AS Level		Extended Certificate		A Level	
Distinction*	28 points			Distinction*	56 points	A*	56
Distinction	24 points			Distinction	48 points	A	46
		A	20			B	40
Merit	16 points	B	16	Merit	32 points	C	32
		C	12			D	24
		D	10	Pass	16 points	E	16
Pass	8 points	E	6				

We have letters of support from a wide range of universities, including Russell Group universities.

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Why choose Cambridge Advanced Nationals (AAQs)?

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Why choose Cambridge Advanced Nationals (AAQs)?

Every mark matters: We've removed hurdles because we want students to achieve their full potential. Our marking criteria are all worth one point each, and those points are all included in calculating the overall qualification grade. **No marks go to waste**

Features teachers love and more: we've kept **visiting moderation**, a blend of exam and coursework units, a Certificate drop-down, and we're keeping the well-recognised Pass, Merit, Distinction, Distinction* grade scale

Pathways to university: Designed in **collaboration with teachers and universities**, Cambridge Advanced Nationals equip students with UCAS points and a well-rounded skill set for today's undergraduate studies as part of a Level 3 programme of study

Complementary practical application: Designed to be taken alongside A Levels, Cambridge Advanced Nationals seamlessly complement a mixed study programme while maintaining a strong focus on the practical application of skills and knowledge – a valuable supplement to A Levels, **preparing students for university or employment**.

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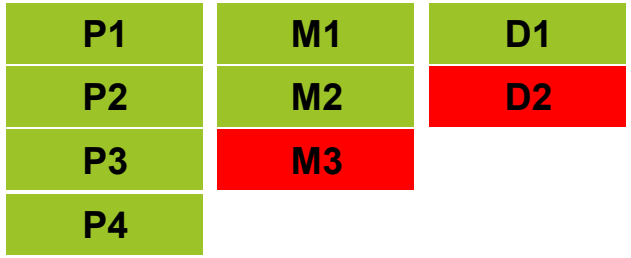
Our marking approach – every mark matters

How it works at qualification level

Each mark that a student achieves counts towards their final qualification outcome.

Old hurdles model



The red criteria haven't been achieved. In the model above, M1, M2 and D1 wouldn't count towards the final qualification grade, because the student would be capped at a Pass.

Our new model

Using our new approach, M1, M2 and D1 all count towards the final qualification grade, as every mark counts.

Boundaries* for each unit can be found in the specification. The example above is simplified for illustration.

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Every mark matters – at unit level

Green criteria have been achieved, red have not been achieved.

Old hurdles model

In the model above, the student would fail the unit, as they haven't achieved all the Pass criteria.

Our new model

Using our new approach, the same student would now pass the unit – as they've achieved enough criteria and points to meet the pass boundary.

No need for a near pass. Full compensation model applies to the EA and NEA units

Boundaries* for each unit can be found in the specification. The example above is simplified for illustration.

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Every mark matters – the detail

An example of a 60GLH unit in our new Cambridge Advanced Nationals

Total number of criteria: **22** (11 Pass, 6 Merit, 5 Distinction)

Total required for a **Pass: 9**
Total required for a **Merit: 13**
Total required for a **Distinction: 18**

If a student achieves a pass with 12 marks, they carry 12 marks forward.

We won't cap them at 9 marks.

The total required for a Pass, Merit or Distinction can come from any unit criteria (e.g., 6 pass, 2 merit and 1 distinction would result in an overall unit Pass)

*Boundaries will be reviewed over time

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Full compensation: Exemplar – Medical Physics, Merit

Pass	Merit	Distinction
P1: Summarise the ionising diagnosis technique(s) that are suitable for the diagnosis scenario. (PO2)	**M1: Explain** why other diagnosis techniques are not suitable. (PO2)	**D1: Analyse** the advantages and disadvantages of your diagnosis plan. (PO3)
P2: Summarise the non-ionising diagnosis technique(s) that are suitable for the diagnosis scenario. (PO2)		
P3: Create a logical diagnosis plan for the patient in the diagnosis scenario, taking into account their needs. (PO4)	**M2:** Use research to **justify** the diagnosis plan for the patient in the therapy scenario. (PO4)	
P4: Create a risk assessment linked to the diagnosis plan. (PO4)		

Pass	Merit	Distinction
P5: Summarise the ionising therapy technique(s) that are suitable for the therapy scenario. (PO2)	**M3: Explain** why other therapy techniques are not suitable. (PO2)	**D2: Analyse** the advantages and disadvantages of your therapy plan. (PO3)
P6: Summarise the non-ionising therapy technique(s) that are suitable for the therapy scenario. (PO2)		
P7: Create a logical therapy plan for the patient in the therapy scenario, taking into account their needs. (PO4)	**M4:** Use research to **justify** the therapy plan for the patient in the therapy scenario. (PO4)	
P8: Create a risk assessment linked to the therapy plan. (PO4)		

Pass	Merit	Distinction
P9: Create an appropriate presentation for the chosen scenario. (PO4)	**M5: Deliver** a presentation tailored to the intended audience, including information beyond what is included in the presentation document. (PO4)	**D3: Justify** the design and content of the presentation. (PO3)
P10: Suggest adaptations to the presentation for healthcare professionals or the patient. (PO2)		

Pass	Merit	Distinction
P11: Summarise the feedback received for your chosen plan. (PO2)	**M6: Assess** the strengths and weaknesses of your chosen plan. (PO3)	**D4: Justify** potential improvements to the plan. (PO3)
		D5: Evaluate the presentation to better meet the needs of the target audience. (PO3)

Total number of criteria: **22**

(11 Pass, 6 Merit, 5 Distinction)

Total required for a **Pass: 9**

Total required for a **Merit: 13**

Total required for a **Distinction: 18**

The most accessible vocational qualification yet!

- Candidates who fail to achieve a Pass on the exam papers or NEA units will not automatically fail the qualification – final grade based on total marks achieved on all units
- Up to 3 attempts on each exam paper
- Up to 2 submissions of each NEA assignment
- Students can reattempt their NEA in class time between moderations
- The best mark from all re-attempts or re-submissions are used in the final grade

Moderation with OCR

- No Lead Internal Verifier needed and no need to submit assessment/curriculum plans
- Two long windows of submission per academic year that match the academic timetable In-person or virtual meetings to discuss internal moderation and review a sample of candidates for each unit
- Constructive feedback from moderators about areas for improvement

- ✓ **Book your moderation when you're ready for work to be reviewed**
- ✓ **One visit per window, if required**
- ✓ **Up to 3 NEAs can be moderated per visit**
- ✓ **Sample of 6 candidates for all cohort sizes**

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When can moderation take place?

2026/27

Window 1 (Winter): **30 November 2026 to 26 February 2027**

Window 2 (Summer): **8 March to 4 June 2027**

Visit the FAQs page

- Book your visit online from January 5th
- Choose your preferred weeks and method
- No data needed yet: upload total marks 10 days before visit

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Registration

Annual/September Series

For the **subject** and not the qualification size

eg 'Applied Science'

Must make **before** any unit entries

Examined unit entries

January series
June series

NEA unit entries

Moderation window 1:
February series
(Year 1: Spring 2026;
Year 2 onwards: Winter)

Moderation window 2:
June series
(Summer)

Certification entry

A certification entry must be made in the student's final series for the qualification size they wish to achieve

Certification is available every Jan/Feb/June series

Certification entries are always free

What else is unique about OCR's Science AAQs?

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Key points to know:

Set assignments for each new year 12 cohort for all NEA units, i.e. with a 2-year life-span

Clear and granular criteria: one criteria, one mark, one command word

Opportunity for students to improve and resubmit work (more on our moderation approach later)

Practical and math skills aligned to the science A levels: affordable, considerate, consistent

2 resits per exam available in a January or June series, i.e. 3 attempts per paper – best mark is used for certification

Strong focus on accessibility – mixture of question items, consistency each year – maximum 1 hour 30 per exam paper

“Paper 1: Show and Apply knowledge

Paper 2: Show, Apply, Analyse and Evaluate

Certificate option available – unique from other board’s AAQ proposals

CLEAPSS

Field Studies Council

Outdoor Learning Experiences

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Cambridge Advanced Nationals (AAQs)

Key: M Mandatory unit | O Optional unit | E Examined assessment | NEA Non-examined assessment

Applied Science

- **Fundamentals of Science** — M, E
- **Science in Society** — M, E
- **Investigating Science** — M, NEA
- **Environmental Science** — O, NEA
- **Analytical Techniques in Chemistry** — O, NEA
- **Forensic Biology** — O, NEA
- **Medical Physics** — O, NEA

Human Biology

- **Fundamentals of Human Biology** — M, E
- **Health and Disease** — M, E
- **Genetics** — M, NEA
- **Biomedical Techniques** — M, NEA
- **Human Reproduction** — O, NEA
- **The Brain** — O, NEA
- **Nutrition and Metabolism** — O, NEA
- **Drug Development** — O, NEA

Highlighted units are the mandatory units for Certificate qualification (180GLH)

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Unique features of Applied Science

- Combined science Unit F180 (Paper 1) with 20 marks for Biology, Chemistry and Physics, plus 10 marks for our six “core” practicals
- Pre-release for F181 (Paper 2) to enable you to prepare students for ~ 50% of marks
- Large (90 GLH) Investigating Science (F182) independent project that aligns with the content on F180
  - expand on the practical knowledge required for F180 during your timetabled lessons for F182
  - Read Amy’s blog to find out how this NEA can be managed and delivered successfully in your centre
- Optional NEA units with a biology, chemistry and physics theme so that you can choose based on your teaching specialisms or student curriculum pathways
- Assessments will reflect a diverse range of individuals, families and contexts (see EDIB policy)
- NEA units are either 60 or 90 GLH

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Unique features of Human Biology

- The first vocational human biology qualification from OCR
- Equal sized exam papers, with HSW and mathematical skills assessed across both (1 hour 15 mins long)
- Two mandatory 50GLH NEAs – biomedical techniques and genetics
- First qualification to use an inclusive approach to knowledge of sex organs and hormones, that includes individuals with variations in sex traits (intersex). Students will also explore the impact of bias in medical research and implications on diagnosis and treatment.
- Assessments will reflect a diverse range of individuals and families in the scenarios (see EDIB policy)
- NEAs include impact on physical and mental well-being of patients and carers of the diagnosis, treatment and rehabilitation

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Teacher feedback

Like the fact that there is a wide range of optional units to choose from that can be tailored to student and teacher needs and strengths.

Good to see that some Russell universities support and would consider this qualification on entry.

We are looking for an alternative for Applied Science following the withdrawing of AQAs offering 2025.

The external assessments appear to be quite accessible i.e. Unit 1.

We need a broad Level 3 science qualification for students who are unable to study more than one or two A Levels.

Views gathered during testing phase

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Overview of Content

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Assessment and Performance Objectives

Students are assessed on the following performance objectives:

PO1 – Show knowledge and understanding: **EA ONLY**
PO2 – Apply knowledge and understanding
PO3 – Analyse and evaluate knowledge, understanding and performance
PO4 - Demonstrate and apply skills and processes relevant to the subject: **NEA ONLY**

Example for Applied Science assessments:

The weightings of the Performance Objectives across the units in the **Certificate** qualification are:

Performance Objective	Externally Assessed unit (range)	NEA unit	Overall weighting
PO1	21.4 – 28.6%	n/a	21.4 – 28.6%
PO2	21.4 – 28.6%	12.5%	33.9 – 41.1%
PO3	0.0	12.5%	12.5%
PO4	n/a	25.0%	25.0%
Overall weighting of assessments	50.0%	50.0%	100.0%

The weightings of the Performance Objectives across the units in the **Extended Certificate** qualification are:

Performance Objective	Externally Assessed unit (range)	NEA units	Overall weighting
PO1	13.3 – 20.0%	n/a	13.3 – 20.0%
PO2	15.0 – 21.7%	15.0 – 17.5%	30 – 39.2%
PO3	5.00%	15.8 – 19.2%	20.8 – 24.2%
PO4	n/a	25.0 – 27.5%	25.0 – 27.5%
Overall weighting of assessments	40.0%	60.0%	100%

Applied Science

F180 Fundamentals of Science – 1 hour 30 minutes, 70 marks

- Parity with A level sciences, foundation knowledge for the NEA units
- 20 marks for each science area, 10 marks from Section D – practicals 1-6
- Mixture of MCQs, short answer, calculations and extended response (up to 4 marks)
  PO1 – Show knowledge and understanding
  PO2 – Apply knowledge and understanding

Biology	Chemistry	Physics
• Cell structure and microscopy • Bioenergetics • Structure and function of biological molecules • Biodiversity and ecosystems	• Atomic structure and the Periodic Table • Quantitative chemistry • Structure and bonding • Rates of reactions and enthalpy changes	• Electricity • Motion • Medical physics

F181 Science in society – 1 hour 15 minutes, 50 marks

Section A based on a pre-release (23-27 marks), Section B from the specification content of F181 (23-27 marks)
Mixture of MCQs, short answer, calculations and extended response (one 6 mark and one 9 mark question)

PO1 – Show knowledge and understanding
PO2 – Apply knowledge and understanding
PO3 – Analyse and evaluate knowledge, understanding and performance

What scientists do	Handling scientific data	Scientific developments	Communicating science
• The skills of scientists • The scientific method • The scientific community • The role of scientists	• Types of scientific data • Collecting scientific data • Storage and presentation of scientific data • Interpreting data	• Hypothesis, theory, and law • Using new technologies in science • Implications and limitations of scientific developments	• Methods of communication • Plagiarism • Using science to inform to inform decision making • Problems with communicating science

F182 Investigating science – 90 GLH NEA

Planning a scientific investigation

- Researching the topic
- Designing a scientific investigation
- Conducting preliminary experiments

Performing a scientific investigation

- Practical skills and apparatus
- Recording data from experiments

Each student needs their own Research Question: must produce a unique, independent investigation

Analysing and communicating results

- Analysing data
- Writing conclusions
- Communicating results

Evaluating a scientific investigation

- Evaluating the investigation

Details about how this can be achieved to follow…

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Independent, unique investigation: real science, real skills

Worked Example: How vitamin C concentration varies in foods.

Produce	Technique	Cooking time	Rate of reaction	Storage Conditions	Preparation
Kale	Titration (Iodine)	Microwave	Presence of metal ions	Exposure to heat	Slicing/cubing
Spinach	Titration (DCPIP)	Oven	Enzymes (from bruising)	Exposure to light	Juicing
Peas	Titration (methylene blue)	Boil	pH	Exposure to oxygen	Time from cutting to cooking
Broccoli	Colorimetry (Folin Phenol)	Air-fry			Ripeness (paused by freezing)
Strawberries	Colorimetry (DCPIP)	Steam			Pickled
Blueberries					Fermented

Optional NEA units – choose 2

One set assignment, 2-year lifetime, with a new one released each year
35-40 hours teaching, 20-25 hours assignment

F183: Analytical techniques in chemistry	F184: Environmental studies	F185: Forensic biology	F186: Medical Physics
• Techniques to categorise and separate chemical substances • Quantitative and qualitative analytical techniques to quantify and identify substances • The principles of spectroscopic techniques and interpreting spectra for chemical substances	• Ecosystems and biodiversity • Impact of human activity and natural events • Waste management • Environmental management and conservation • Fieldwork	• Forensic biology disciplines and evidence • Cells, Tissues and Organs in Forensic Biology • Investigation and Evidence Collection • Analytical Techniques and Evidence Interpretation	• Application of non-ionising diagnosis techniques • Application of ionising diagnosis techniques • Application of ionising therapy techniques • Application of non-ionising therapy techniques • Planning for diagnosis and therapy

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Human Biology

F170 Fundamentals of Science – 1 hour 15 minutes, 60 marks

- Parity with A level sciences, foundation knowledge for the NEA units
- Content will be sampled from all topic areas, with at least one question or part question relating to each topic area.
- Content in this exam will have links to the 'How Science Works Concepts and Skills' and 'Mathematical skills for Human Biology'.
- Mixture of mcqs, short answer, calculations and extended response (up to 4 marks) and assess only:
  - PO1 – Show knowledge and understanding
  - PO2 – Apply knowledge and understanding

Human cells and tissues	Human physiology, organs and systems	Key concepts in endocrinology, neurobiology and reproduction	Basics of microbiology
• Cell structure and microscopy • Tissue structure and function	• Human physiology • Systems in the human body	• Key concepts of endocrinology • Key concepts of neurobiology • Key concepts of reproduction	• Key features of microbes • Beneficial microbes

F171 Health and disease – 1 hour 15 minutes, 60 marks

- Content will be sampled from all topic areas, with at least one question or part question relating to each topic area. Content in this exam will have links to the 'How Science Works Concepts and Skills' and 'Mathematical skills for Human Biology'.
- Mixture of mcqs, short answer, calculations and extended response (one 6 mark and one 9 mark question):
  - PO1 – Show knowledge and understanding
  - PO2 – Apply knowledge and understanding
  - PO3 – Analyse and evaluate knowledge, understanding and performance

Causes and effects of diseases and disorders	Curative management and preventative therapies	The role of immunology	Techniques for diagnosis and monitoring	Reporting, research and confidentiality
• Definitions of health and disease • The nature of physiological disorders/diseases • The nature of communicable diseases	• Curative therapies • Management Therapies • Preventative therapies	• The immune system • Immune dysfunction and clinical immunology	• Diagnostic techniques • Monitoring techniques	• Reporting • Research • Confidentiality

Two Mandatory NEA units
F172 Genetics and F173 Biomedical Techniques

- One set assignment by OCR, 2-year lifetime, with a new one released each year
- 30-35 hours teaching, 20-23 hours assignment
- Mixture of supervised and unsupervised activities

F172: Genetics

- Fundamentals of genetics
- Mode of inheritance
- Genetic counselling and genetic testing
- Gene therapy and genetic engineering

F173: Biomedical techniques

- What biomedical science is
- Diagnostic techniques: cells and microscopy
- Diagnostic techniques: biological molecules
- Planning a clinical investigation
- Report writing

Two optional NEA units from a choice of four

- One set assignment by OCR, 2-year lifetime, with a new one released each year
- 30-35 hours teaching, 18-24 hours assignment
- Mixture of supervised and unsupervised activities

F174: Nutrition and metabolism	F175: Human reproduction	F176: The brain	F177: Drug development
• Nutrients required for a healthy body • Diets and disorders • Metabolic pathways and control mechanisms • Diagnosis, monitoring and treatment for nutritional / metabolic disorders	• Conception and pregnancy • Pregnancy (antenatal) care • Infertility • Assisted reproduction (AR)	• Structure and function of the nervous system • Neuron communication and control • Nociception, neurotransmitters and drugs • The diagnosis and treatment of brain disorders/injuries • Monitoring and scanning the brain	• Pharmaceutical drugs • Process of drug development • Factors influencing drug development • Producing a clinical research proposal

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What support will be available for centres?

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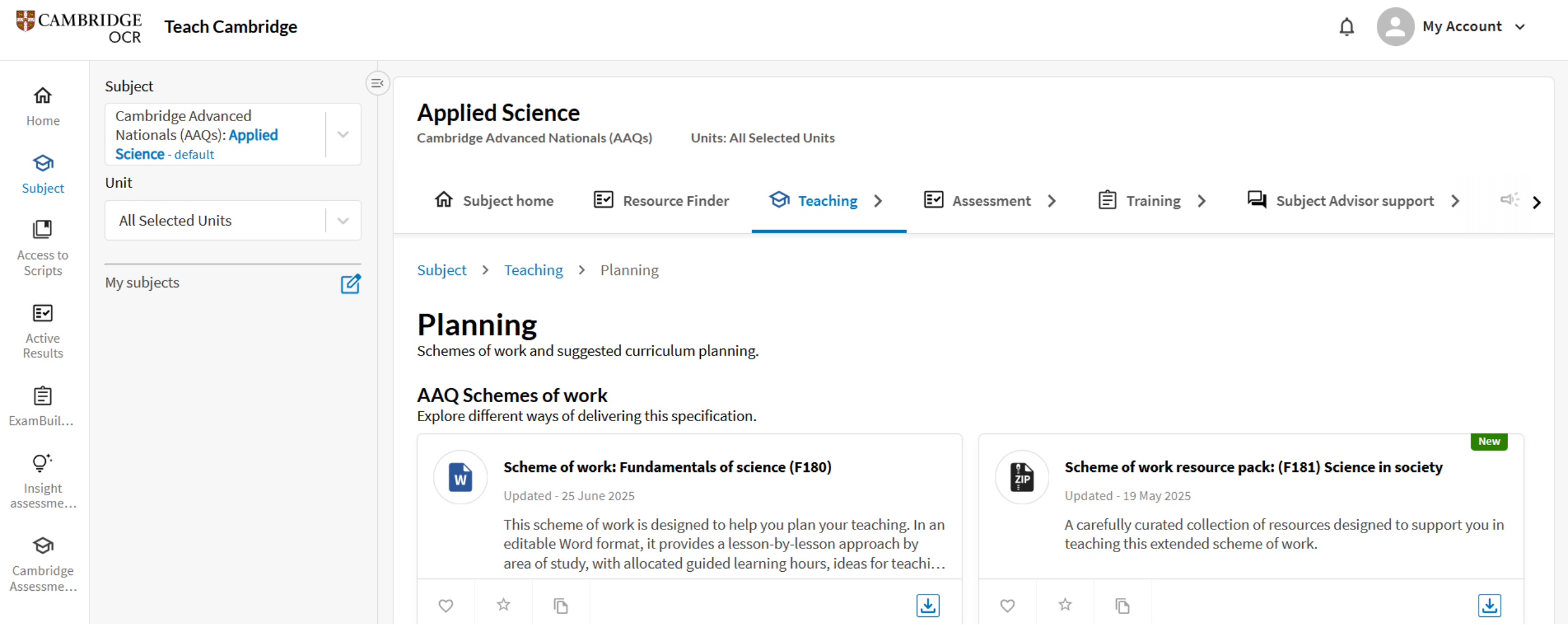
Teach Cambridge – our dedicated resource platform



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Teacher and Student Resources on Teach Cambridge

Teaching & Learning	Assessment	Training
• Textbook • Switching Guide • Mapping Guide • Getting Started Guide • Curriculum Planner • Scheme of Work • E-Learning course • Practical Guide* unique for the sciences • Maths Guide* unique for the sciences	• Annotated Sample Assessment Materials • Assessment Story • Practice Papers • Candidate Style Answers (EA) • **Candidate Style Work (NEA)** • Teacher NEA Guide • Student Guide to the NEA	• Choosing AAQs and understanding the compensation model • Starting to Teach • Ask the SA • Ask the Moderator • Preparing for the Exam • Preparing for the NEA • Exploring the exam (*after live examination series*) • Exploring the NEA (*after live examination series)* • Enhance your teaching

Curriculum planners available now for 1 and 2 teacher models: suggested 5-6 hours per week

Curriculum plan 2 year model with 1 teacher

Year 1														
		Term 1				Term 2				Term 3				
Teacher Activity	Classroom activity	F180* Examined Unit: Teaching				F182* NEA: Teaching and assessment				F181 Examined Unit: Teaching				
	Revision and internal assessment				F180* internal assessment opportunity					F180* revision	Opportunity for students to work on F182* resubmission.			
Assessment	Assessment Opportunity			**Moderation Window 1 (Nov- Feb)**	**Jan Exam series**	**Moderation Window 1 (Nov- Feb)**			**Moderation Window 2 (March-June)**		**June Exam series**			
	Exams and Moderation			Not used	No entries made	Not used				F182* NEA moderation	F180* Exam			

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Comprehensive and supportive schemes of work

Area of study: 1.1 The Skills of Scientists (Topic Area 1: What Scientists Do)

Lessons

Lesson number	Specification coverage	GLH	Lesson aims and outcomes	Lesson ideas, key words and activities	Useful resources	Student independent learning – ideas and useful resources
1	1.1.1 The skills scientists use to carry out research into the natural world and developing new technologies: • **Analysis** • **Communication** • **Problem solving** • **Creativity** • **Open-mindedness** • **Scepticism** • **Logic** • **Observation** • **Objectivity** • **Pragmatism** • **Curiosity**	1	By the end of the lesson, students should: • Know what each skill involves. • Understand how these skills are used by scientists. • Know reasons why these skills are important in science. • Understand how to recognise when scientists are employing these skills in their work.	Start the lesson by asking students to identify any skills that scientists may use. To help students with this, you could: • Show students one or more of the linked videos and ask what type of skills they may have to do those jobs. • You could also show slides 1-3 on the 1.1.1 Scientific skills PowerPoint with some job descriptions. • Ask what type of skills each of the jobs might have in common. Responses could be provided in a variety of ways (interactive Mentimeter, mini whiteboards, group discussion with answers brought together on the board). The slide of scientific investigations and image of scientist in a lab (1.1.1 Scientific skills slides 4-6) could be displayed to prompt this discussion. Display the names of the skills. Discuss the meanings of each of these as a class. Students need to make a note of each of the definitions. Students could also then give an example of how scientists demonstrate each skill. You could	What is a scientist? video (youtube.com) Why is science important? video (youtube.com) What is science / scientists / types of scientists video (youtube.com) 1.1.1 Scientific skills PowerPoint (teachcambridge.org) Mentimeter word cloud generator (mentimeter.com) A free account needs creating. Students would need access to ICT for this task. There are some videos below which could be shown for students to understand the role of research scientists. Career Talks: Research Scientist Day in the Life of a Research Scientist	Students could complete summary notes (a mind map or flash cards) summarising the main skills required by scientists and where these are important. Students could also come up with a mnemonic to help them remember the names of each of the eleven skills. Students could also research a particular scientist and their associated discovery / invention and give examples of how each of the skills they have identified in this lesson would be used in that role.

- All schemes of work available FREE on Teach Cambridge
- Huge list of suggested resources
- Wide range of pedagogical approaches
- Opportunities for summative and formative assessment
- Suggested homework and flipped learning
- Build on existing knowledge from GCSE

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Additional support for ECTs and non-specialists

Subject knowledge support for this area of study

Underlying knowledge and understanding	Students may have heard of some of these organisations before and have some idea of their role within science. Most likely they will have heard of the World Health Organization and their role in promoting health and keeping the population of the world safe. Students may not be aware of how organisations such as the WHO do this. Students may have prior knowledge of the idea of collaboration, perhaps outside of the context of scientific investigation (through the idea of team work). This could be brought in with reference to an example they are more familiar with such as team sports. Students may have some prior knowledge of inclusivity and diversity; what this means and why it is important. Students may also have some prior knowledge of some of the key scientific discoveries such as the Human Genome Project; they may have some knowledge of what the genome is, what it means to sequence a gene and how this might be relevant to scientific advancements. However, there are lots of examples where students may be less than familiar and so the research theme to these lessons will enable students to increase their knowledge accordingly.
Common misconceptions	Students may have the misconception that diversity and inclusivity are the same thing; diversity is the presence of different identities, but this does not automatically lead to inclusion. Inclusivity brings in the idea that employees with diverse identities feel valued and supported. Students may think that collaboration happens between scientists of the same discipline, or from the same organisation. For instance, students may think that lots of different geneticists from one organisation worked on the Human Genome Project, and may not realise that scientists from different disciplines and countries, as well as a mixture of industrial and academic scientists, were required to make the project effective. Occasionally, students may pick up the idea of competition between scientists rather than collaboration (owing to scientific advancements such as the 'space race' and more recently, the apparent competition between organisations to produce the Covid-19 vaccine). This can be discussed and steered in the direction of scientific advancements benefitting from collaboration and healthy competition.
Key concepts	Collaboration – the collaborative approach is used alongside working independently and as part of a team. Collaboration can be between scientists of the same discipline and/or institution, or across different disciplines and across different industries, organisations, companies; this can be across a global network, depending on the scale of the project and the collaborative skills and resources required. Inclusivity – inclusivity is ensuring that all people are valued and supported. Diversity – diversity is the range of identifies of individuals. Scientific organisations – there are a range of global scientific organisations which work to advance science in a safe and effective way. These include UNICEF, WHO and WWF to name a few. **Links to other parts of the specification** **Specification point 1.3.1 and 1.3.2 links to 3.3.1 – considerations for scientific developments and 3.3.2 – contemporary issues that science will need to solve in the future.**
Subject knowledge enhancement for teachers (further reading)	For further information on this subject you can look at the following websites. OCR's STEM contributors resource (ocr.org.uk/blog) What is Collaborative Science? Benefits of Scientific Collaboration (lasernetus.org) Why is collaboration important? (wi.mit.edu)

- Expectations of prior knowledge made clear
- Many suggested misconceptions to be aware of and address
- Outline of key concepts to acquire from each topic area
- Enhance subject knowledge and build expertise

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Applied Science Textbook Available now

A printed textbook, and the 4 optional units as eTextbooks (PDF):

1. EA and mandatory units (F180, F181, F182) available as a single bound textbook
2. EA and mandatory units (F180, F181, F182) available as a photocopy master with optional upgrade to PDF eTextbook (or Word editable)
3. Optional units (x4) each available individually as a photocopy master with optional upgrade to PDF eTextbook (or Word editable).

Further details:

- Any school that purchases the photocopy master for the mandatory units will get a notable discount if they also want to buy the textbook.
- Answers to the practice, recall and stretch questions will be available to teachers only via a secure link.
- Details on how to order, prices and samples available now

Human Biology Textbook
Available soon

- Similar bundles to those available for Applied Science
- Draft authoring and review already underway
- Mandatory chapters on course to be ready for December

Primrose Kitten: Human Biology Digital Learning Platform

Digital resources from Primrose Kitten

Teaching Videos: Engaging videos break down complicated concepts into digestible bites with lessons from Dr. Edwards and Primrose Kitten

Retrieval Questions: Targeted retrieval questions that help recall and apply what is learned.

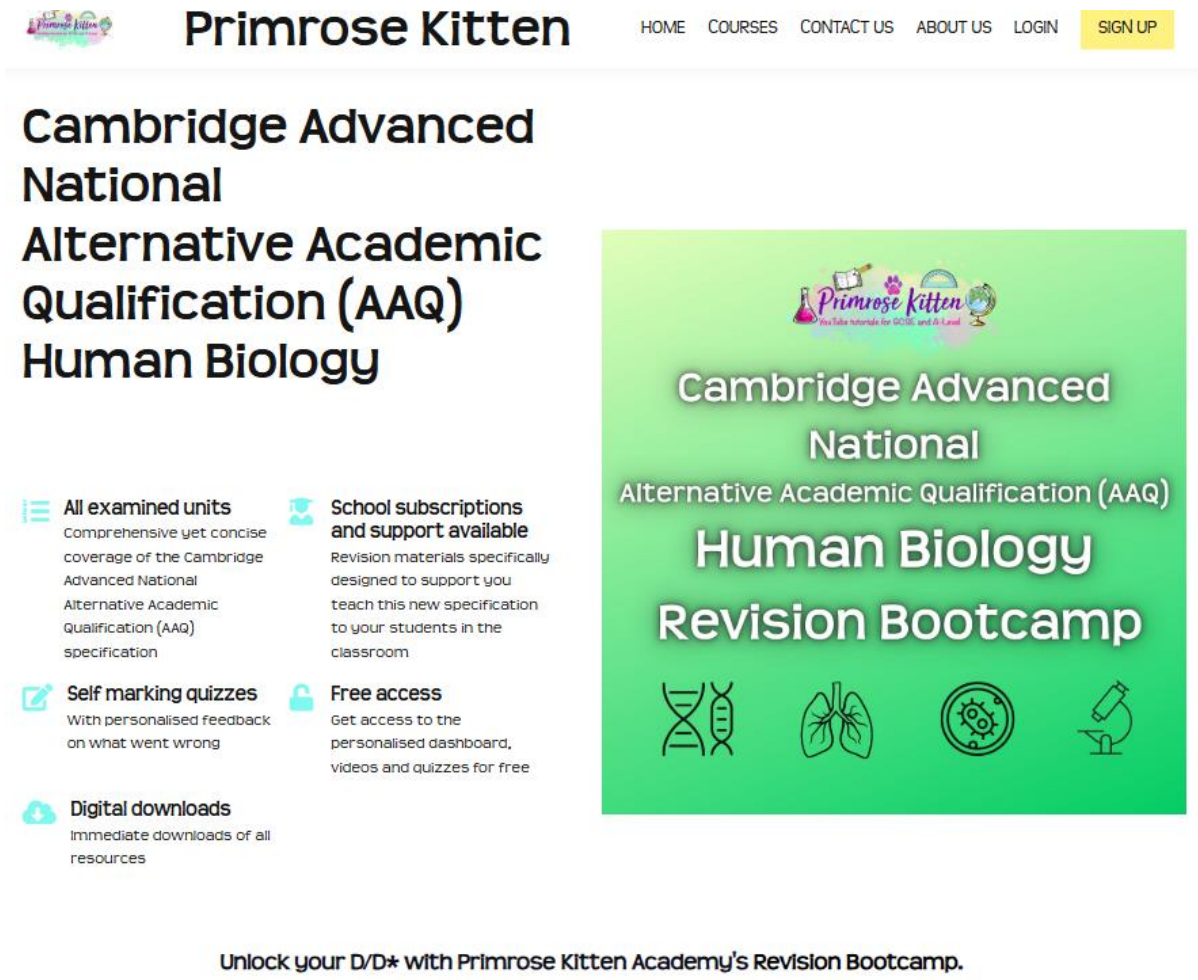
Personalised Feedback: Customised feedback at the end of each quiz, showing what you got wrong.

Exam Skills: Learn the ins and outs of tackling your exams, from time management to decoding complex questions

Maths in Biology: Specialised sessions that integrate essential mathematical concepts directly into the Human Biology syllabus

Convenience and Flexibility: The course material is accessible at all times.

Comprehensive Yet Concise OCR AAQ Coverage: Balancing the need for depth in tight time frames there is comprehensive yet concise coverage of the OCR AAQ specification.



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Cambridge Advanced National Alternative Academic Qualification (AAQ) Human Biology Revision Course

Primrose Kitten
YouTube tutorials for GCSE and A-Level

Introduction to Unit 1: Fundamentals of Human Biology

🧬 Medical science is evolving rapidly, bringing exciting new discoveries in how we understand, diagnose, and treat disease. This unit introduces you to the biology behind these advances, from how the body works to how we use cutting-edge techniques to combat illness.

☐ You'll explore the structure and function of cells, tissues, and organ systems, and how they work together to maintain health. You'll also examine what happens when these systems fail—particularly in the endocrine, nervous, and reproductive systems—and how we detect and treat those issues.

🦠 You'll also be introduced to microbiology, learning about:

- The human biome and beneficial microbes
- Pathogens, including viruses
- The body's immune response

📚 Topics You'll Study in This Unit

—

Unit 1 Fundamentals of Human Biology
0/1 Lessons Completed

- ☐ Introduction

Eukaryotic Cell Structure
0/2 Lessons Completed

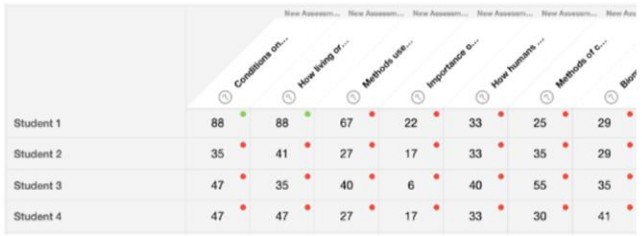
Prokaryotic Cell Structure
0/2 Lessons Completed

Stem Cells
0/2 Lessons Completed

[Check it out now]

Teacher Dashboards

Our **teacher gradebook** makes tracking student progress a breeze! With colour-coded percentages, you can quickly see how everyone is doing. You'll also be able to view their exact answers, the number of attempts they made, and how long they spent on each quiz. It's a fantastic tool for gaining insights into student performance and providing targeted support!



	Conditions on...	How living or...	Methods use...	Importance o...	How humans ...	Methods of c...	Biol
Student 1	88	88	67	22	33	25	29
Student 2	35	41	27	17	33	35	29
Student 3	47	35	40	6	40	55	35
Student 4	47	47	27	17	33	30	41

You can easily **track student attendance** to our live lessons, including when they joined and how long they stayed, as shown in the image below. This feature helps ensure students stay engaged and allows you to follow up with those who may need extra support. It's a simple and effective way to keep the classroom connected and accountable!

	A	B	C	D
1	Name	Joined On	Time Spent	Data Source
2	Student 1	10/09/2024 16:08	24	Course Player
3	Student 2	10/09/2024 16:11	43	Course Player
4	Student 3	10/09/2024 16:08	49	Course Player
5	Student 4	10/09/2024 16:14	86	Course Player
6	Student 5	10/09/2024 16:08	45	
7				

Make an enquiry

Fill out our contact form to get in touch with Emily, the Head of Academy at Primrose Kitten.

Emily is dedicated to helping schools like yours access the best resources and will gladly provide detailed information about our school subscription options.

By reaching out, you'll:

- Discover the benefits of our Masterclasses for your students
- Learn about flexible subscription plans tailored to your school's needs
- Get personalised recommendations and support from our expert team
- Find out how our Masterclasses can complement your existing curriculum

Emily is here to answer any questions you may have and guide you through the process of integrating our Masterclasses into your school's educational offerings.

Your name:

Primrose Kitten

Your email:

info@primrosekitten.com

Message:

I'd like some more information about school subscriptions please!

Send

Availability

Fundamentals of Human Biology F170 – Sept 2025

Genetics F172 - Sept-Dec 2025

Biomedical Techniques F173 - Dec 2025

Health and Disease F171 – 2026

Further units will become available in due course

Pricing structures

Free login for teachers and students to the materials (videos, notes, flashcards, quiz)

Free access to the platform

Paid for services are for the elements like e-books

Further paid for services from 2027/28 (e.g. live tutoring/practice questions)

School subscription model: annual subscription of £100 which includes access to all materials for all teachers and unlimited students in that school, teacher dashboard to see all student activity, quiz results etc (with teacher access to anything that is created behind the pay wall)

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Benefits of the Cambridge Advanced Nationals

Benefits to teachers

- Access to on-demand and live training throughout the year
- Access to teaching materials and assessment support (details coming up)
- All the benefits of our collaborative and constructive moderation processes
- Deliver exciting, relevant and up-to-date content that students will enjoy

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Benefits to students

- Reliable assessments – papers that are accessible and ramp-up, every question can be attempted
- Minimum time sat in exam halls – our papers are 1 hour 30 and 1 hour 15 minutes, respectively
- Chances to resit papers in January and June: 3 attempts in total
- Resubmit coursework in the next appropriate window
- No more hurdles – every single mark counts towards their final grade
- Content is relevant, up to date, and career-orientated

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Support for all OCR teachers

Free ***My Cambridge*** login for all teachers (and technicians) via your exams officer that gives you access to:

- Teach Cambridge: teaching resources, schemes of work, assessment materials and set assignments
- OCR Train: our on-demand training and standardisation platform
- Interchange: request your moderation visits during the two windows
- Active Results: compare your school's results against national averages and drill down into item-level and candidate-level analysis
- Access to Scripts: see candidate papers after results day
- Submit for Assessment: digital upload of candidate work for moderation
- ExamBuilder: create assessments from our large bank of question from the Cambridge Technical course, as well as access to all A level and GCSE questions

Support from the Science Subject Advisor Team

Contact us via our email ocr.vqscience@ocr.org.uk

Book a meeting with Bethan or Amy* – we'll talk to individuals, departments or SLT.

Invite Bethan or Amy to come out to your school or MAT to talk about the qualifications and working with OCR

*(Please provide clear details when making your booking)

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What are the next steps?

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If you wish to teach from September:

1. Let us know you'll be teaching Cambridge Advanced Nationals here
2. Sign up for email updates (be sure to select "Cambridge Advanced Nationals" and/or your subject areas)
3. Check with your Exam Officer that you're a registered centre
4. Request from them your *My Cambridge* login to access all the curriculum resources on Teach Cambridge
5. Book on to the Starting to Teach course: 23rd June and 25th June
6. Check out the FAQs
7. Come to a Teacher Network

Join our Science Advisory Group

Nearly 100 members

Tell us what you think about our Science qualifications (including our AAQs)

Be part of the review of subject content, assessments and teaching materials

Connect with other teachers

https://ocrpanel.recollective.com/science-advisory-group/join?key=Cxp7

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Teacher Networks and Ambassador Centres

Ambassador Centres:

North: Queen Elizabeth High School, Hexham

Midlands: Cadbury Sixth Form College

South: Salisbury Sixth Form College

Other networks held in: Hove, Keighley, Liverpool, London

Host one in your area or talk to us about becoming an Ambassador Centre

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Questions and comments

The slides are available to download now, and the recording will be available to attendees soon.

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