



Biology: Curriculum

A Level Biology gives you the opportunity to study topics such as geometry, calculus and trigonometry (pure mathematics) and to use these ideas within the 'applied' topics such as mechanics and statistics.

Exam Board: AQA

Paper 1

Examination: 1 hour 30 minutes (75 marks)

All questions must be completed. Calculators are allowed.

65 marks: short answer questions

10 marks: extended response questions

Content: Any content from topics 1-4, including relevant practical skills.

Paper 2

Examination: 2 hours (91 marks)

All questions must be completed. Calculators are allowed.

76 marks: mixture of short and long answer questions

15 marks: comprehension question

Content: Any content from topics 5-8, including relevant practical skills.

Paper 3

Examination: 2 hours (78 marks)

All questions must be completed. Calculators are allowed.

38 marks: structured questions, including practical techniques

15 marks: critical analysis of given experimental data

25 marks: one essay from a choice of two titles

Content: Any content from topics 1-8, including relevant practical skills.

Supplementary Resources

[Khan Academy](#) Providing online practice exercises, instructional videos, and a personalised learning dashboard.

[Physics and Maths Tutor](#) Has an array of resources from past exam questions to challenging extension questions. (It is the old specification but most topics are the same.)

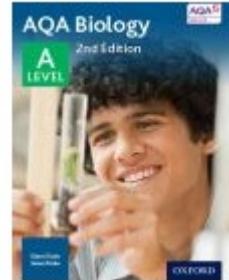
[Snaprevise](#) provide some free revision videos on YouTube (some you will have to pay for)

Provided Textbooks and Resources

Textbooks:

Year 12 & 13

- AQA A-level biology (2nd edition)



Resources for the course:

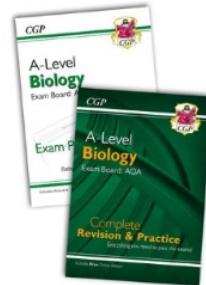
- AQA Specification
- Lab book (red)
- Notebook (green)
- Questions book (purple)
- 1 set of 10-page dividers
- Practical assessment booklet

Resources for each unit:

- Independent study workbook
- Knowledge organisers

Students Required Equipment

- A4 ring binders
- Scientific Calculator
- Black, blue, red and green pens
- Highlighters
- Ruler
- Pencils
- ~~CGP~~ A-level biology revision



Finished Your Homework?...

Please use one of the supplementary resources (on the left) to complete exam style questions. Please ensure you complete each question in exam conditions and mark it before moving on to the next question. This will ensure you are not practicing questions incorrectly and that you learn from any mistakes quickly.

Remember:

Practice Makes Permanent – complete and mark past exam questions

For every lesson in class, you must do the equivalent time in out of class learning

6x6 = 12 hours subject specific learning (planning not included)

Make revision material as you learn

Biology: Super-Curricular Activities

Competitions

Newnham essay writing competition - £500 award (Yr12)
<http://www.discoverdowning.com/resources/newnham-essay-prizes/>
British Biology Olympiad (BBO) (Year 12 & Year 13)

Recommended Wider Reading

Richard Dawkins:
The Selfish Gene
The Blind Watchmaker
Unweaving the Rainbow Climbing Mount Improbable
The Ancestor's Tale

Steve Jones:
Y: The Descent of Men
In the Blood: God, Genes and Destiny
Almost Like a Whale: The 'Origin of Species' Updated
The Language of the genes

Matt Ridley Genome:
The Autobiography of a Species in 23 Chapters
The Red Queen: Sex and the Evolution of Human Nature
The Language of Genes

Francis Crick: Discoverer of the Genetic Code
Nature Via Nurture: Genes, Experience and What Makes Us Human

James Watson:
DNA: The Secret of Life
The Double Helix: Personal Account of the Discovery of the Structure of DNA

Lewis Thomas:
The Lives of a Cell: Notes of a Biology Watcher
The Medusa and the Snail: More Notes of a Biology Watcher

Barry Gibb: The Rough Guide to the Brain (Rough Guides Reference Titles)

Charles Darwin: The origin of species

Armand Marie Leroi: Mutants: On the Form, Varieties and Errors of the Human Body

David S. Goodsell: The Machinery of Life

Ernst Mayr: This Is Biology: The Science of the Living

World George C. Williams: Plan and Purpose in Nature

Steve Pinker: The Language Instinct Edward O Wilson: The Diversity of Life Richard Leaky: The Origin of Humankind

Bill Bryson: A Short History of Nearly Everything

Oliver Sachs: The Man Who Mistook His Wife For A Hat

Daniel Chamovitz: What A Plant Knows

Current biological research

New Scientist - weekly science magazine that keeps you up to date with what's new in science. <http://www.newscientist.com/>

Nature - international weekly journal of science. <http://www.nature.com/>

BBC Science and Environment news - up to date science and environment
http://www.bbc.co.uk/news/science_and_environment or via the BBC News phone App.

BBC Health news - breaking news from the world of human health and can also be found on the BBC News App.
<http://www.bbc.co.uk/news/health>

Websites

<http://www.ibiblio.org/virtualcell/index.htm> – An interactive cell biology site

<http://www.accessexcellence.org/RC/VI/GG> – A web site showing illustrations of many processes of biotechnology

<http://www.uq.oz.au/nanoworld> – Visit the world of electron-microscopy

<http://www.dnai.org/a/index.html> – Explore the genetic code

<http://nobelprize.org> – Details of the history of the best scientific discoveries

<http://nature.com> – The site of the scientific journal

<http://royalsociety.org> – Podcasts, news and interviews with scientists about recent scientific developments

<http://www.nhm.ac.uk> – The London Natural History Museum's website with lots of interesting educational material

Chemistry: Curriculum

A Level Chemistry gives you the opportunity to study topics such as organic, physical and inorganic chemistry.

Exam Board: AQA

Course & Assessment Overview

Assessments

Paper 1	+	Paper 2	+	Paper 3
What's assessed <ul style="list-style-type: none">Relevant Physical chemistry topics (sections 3.1.1 to 3.1.4, 3.1.6 to 3.1.8 and 3.1.10 to 3.1.12)Inorganic chemistry (Section 3.2)Relevant practical skills		What's assessed <ul style="list-style-type: none">Relevant Physical chemistry topics (sections 3.1.2 to 3.1.6 and 3.1.9)Organic chemistry (Section 3.3)Relevant practical skills		What's assessed <ul style="list-style-type: none">Any contentAny practical skills
How it's assessed <ul style="list-style-type: none">written exam: 2 hours105 marks35% of A-level		How it's assessed <ul style="list-style-type: none">written exam: 2 hours105 marks35% of A-level		How it's assessed <ul style="list-style-type: none">written exam: 2 hours90 marks30% of A-level
Questions 105 marks of short and long answer questions		Questions 105 marks of short and long answer questions		Questions 40 marks of questions on practical techniques and data analysis 20 marks of questions testing across the specification 30 marks of multiple choice questions



Supplementary Resources

[Khan Academy](#) Providing online practice exercises, instructional videos, and a personalised learning dashboard.

[Chem guide](#) Provides written explanations on topics, and practice questions to check your understanding of a topic.

[Physics and Maths Tutor](#) Has an array of resources from past exam questions to challenging extension questions. (It is the old specification but most topics are the same.)

[Fuse school](#) Provides videos about a range chemistry topics.

[Up Learn](#) Revision website which utilises the Science of Learning to promote storage of key knowledge to your long-term memory

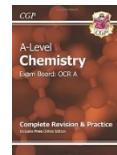
[Allery Chemistry](#)
Great revision videos per topic

[Elliot Rintoul](#)
AQA specific You-Tube videos for each topic

Provided Textbooks and resources

Textbook

- AQA A Level Chemistry
- CGP Revision Guide



Resources for each unit

- Learning checklists (PLC)
- Exam paper tracker
- Exercise book
- Independent study booklets
- Exam questions pack

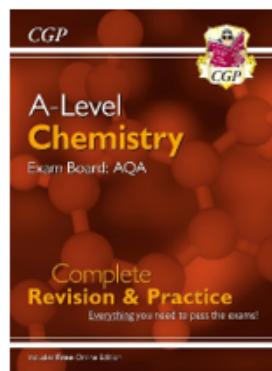
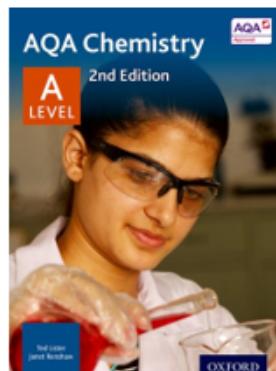
Students Required Equipment

- Black, blue, red and green pens
- Scientific calculator
- A3 lever arch folder
- Folder dividers
- A4 lined paper
- 30 cm ruler
- Pencils

Finished Your Homework?...

Please use one of the supplementary resources (on the left) to complete exam style questions. Please ensure you complete each question in exam conditions and mark it before moving on to the next question. This will ensure you are not practising questions incorrectly and that you learn from any mistakes quickly.

Remember: Practice Makes Permanent



Chemistry: Super-Curricular Activities



Recommended Wider Reading

Mark Miodownik

Stuff matters

Ball, Philip

Elegant solutions : ten beautiful experiments in chemistry

H2O – a biography of water

The ingredients – a guided tour of the elements

Stories of the invisible – a guided tour of the molecules

Aldridge, Susan

Magic molecules – how drugs work

Atkins, P. W. (Peter)

Four laws that drive the universe

The periodic kingdom – a journey into the land of the chemical elements

Reactions – The private life of atoms

Diarmuid Jeffreys

The story of the wonder drug Aspirin

Beckett, S. T.

The science of chocolate

Brock, W. H.

The Fontana history of chemistry

Coultate, T. P.

Food – the chemistry of its components

Hugh Aldersey-Williams

Periodic tales: The curious Lives of the elements

Sam Kean

The disappearing spoon

Videos

BBC iPlayer Science

Documentaries exploring science concepts.

TED Science videos

A collection of TED talks on science

Podcasts

BBC podcasts

Inside Science

The Infinite Monkey Cage

Rutherford and Fry

5 Live Science podcast

CrowdScience

Science in action

Websites

Royal society of Chemistry:

ChemNet

News and events

Public Lectures & Events

You can Google these events for the most up to date information:

Kings College – Medicine in action lectures

New scientist Live

The Royal Society

Chemistry at the Science Museum

The Wellcome Collection

Computer Science: Curriculum

A Level Computer Science offers learners the opportunity to develop analysis, critical evaluation and decision-making skills. The topics and case studies explored in A Level Computer Science will be relevant to the modern and changing world of computing.

Students who complete the course will gain an understanding and ability to apply fundamental principles and concepts in computer science, ability to analyse problems through practical experiences of solving problems, the capacity to see the relationships between different aspects of computer science and the ability to articulate the moral, ethical, legal and cultural impact of digital technology.

Exam Board: OCR H446 Computer Science

Component 1: Computer Systems

Examination: 2 hours 30 minutes (40%)

Content:

- The characteristics of contemporary processors, input, output and storage devices
- Software and software development
- Exchanging data
- Data types, data structures and algorithms
- Legal, moral, cultural and ethical issues

Component 2: Algorithms and programming

Examination: 2 hours 30 minutes (40%)

Content:

- Elements of computational thinking
- Problem solving and programming
- Algorithms to solve problems and standard algorithms

Component 3: Programming project

Non exam assessment (20%)

Content:

The learner will choose a computing problem to work through according to the guidance in the specification.

- Analysis of the problem
- Design of the solution
- Developing the solution
- Evaluation

Provided Textbooks and Resources

Textbooks:

[AS/A Level Computer Science for OCR Student Book](#)

Author: Alistair Surrall and Adam Hamfleet
ISBN: 9781108412711



[OCR AS and A Level Computer Science](#)

Author: PG Online Ltd
ISBN: 978-1-910523-05-6



Folder Requirements:

- Printed specification
- Personal Learning Checklist (PLC)
- Unit content
- Assessed work with DIRT tasks completed
- Notes organised chronologically

Students Required Equipment

- 1 ring binder folders or 1 lever arch file
- 2 sets of 10-page dividers
- Exercise book (lined)
- Black, blue and green pens
- Highlighters
- Ruler
- Pencils



Finished Your Homework?...

- Use an A3 grid to apply each element of the topic and create a knowledge organizer. Remember context.
- Create a mind map of the topic and outline the advantages and disadvantages of the technology/method.
- Watch Craig 'n' Dave YouTube channel for revision.

Supplementary Resources

[ICT & Computer Science department](#) This department is here to support ICT and Computer Science students. Our computer suites are available for students to complete work.

[Exemplar Work](#) We store examples of exam answers and coursework to support you with your work. These are available on request.

[OneDrive](#) Teachers share a OneDrive folder with all Sixth Form students to allow students to have access to all resources. This allows students to have access to the materials remotely.

Computer Science: Super-Curricular Activities

TED Talks

Shohini Ghose:
A beginner's guide to quantum computing
Misha Glenny:
Hire the hackers
Glenn Cantave:
The case for AR and VR in activism
Simona Francese:
Your fingerprints reveal more than you think
Pratik Shah:
How AI is making it easier to diagnose disease
Keller Rinaudo:
How we're using drones to deliver blood and save lives

Museums and Exhibitions

Please click on the links below for key lectures and events:

[Bletchley Park](#)

[Science Museum](#)

[National Museum of Computing](#)

[Centre of computing history](#)

Recommended Wider Reading

Computational Fairy Tales by Jeremy Kubica.
ISBN: 978-1477550298

Artificial Intelligence: A ladybird Expert Book by Michael Wooldridge.
ISBN: 978-0718188757

Code: The hidden language of computer hardware and software by Charles Petzold
ISBN: 978-0735611313
BBC's Make IT digital interactive

CS4FN (Computer Science for Fun) magazine

Extension Through Fiction

William Hertling *The Turing Exception*

William Hertling *Avogadro Corp*

Ted Chiang *The lifecycle of software objects*

Neal Stephenson *Anathem*

Podcasts

- **Software engineering radio**

Listeners can expect to learn about the newest in technology and method through in-depth breakdowns, interviews, current event analysis and more.

- **Security Now**

This podcase, co-hosted by TechTV's own Leo Laporte provide listeners with an up-to-date rundown of all things related to computer security today.

- **Linux Action Show**

It is an active podcast sharing all of the latest and greatest information on Linus and other related computer tech developments.

- **Twit**

This podcast on todays computer science focuses specifically on Microsoft products.

- **Spark with Nora Young**

Subject covered can range from AI in vehicles to smart phones programming or computer science used in the financial industry.

Websites

http://www.teach-ict.com/2016/A_Level_Computing/OCR_H446/OCR_H446_home.html

https://www.youtube.com/channel/UC0HzEBLJxlrwBAHJ5S9JQg/playlists?view=50&sort=d&shelf_id=10

Economics: Curriculum

What is Economics?

Economics is the study of scarcity. As a subject, it is concerned with trying to get the most out of the limited resources that planet earth has, in order to best satisfy its population. The subject tries to answer three basic questions: What should we produce How should we produce it For whom should we produce From these basic questions, the subject is developed, dealing both in scarcity issues on a small scale (microeconomics) and those on a larger scale (macroeconomics).

Exam Board: Edexcel

Paper 1: Markets and Business Behaviour

This paper focuses on microeconomic concepts and studies the nature of economics, how markets work market failure and government intervention. In addition, it covers business behaviour and the labour market including, business growth and business objectives, revenues, costs and profits, market structures, labour market and government intervention.

Paper 2: The National and Global Economy

This paper covers the macroeconomic concepts of aggregate demand, aggregate supply, national income, economic growth, macroeconomic objectives and policy, the year 2 focus is International economics poverty and the financial sector.

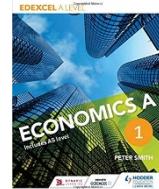
Paper 3: Micro and Macro Economics

This is the Synoptic paper where questions are drawn across all themes both macro and micro and students are tested on how they can integrate and interleave their answers showing a more sophisticated interpretation and understanding.

Provided Textbooks and Resources

Textbooks:

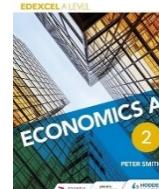
Economics – Alain Anderton



Lesson Requirements:

Folder containing :

- Contents page
- Course booklet
- Syllabus
- Notes organized chronologically
- Assessments and homework stored separately
- Handouts and articles stored in theme



Students Required Equipment

- 1 A4 ring binder, plus exercise book
- Dividers
- A4 paper (lined and punched)
- Black, blue and green pens
- Highlighters
- Ruler
- Pencils
- Calculator

Finished Your Homework?...

You will be provided with a login for UPLEARN an online learning platform for Economics students to support your course teaching. The school also offers Senaca for online support.

Supplementary Resources

Television/film

The Big Short

Periodicals

The Economist

Economics Review - Philip Allan Magazines

Economics Today - Anforme Ltd 2019/

Tutor2u Economics - this website offers many revision videos and useful resources

Economics: Super-Curricular Activities

Public Lectures & Events

- Bank of England (BOE) challenge
- LSE – London School of Economics offer a wide range of seminars and speakers
- Young Economist of the Year 2021 competition

In association with the Financial Times- students are asked to submit an essay of up to 1000 words on specified topics

Useful Websites

- www.bbc.co.uk/news/correspondents/kamalahmed
- [www.economist.com /finance-and-economics](https://www.economist.com/finance-and-economics) (user name to be provided from the school library)
- Deloitte Monday Briefing <http://blogs.deloitte.co.uk/mondaybriefing>
- www.itv.com/news/meet-the-team/robert-peston
- www.bankofengland.co.uk/news/publications
- Edexcel past papers
- The Economics Network
- National Statistics online

Recommended Wider Reading

Why Nations Fail - Acemoglu & Robinson (Profile Books)

The Rise & Fall of American Growth - Robert Gordon (Princeton Press)

The Big Short- Michael Lewis (Penguin)

Fooled by randomness - Nicholas Taleb (Penguin)

23 Things they don't tell you about capitalism- Ha-joon Chang (Penguin)

50 Economic Ideas Edmund Conway Quercus

The Great Economists Linda Yueh Penguin

50 Things That Made the Modern Economy - Tim Harford (Little Brown)

Economics: A User's Guide - Ha-joon Chang (Pelican)

Liars Poker -Michael Lewis

Articles & Podcasts

Will coronavirus reverse globalisation?

<https://www.bbc.co.uk/news/business-52104978>

How to pay for the pandemic

<https://www.economist.com/finance-and-economics/2020/03/25/how-to-pay-for-the-pandemic>

Rich countries try radical economic policies to counter covid-19

<https://www.economist.com/briefing/2020/03/26/rich-countries-try-radical-economic-policies-to-counter-covid-19>

Sunak adds extra £60bn public spending to fight coronavirus

<https://www.ft.com/content/29843c8a-24b2-4f2a-8090-9d514e79bb2d>

Oil prices fall to 17-year low as Saudi Arabia-Russia standoff continues, coronavirus hits demand

<https://www.cnbc.com/2020/03/30/oil-falls-amid-saudi-arabia-russia-price-war-coronavirus-hits-demand.html>

Listen into the Fighting the Downturn webinar and stay up to date with the latest news on the Deloitte Monday Morning Briefing

https://blogs.deloitte.co.uk/mondaybriefing/Planet_Money_Episode_985:_Where_Do_We_Get_%242,000,000,000%3F

<https://www.npr.org/2020/03/26/821787090/episode-985-where-do-we-get-2-000-000-000-000>

Planet Money - Episode 986: America Unemployed

<https://www.npr.org/2020/03/27/822944544/episode-986-america-unemployed>

BBC Sounds - Coronavirus: The economic crisis

<https://www.bbc.co.uk/sounds/play/w3csydff>

English Literature: Curriculum

A Level English Literature gives you the opportunity to read widely and to engage critically with a substantial body of prose, poetry and drama. You will develop and effectively apply literary analysis skills and explore the contexts of the texts you read as well as others' interpretations of them.

Exam Board: Edexcel

Paper 1: Drama

Examination: 2 hours 15 minutes (60 marks)

Open book clean copies available. students answer one question from a choice of two on their studied text for both Sections

Content: Section A – Shakespeare: one essay question, incorporating ideas from wider critical reading (AO1, AO2, AO3, AO5 assessed).

Section B – Other Drama: one essay question

Paper 2: Prose

Examination: 1 hour 15 minutes (40 marks)

Open book clean copies available. Open book – clean copies of the prose texts can be taken into the examination.

Content: Students answer one comparative essay question from a choice of two on their studied theme - Science and Society (AO1, AO2, AO3, AO4 assessed).

Paper 3: Poetry

Examination: 2 hours 15 minutes (60 marks)

Open book – clean copies of the poetry texts can be taken into the examination.

Content:

Post-2000 Specified Poetry: one comparative essay question on an unseen modern poem written post-2000 and one named poem from the studied contemporary text (AO1, AO2, AO4 assessed) (30 Marks)

Specified Poetry Pre- or Post-1900: one essay question (AO1, AO2, AO3 assessed).

Non-examination assessment

Students produce one assignment:

One extended comparative essay referring to two texts (AO1, AO2, AO3, AO4, AO5 assessed)

Advisory total word count is 2500–3000 words.

Total of 60 marks available.

Resources

Key texts:

Year 12

Poems of the Decade: An Anthology of the Forward Books of Poetry by Forward Arts Foundation

Students will also need to purchase their own copy of:

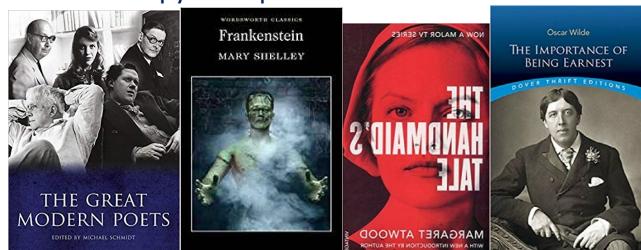
- *The Handmaid's Tale* (Vintage Classics)
- *Frankenstein* (Wordsworth Classics)
- *Twelfth Night* (Oxford Schools Shakespeare)
- *The Importance of Being Earnest* (Dover Thrift Editions)

Year 13

The Great Modern Poets: An Anthology of the Best Poets and Poetry Since 1900 edited by Michael Schmidt

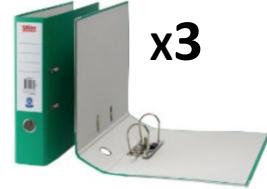
Resources for each unit:

- Exercise book
- Own copy of required text for annotation



Students Required Equipment

- 3 Ring binders (Poetry, Prose and Drama)
- 3 sets of 5 part folder dividers
- A4 Paper (lined or square)
- Black, blue, red and green pens
- Highlighters
- Ruler



Supplementary resources

Bacon's A-Level Prose: Supplementary Reading Booklet Study and Revise for AS/A Level: The Handmaid's Tale. Nicola Onyett. Hodder.

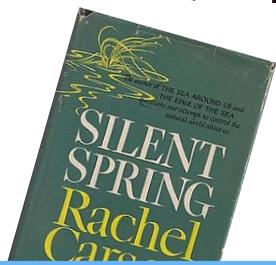
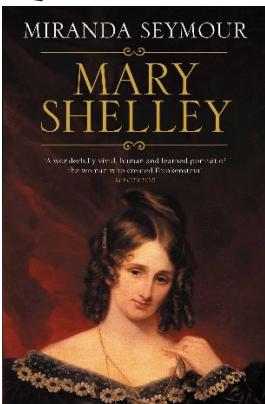
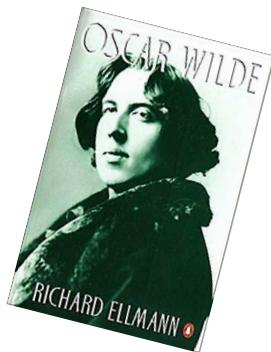
The Cambridge Introduction to Margaret Atwood. Heidi Stetterdahl Macpherson. Cambridge University Press.

Study and Revise for AS/A Level: Pearson Edexcel Poems of the Decade. Richard Vardy: Hodder.

The Art of Poetry: Forward Poems, revised selection: Volume 8. Neil Bowen, Michael Meally. Peripeteia Press.

Use the supplementary resources to enhance your understanding and analysis. Make careful summary notes. Use past papers to help you formulate exam style questions and write essay plans to help you revise

English Literature: Super-Curricular Activities



Recommended Wider Reading

[Mary Shelley](#)

By Miranda Seymour

[The Testaments](#)

The sequel to *The Handmaid's Tale* by Margaret Atwood

[In Search of Mary Shelley: the girl who wrote Frankenstein](#)

By Fiona Sampson

[The Secret Life of Oscar Wilde](#)

By Neil McKenna

[Oscar Wilde](#)

Richard Ellmann

[The Picture of Dorian Grey](#)

Novel by Oscar Wilde, will deepen understanding of Wilde's pre-occupations

[Romanticism: a very short introduction](#)

By Michael Ferber

[The Silent Spring](#)

Influential critique of the over-use of pesticides in the USA. By Rachel Carson. Available as a PDF

Films

[The Handmaid's Tale \(1990\):](#)

Directed by Volker Schlöndorff with a screenplay by Harold Pinter. Faithful to the novel and starring Natasha Richardson, Robert Duvall and Faye Dunaway.

[Mary Shelley's Frankenstein \(1994\)](#)

Directed by Kenneth Branagh. Starring Robert De Niro and Helena Bonham Carter.

[Mary Shelley \(2017\)](#)

Recent film about the author's early life and the writing of Frankenstein. Starring Elle Fanning. Available on Netflix.

Podcasts

[In Our Time](#)

Melvin Bragg and guests discuss the history of ideas. Useful episodes include: 'Frankenstein', '1816 the Year Without a Summer', 'The Late Romantics', Jean Jacques Rousseau', Oscar Wilde.

[The Life of Oscar Wilde: University of Oxford Podcasts](#)

[Bookclub: Margaret Atwood The Handmaid's Tale](#)

Margaret Atwood discusses her dystopian novel with James Naughtie and a group of readers

[Frankenpod 200: celebrating Mary Shelley's masterpiece - Science Weekly podcast](#)

Two hundred years after the publication of Frankenstein, how relevant are the themes and concerns of Shelley's gothic tale to today's readers?

[History Extra Podcast: Mary Shelley and her Monster](#)

Fiona Sampson, author of a new biography of Mary Shelley, discusses the remarkable life of the Frankenstein author.

[Website:](#)

www.bl.uk/discovering-literature

Examines literature in context with a wealth of material on key poems, novels and plays.

Further Mathematics: Curriculum

A Level Further Mathematics gives you the opportunity to study topics such as vectors, complex numbers and differential equations and to use these ideas within the 'applied' topics such as Decision.

Exam Board: Edexcel

Paper 1: Core Pure 1

Examination: 1.5 hours (75 marks)

All questions must be completed. Calculators are allowed.

Content: Complex Numbers, Matrices, Induction, Vectors. (content in Paper 1 or 2)

Paper 2: Core Pure 2

Examination: 1.5 hours (75 marks)

All questions must be completed. Calculators are allowed.

Content: Complex Numbers, Series, Calculus, Polar Coordinates, Hyperbolic Functions, Differential Equations.

(content in paper 1 or 2)

Paper 3: Further Pure 1

Examination: 1.5 hours (75 marks)

All questions must be completed. Calculators are allowed.

Content: Vectors, Conic Sections, Taylor Series, Numerical Methods, Calculus.

Paper 4: Decision 1

Examination: 1.5 hours (75 marks)

All questions must be completed. Calculators are allowed.

Content: Algorithms, Networks, Route inspection, Travelling Salesman Problems, Linear Programming, Simplex Algorithm, Critical Path Analysis.

Students Required Equipment

- Scientific Calculator **Casio FX 991 EX Classwiz**
- 4 ring binder folders (Core Pure 1, Core Pure 2, Further Pure and Decision 1)
- 4 sets of 10 page dividers
- A4 Paper (lined or square)
- Black, blue, red and green pens
- Highlighters
- Ruler
- Pencils

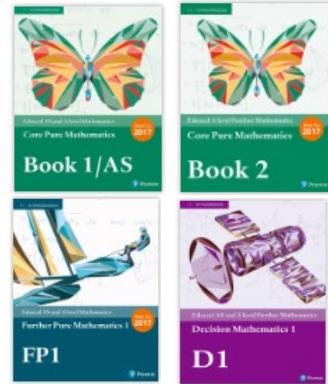


Provided Textbooks and Resources

Textbooks:

Edexcel A level Further Mathematics

- Core Pure 1
- Core Pure 2
- Further Pure 1
- Decision 1



Resources for each unit:

- Contents page
- Personalised learning checklist (PLC)
- Exam Paper Tracker
- Assessed Homework Tracker/Pearson Assessment Tracker
- Exercise book (for textbook homework only)
- Polar Graph Paper

Supplementary Resources

[Underground Mathematics](#) Arranged as a London tube map (since maths concepts are often interrelated!)

[Khan Academy](#) Providing online practice exercises, instructional videos, and a personalised learning dashboard.

[Exam Solutions](#) Provides many past papers, exam questions by topic and excellent tutorial videos.

[Physics and Maths Tutor](#) Has an array of resources from past exam questions to challenging extension questions. (It is the old specification but most topics are the same.)

[Bicen Maths](#) Has videos explaining every topic

Finished Your Homework?...

Please use one of the supplementary resources (on the left) to complete exam style questions. Please ensure you complete each question in exam conditions and mark it before moving on to the next question. This will ensure you are not practising questions incorrectly and that you learn from any mistakes quickly.

Remember: Practice Makes Permanent

Further Mathematics: Super-Curricular Activities

Competitions

UKMT Senior Mathematical Challenge (Year 12 & Year 13)

Date: Wednesday 10th November 2021

Public Lectures & Events

Please click on the links below for key lectures and events:

[University of Oxford](#)

[Further Maths Support Programme](#)

[Kings Maths School](#)

[Maths Inspiration](#)

[Gresham College](#)

[Long Road](#)

[UCL: Step Lectures](#)

[London Mathematical Society](#)

Videos

[Fermat's Last Theorem: A Video Review](#)

Watch Univ Mathematics student Dan talk about the “deceptively deep” theorem in this international bestseller.

[Numberphile](#)

These videos feature mathematicians with a sense of humour and a love of numbers exploring cool conundrums and puzzling paradoxes.

Podcasts

[More or Less](#)

Listen to this Radio 4 programme for an explanation of the numbers and statistics used across news, political debate and other areas of life.

[London Mathematical Society](#)

Exciting talks from the London Mathematical Society on maths topics for those with an interest (but not necessarily a PhD!) in it.

[A Brief History of Mathematics](#)

Radio 4 podcast exploring the colourful characters of past mathematicians, and arguing that Maths is integral to all sciences.

Recommended Wider Reading

[A Brief History of Time](#)

By Stephen Hawking

[Fermat's Last Theorem](#)

By Simon Singh

[Journey Through Genius](#)

By William Dunham

[Professor Stewart's Cabinet of Mathematical Curiosities](#)

By Ian Stewart

[The Wisdom of Crowds](#)

By James Surowiecki

[Zero: The Biography of a Dangerous Idea](#)

By Charles Seife

[A Mind for Numbers](#)

By Barbara Oakley

Websites

[Wild Maths](#)

A collection of games and puzzles to show you the creative side of mathematics!

[Millennium Mathematics Project – Maths and Sport](#)

Give your brain a workout with these sports-related maths problems designed to develop problem-solving and mathematical reasoning skills.

[NRICH](#)

With thousands of free online resources, this website is devoted to providing challenging, enriching maths problems.

Geography: Curriculum

Exam Board: AQA

A-level Geography gives you the opportunity to study the world around us. The world in which we live is likely to change more in the next 50 years than it has ever done before and our role in that change is more important than ever. Geography is concerned with the world around us: what shapes it, what sustains it and what influence we have upon it. Geography is therefore highly relevant to some of the most topical issues of the day, from earthquakes and climate change, to the exploitation of finite natural resources and our changing urban environments. Geography is about what is happening to us, now.

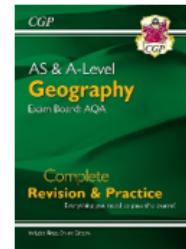
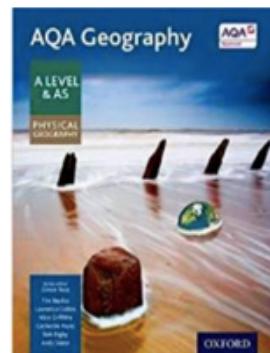
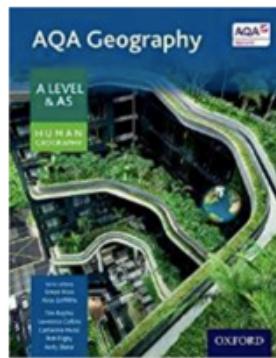
What will I study?

Paper 1: Physical Geography

Examination: 2 hours 30 minutes written exam worth 40% of A Level

Content:

- Water and carbon cycles
- Coastal systems and landscapes
- Hazards
- Geographical skills



Paper 2: Human Geography

Examination: 2 hours 30 minutes written exam worth 40% of A Level

Content:

- Global systems and global governance
- Changing places
- Contemporary urban environments
- Geographical skills

Paper 3: Geography Fieldwork Investigation

No examination but a 3,000-4,000 word report worth 20% of A-level.

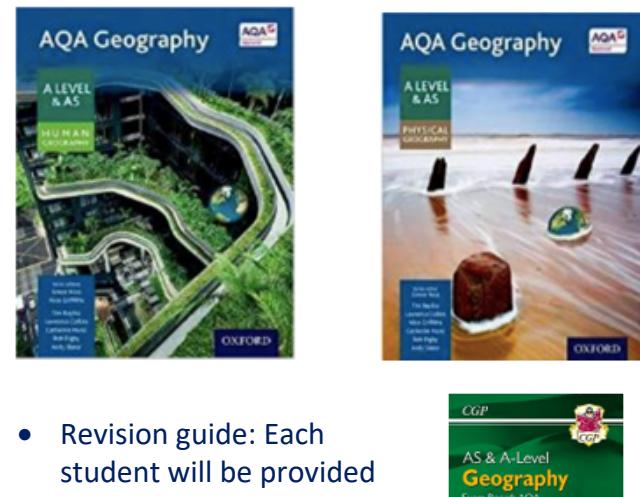
Students complete an individual investigation which includes 2 fieldwork days where data is collected.

Provided Textbooks and Resources

Textbook:

Two textbooks will be kept in the library for student use throughout the year:

- AQA Geography A Level & AS Human Geography Student Book, Oxford.
Ross S, Griffiths A, Bayliss T, Collins L, 2016
- AQA Geography A Level & AS Physical Geography Student Book, Oxford
Ross S, Bayliss T, Collins L, Griffiths A, 2016



- Revision guide: Each student will be provided with a CGP revision and practice guide.

What career opportunities can it lead to?

Geography is highly valued by universities, as it combines both arts and science it opens up many options for future study. Due to the extensive and contemporary issues studied, as well as the multitude of skills and practical experience Geography includes, there are many career pathways that are opened up by studying A-level Geography. Some of these include: Environmental management, Emergency management and planner, urban planning developer, cartography, real estate, land surveyor, educational roles, government advisor and many more.

Finished Your Homework?...

Please use the revision and practice book to complete Cornwell's notes and answer the exam-style questions. Complete exam questions from past papers available to you on the AQA website. You can also read ahead to the ¹⁶ chapter to familiarise yourself with key knowledge and concepts. Remember: **Practice Makes Permanent**

Geography: Super-Curricular Activities



Bacon's College Sixth Form
The best in everyone™
Part of Unite Learning

Journals & Magazines

- New Scientist.
- National Geographic.
- Geographical.
- The Economist

Websites

Geographical Association

<http://www.geography.org.uk/resources>

The British Geographers -

<http://thebritishgeographer.weebly.com/>

Royal Geographical Society - <http://www.rgs.org>

Watch anything by Hans Rosling on TED talks

https://www.ted.com/playlists/474/the_best_hans_rosling_talks_yo

World economic forum – lots of economic and political geography very interesting

<https://www.weforum.org/>

Maps that show us who we are (not just where we are) | Danny Dorling:

<https://www.youtube.com/watch?v=iWaZEXBbQLO>

Danny Dorling - Inequality and Insurrection |

SOAS University of London:

<https://www.youtube.com/watch?v=Z0FZKyJXA9E>

Worldmapper – www.worldmapper.org

Organisation for Economic Co-operation and Development – www.oecd.org United Nations

Millennium Development Goals

<https://www.un.org/sustainabledevelopment/sustainable-development-goals/>

International Organisation for Migration –

www.iom.int

New Internationalist – www.newint.org environment/populationenvironment

Public Lectures & Events

- RGS Lectures
- Kings College London Lectures
- TED talks

Recommended Wider Reading

- Prisoners of Geography: Ten Maps That Tell You Everything You Need to Know About Global Politics** Paperback by Tim Marshall
- Geography: Ideas in Profile** by Danny Dorling & Carl Lee
- What is radical about Geography?** by Danny Dorling
- Remaking London: Decline and regeneration in urban culture'** By Ben Campkin (2013)
- 'The Beach book: Science of the shore'** by Carl Hobbs (2012)
- Richter 10** by Arthur C Clark and Mike McQuay (1996)

Videos

General- Raging Planet/ Planet Earth I and II/ Earth: Power of the Planets.

Around the world in 80 days/ Sahara/ Full Circle etc – Michael Palin.

Human Geog-Andrew Marr's Megacities/ Britain from Above.

The war to live in London: Regeneration Game (2015)

Hazards- Volcano (1997) /Dantes Peak (1997)/ Earthquake (1974)/ San Andreas (2015).

The Impossible (2017).

Climate Change- An Inconvenient Truth, Climate Change State of the Planet – a series made in 2001 and presented by David Attenborough, Great Global Warming Swindle

Human Planet – 8 part BBC series (2011)

Wall. E (2008) Covers themes of

Globalisation and brand power. Also,

environmental issues depicted through

scenes of a post-apocalyptic world devoid of all natural life.

Graphic Communications: Curriculum



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A Level Graphic Communications provides students with the opportunity to develop an in-depth understanding of visual literacy and its impact on design, through both practical work and theoretical study. Learners will investigate a theme or subject utilising a range of graphical mediums. Graphic Communications critically explores a wide range of contemporary designers from varying disciplines while developing practical skills in industry standard software. This gives learners both the techniques and understanding to navigate the ever-expanding world of digital visual representations.

Exam Board: Eduqas

WORKSHOP

Portfolio Submitted as part of Personal Investigation

Content:

1. A preparatory element enabling students to experiment with digital methods of creativity and use software and gain understanding of relevant skills and processes. This involves five detailed tasks and will acclimatise students to necessary procedures to successfully navigate Component 1.

Component 1: Personal Investigation

60% of Qualification (120 marks)

Content:

1. An in-depth critical, practical investigative project/portfolio and outcome that are based on themes or subject matter of personal significance.
2. An extended written element of 2000 words containing images and text related to the project/portfolio, this must contain a practical and theoretical element using specialist vocabulary and terminology.

Component 2: Externally Set Assignment

40% of Qualification (80 marks)

Content:

1. Themes are released to learners on February 1st beginning a period where students visually document their exploration preparing for 15 hours of sustained focus.
2. Students complete outcome under exam conditions for 15 hours.

Provided Resources

Equipment:

- A3 Sketch Books
- A3 Carry Case
- Graphics Tablet



Software:

- Adobe Creative Suite (Photoshop/Illustrator/After Effects/Animate)



Adobe® Creative Cloud™

Submitted:

- Workshop Unit
- Personal Investigation
- Visual Essay
- Personal Investigation Outcome
- Outcome
- Externally set Assignment
- Externally set Assignment Outcome

Students Required Equipment

- Artist Sketching Pencils
- Fine Line Pens



Finished Your Homework?...

- Visit one of the sites listed overleaf and complete one of the hundreds of tutorials on offer. They come in varying lengths and complexities and there is something to suit all competencies. Test your skills and knowledge by using an Adobe program that you're less familiar with. Remember to always document your work as it progresses as proof of concept.

Supplementary Resources

Photography Studio The studio features a green screen, professional quality lights and a wind machine.

Laser Cutter This service enables students to access to industry standard cutting tools to be utilised for installations and physical outcomes.

Art Studio An area of the design department where students 6th form students can work independently.

Shared Area The Sixth Form Graphics Shared area has copies of lesson resources, knowledge organisers and Theoretical Framework Grids to support your independent study.

Graphic Communication: Super-Curricular Activities

Podcasts

Creative Pep Talk : Andy J. Miller

Design Matter: Debbie Millman

Accidental Creative: Todd Henry

Illustration Podcast: Frannerd

Museums and Exhibitions

Google these for exhibitions and events:

The Design Museum

The Victoria & Albert Museum

Tate Modern

Hayward Gallery

The Photographers Gallery

The National Portrait Gallery

Websites

<https://www.creativebloq.com>

<https://tutsplus.com/>

<https://www.thejealouscurator.com/blog/>

<https://www.designweek.co.uk/>

<https://www.behance.net>

<https://www.digitalartsonline.co.uk/>

TED Talks

-Martina Flor:

The Secret Language of Letter Design

-Tom McCall:

The Simple Genius of a Good Graphic

-Tony Fadell:

The First Secret of Design.. Noticing

-Ingrid Fetell Lee:

Where Joy Lives and How to Find it.

-Jamie Paik:

Origami Robots that Reshape and Transform themselves

Recommended Wider Reading

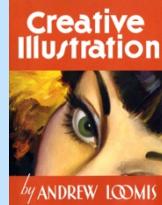
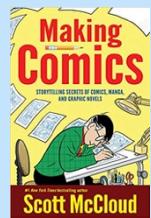
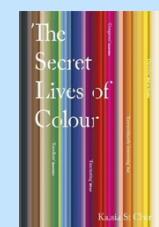
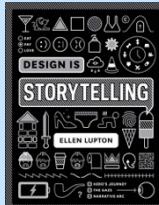
Design is Storytelling: Ellen Lupton

The Animators Survival Kit: Richard E. Williams

Making Comics: Scott McCloud

The Secret Lives of Colour: Kassia St Clair

Creative Illustration: Andrew Loomis



Extension Through Fiction

Art Spiegelman *Maus*

Alan Moore *V for Vendetta*

Alan Moore *Watchman*

Marjane Satrapi *Persepolis*

History: Curriculum

A Level History covers a range of topics spanning 200 years of world history that enable students to build on their source and interpretation skills and strengthen their understanding of the past. History allows students to develop a number of skills including analysis, evaluation, research and how to communicate ideas clearly and concisely.

Exam Board: AQA

Paper 1: The British Empire, c1857–1967

Examination: 2 hour 30 minutes written exam, 80 marks

This paper allows students to study in breadth issues of change, continuity, cause and consequence as the British Empire developed and consolidated its power and was then challenged before ending after a process of decolonisation. You will explore these content through analysis and evaluation of historical interpretation.

Paper 2: Crisis of Communism: USSR and the Soviet Empire, 1953–2000

Examination: 2 hour 30 minutes written exam, 80 marks

This option provides for the study in depth of the practice and demise of Soviet Communism. It explores concepts such as de-Stalinisation, Glasnost, Perestroika and 'people power' and encourages students to reflect on issues of authority, leadership and legitimacy as well as the problems of communism in practice. Furthermore, this option will help students to understand issues surrounding Russia and Eastern Europe in the present day.

Non-Exam Assessment

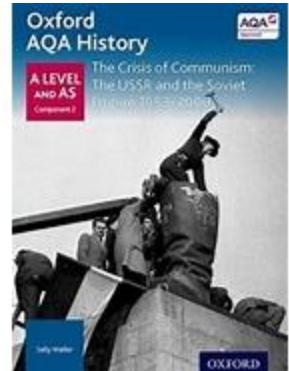
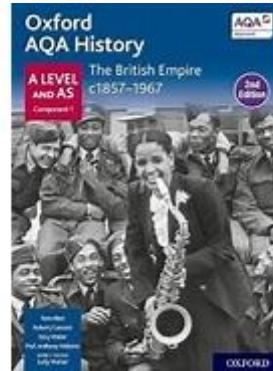
You will be required to write an independently researched extended essay, worth 40 marks. This will focus on the **Tudors** as the course must cover a certain number of years. You are required to create and sustain an argument and analyse and evaluate historians' interpretations of the chosen area on historical debate



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Part of Unilearning

Provided Textbooks and Resources

Textbooks:



Exercise books and all resources need to prepare for exams will be provided for work in lessons and for independent study.

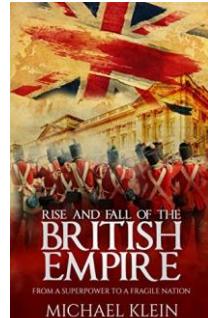
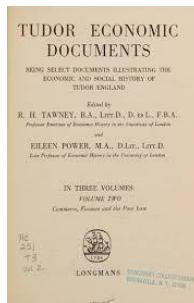
Students' Required Equipment

- 2 ring binder folders
- 2 sets of dividers
- Black, blue, red and green pen
- Highlighters
- Ruler
- Pencils

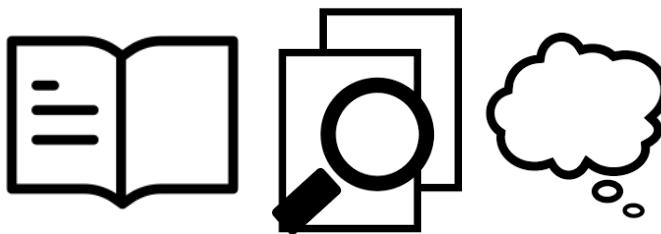


Equipment and expectations

- Your work is your responsibility
- Keep a folder for each paper, with sections for each topic within the paper
- Date every handout and piece of written work
- Keep a separate section in your folder for assessed work and feedback
- Work to be marked is to be completed on paper
- If essays are typed, they must be in font size 12
- You require pens, coloured and black, and a highlighter



History: Super-Curricular Activities



Websites and Podcasts

How to revise A-Level history:

<https://www.youtube.com/watch?v=lr6PcpTPkk>

www.nationalarchives.gov.uk

www.history.com

www.historyextra.com

www.history.org.uk

www.britishempire.org.uk

www.youtube.com/user/crashcourse

AQA Homepage:

<https://www.aqa.org.uk/subjects/history/>

New York Times archive -

<https://archive.nytimes.com/www.nytimes.com/ref/membercenter/nytarchive.html>

Recommended Wider Reading

- T Crump, Brezhnev and the decline of the Soviet Union, Routledge, 2013
- D Evans and J Jenkins, Years of Russia, the USSR and the Collapse of Soviet Communism, Hodder Arnold (2nd edn), 2001
- S J Lee, Russia and the USSR, Routledge, 2005
- J Laver, C Rowe and D Williamson, Years of Division, Europe since 1945, Hodder Murray, 1999
- D Marples, The Collapse of the Soviet Union 1985-1991, Longman, 2004
- A Jackson, The British Empire: a short introduction
- F McDonough, The British Empire 1815-1914
- L James, The rise and fall of the British Empire
- J MacKenzie, The Partition of Africa, Routledge, 1983
- B Porter, The Lion's Share: A History of British Imperialism 1850-2011, Routledge, 2012

Visual sources and websites

Paper 1: British empire

- S Schama, A History of Britain, 14: The Empire of Good Intentions, DVD, BBC, 2000
- J Paxman, Empire, DVD, BBC, 2012
- BBC On This Day

Paper 2: Soviet empire

- <http://chnm.gmu.edu/1989/primarysources>
- http://www.libraries.iub.edu/index.php?page1_id=1001156
- <http://www.centreuropeannerve.com/online-primary-sources>
- <http://libguides.adelaide.edu.au/content.php?pid=296810&sid=2436821>
- <http://germanhistorydocs.ghi-dc.org/>

Podcasts

Pax Britannica: A History of the British Empire

Podcast: Sociology of the personal life

Historical association podcast on empire:

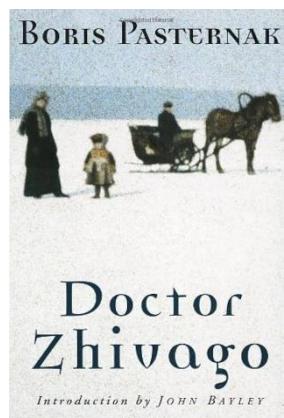
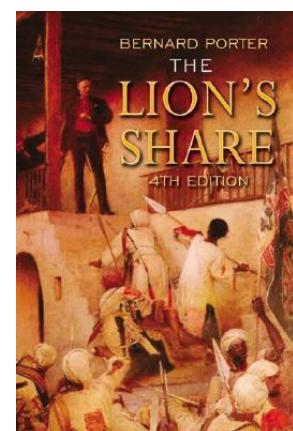
<https://www.history.org.uk/secondary/module/8792/podcast-series-confronting-controversial-history/11074/empire>

Dan Snow's history hit:

<https://shows.acast.com/dansnowshistoryhit/episodes/the-british-empire>

The fall of the Soviet Union

<https://podcasts.apple.com/mt/podcast/the-fall-of-the-soviet-union/id1537788786?i=1000553246963>



Mathematics: Curriculum

A Level Mathematics gives you the opportunity to study topics such as geometry, calculus and trigonometry (pure mathematics) and to use these ideas within the 'applied' topics such as mechanics and statistics.

Exam Board: Edexcel

Paper 1: Pure Mathematics 1

Examination: 2 hours (100 marks)

All questions must be completed. Calculators are allowed.

Content: Algebra and Functions; Coordinate Geometry; Proof; Exponentials and Logarithms; Trigonometry; Differentiation and Integration and Vectors. (Content can be in paper 1 and/or 2.)

Paper 2: Pure Mathematics 2

Examination: 2 hours (100 marks)

All questions must be completed. Calculators are allowed.

Content: Algebra and Functions; Coordinate Geometry; Proof; Exponentials and Logarithms; Trigonometry; Differentiation and Integration and Vectors. (Content can be in paper 1 and/or 2.)

Paper 3: Statistics and Mechanics

Examination: 2 hours (100 marks)

All questions must be completed. Calculators are allowed.

Content:

Statistics (50 marks): Sampling; Data Representation and Interpretation; Statistical Distributions and Hypothesis Testing.

Mechanics (50 marks): Kinematics; Forces and Newton's Laws; Moments and Projectiles.

Supplementary Resources

Underground Mathematics

Bicen Maths

Khan Academy Providing online practice exercises, instructional videos, and a personalised learning dashboard.

Exam Solutions Provides many past papers, exam questions by topic and excellent tutorial videos.

Physics and Maths Tutor Has an array of resources from past exam questions to challenging extension questions. (It is the old specification but most topics are the same.)

Provided Textbooks and Resources

Textbooks:

Year 12

Edexcel AS and A level Mathematics

- Pure Mathematics Year 1/AS
- Statistics & Mechanics Year 1/AS



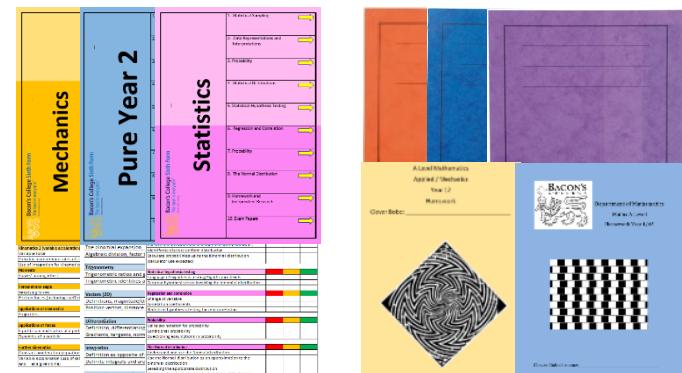
Year 13

Edexcel A level Mathematics

- Pure Mathematics Year 2
- Statistics & Mechanics Year 2

Resources for each unit:

- Contents page
- Personalised learning checklist (PLC)
- Exam Paper Tracker
- Assessed Homework Tracker/Pearson Assessment Tracker
- Exercise book (for textbook homework only)



Students Required Equipment

- Scientific Calculator **Casio FX 991 EX Classwiz**
- 3 ring binder folders (Pure, Statistics and Mechanics)
- 3 sets of 10 page dividers
- A4 Paper (lined or square)
- Black, blue, red and green pens
- Highlighters
- Ruler
- Pencils



Finished Your Homework?...

Please use one of the supplementary resources (on the left) to complete exam style questions. Please ensure you complete each question in exam conditions and mark it before moving on to the next question. This will ensure you are not practising questions incorrectly and that you learn from any mistakes quickly.

Remember: Practice Makes Permanent

Mathematics: Super-Curricular Activities

Competitions

UKMT Senior Mathematical Challenge (Year 12 & Year 13)

Date: Wednesday 10th Nov 2021

Public Lectures & Events

Please click on the links below for key lectures and events:

[University of Oxford](#)

[Further Maths Support Programme](#)

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[UCL: Step Lectures](#)

[London Mathematical Society](#)

Recommended Wider Reading

[A Brief History of Time](#)

By Stephen Hawking

[Fermat's Last Theorem](#)

By Simon Singh

[Journey Through Genius](#)

By William Dunham

[Professor Stewart's Cabinet of Mathematical Curiosities](#)

By Ian Stewart

[The Wisdom of Crowds](#)

By James Surowiecki

[Zero: The Biography of a Dangerous Idea](#)

By Charles Seife

[A Mind for Numbers](#)

By Barbara Oakley

Videos

[Fermat's Last Theorem: A Video Review](#)

Watch Univ Mathematics student Dan talk about the “deceptively deep” theorem in this international bestseller.

[Numberphile](#)

These videos feature mathematicians with a sense of humour and a love of numbers exploring cool conundrums and puzzling paradoxes.

Podcasts

[More or Less](#)

Listen to this Radio 4 programme for an explanation of the numbers and statistics used across news, political debate and other areas of life.

[London Mathematical Society](#)

Exciting talks from the London Mathematical Society on maths topics for those with an interest (but not necessarily a PhD!) in it.

[A Brief History of Mathematics](#)

Radio 4 podcast exploring the colourful characters of past mathematicians, and arguing that Maths is integral to all sciences.

Websites

[Wild Maths](#)

A collection of games and puzzles to show you the creative side of mathematics!

[Millennium Mathematics Project – Maths and Sport](#)

Give your brain a workout with these sports-related maths problems designed to develop problem-solving and mathematical reasoning skills.

[NRICH](#)

With thousands of free online resources, this website is devoted to providing challenging, enriching maths problems.

Physics: Curriculum

A Level Physics gives you the opportunity to study topics such as mechanics, projectile motion, planetary motion, photons, and Quantum Physics, and to then apply these ideas to real universe situations.

Course & Assessment Overview (Year 13 only):

Content Overview	Assessment Overview	
Content is split into six teaching modules:	Modelling physics (01) 100 marks 2 hours 15 minutes written paper	37% of total A level
	Exploring physics (02) 100 marks 2 hours 15 minutes written paper	37% of total A level
	Unified physics (03) 70 marks 1 hour 30 minutes written paper	26% of total A level
Component 01 assesses content from modules 1, 2, 3 and 5. Component 02 assesses content from modules 1, 2, 4 and 6. Component 03 assesses content from all modules (1 to 6).	Practical Endorsement in physics (04) (non exam assessment)	
	Reported separately (see Section 5g)	

Provided Textbooks and resources

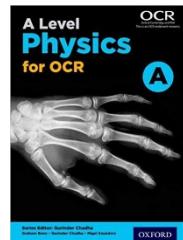
Textbooks:

Year 12

A Level Physics for OCR AS / Year 1

Year 13

A Level Physics for OCR



Students Required Equipment

- Scientific Calculator
- Ring binder folder, we will provide
- Black, blue, red and green pens
- Ruler
- Pencils



Supplementary Resources

Ulearn (a subscription website we buy you a subscription to) is a valuable online resource and should be a regular choice for consolidation and revision.

Gorilla Physics contains a large number of quality videos and some good question resources, including worked exam questions.
<http://www.gorillaphysics.com/>

Phet contains numerous animations that can be used and are interactive and adjustable.

Azzopardi resources. These contain information on the topics and some practice questions that you can try.

Khan Academy Providing online practice exercises, instructional videos, and a personalised learning dashboard.

Institute of Physics – numerous resources related to physics both within the A-level specification and wider.

Finished Your Homework?...

Complete some Azzopardi questions on the topics you have struggled on in the past. These can be found in O:\6th Form\Science\Physics from 2015\Azzopardi PDF's for help and revision

Complete summary questions for topics you struggled on previously. You will have forgotten the questions and answers so redoing them will be valuable!

Remember: Practice Makes Permanent

Physics: Super-Curricular Activities

Recommended Wider Reading

Storm in a Teacup: The Physics of Everyday Life by Helen Czerski

A Brief history of Time by Stephen Hawking

The quantum universe, anything that can happen does happen by Professor Brian Cox

QED: The Strange Theory of Light and Matter by Richard Feynman

The Elegant Universe by Brian Greene

Videos

TED videos

Boaz Almog – levitating super conductors

Color – the spectrum of science. Four part series on BBC iPlayer

The Feynman lectures on physics

Documentary - How It Works Metal

Kurzgesagt YouTube channel

Minutephysics YouTube channel

Podcasts

The Infinite Monkey Cage – BBC

Rutherford and Fry – BBC

5 Live Science podcast – BBC

CrowdScience – BBC

Science in action – BBC

BBC Inside Science – BBC

<https://blog.sciencemuseum.org.uk/tag/physics/page/2/> science museum physics blog

Competitions

SATRO challenge

Public Lectures & Events

Please click on the links below for key lectures and events:

New scientist Live

Science Museum

Websites

<https://phet.colorado.edu/> University of Colorado interactive simulations

<http://www.iop.org> Institute of physics

<https://insidestory.iop.org/> Medical physics information and simulations

Psychology: Curriculum

A Level Psychology offers learners to study a range of topics from why and how people react differently in different social surroundings, to the development of mental disorders. These topics are current, relevant and provide scope to apply what they have learned in the classroom, out in the real world.

Paper 1: Introduction Topics in Psychology

Examination: 2 hours (96 marks)

Content:

- **Social influence** - conformity, obedience and how social influence can bring about social change.
- **Memory** - how we store and retrieve information; including models of memory, memory in everyday life.
- **Attachment** - how children develop attachments and how these can affect later adult relationships.
- **Psychopathology** - definitions of abnormality, explanations and treatments of disorders, such as depression, phobias and OCD.

Paper 2: Psychology in context

Examination: 2 hours (96 marks)

Content:

- **Research methods** – learning how psychologists conduct research.
- **Approaches in Psychology** -comparing and contrasting the different views found in psychology, for example biological approach vs humanistic approach.
- **Biopsychology** – the nervous system, neurons and synaptic transmission, localisation of function in the brain, ways of studying the brain, biological rhythms.

Paper 3: Issues and options in Psychology

Examination: 2 hours (96 marks)

Content:

- **Issues and Debates** - explores some of the key debates in psychology.
- **Relationships** - explore factors affecting attraction, different explanations for romantic relationships and relationship breakdown.
- **Schizophrenia** – Investigate the nature of schizophrenia, as well as comparing possible explanations and treatments.
- **Forensic Psychology** – explores offender profiling, different explanations of criminal behaviour and ways of dealing with offender behaviour.

Provided Textbooks and Resources

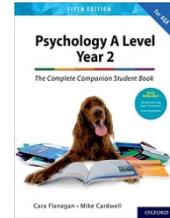
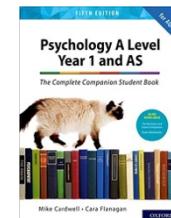
Textbooks:

Year 12

Psychology A level Year 1 and AS

Year 13

Psychology A level Year 2



Resources for each unit:

- Contents page
- Personalised learning checklist (PLC)
- Exam Paper Tracker
- Exercise book (for exam questions only)

Students Required Equipment

- Calculator
- 1 set of 10page dividers
- 1 lever arch file
- A4 Paper (lined)
- Black and green pens
- Highlighters
- Pencils



Supplementary Resources

Tutor2u – key studies and content

AQA - specification, past papers, mark schemes, examiner's reports, exam dates etc.

Psychology4a - for revision and content.

PsychBug.- Videos and quizzes

S-cool – Revision

Finished Your Homework?

- Use one of the supplementary resources to complete exam style questions and quizzes for each topic.
- Create essay plans for each topic
- Make flash cards for key research and keep them in your folder.
- Produce a vocabulary book and update this regularly.

Psychology: Super-Curricular Activities

Podcasts

The Psychology Podcast

The psychology podcast will give you insights into the mind, brain, behaviour and creativity.

PsychCrunch

Each episode will explore whether the findings from psychological science can make a difference in real life.

Psychology in Everyday Life

Professor Michael Britt hosts this engaging podcast in which he talks to college students about where we see ideas from Psychology in our daily lives.

Hidden Brain

Science and storytelling are used to reveal the unconscious patterns that drive human behaviour.



Recommended Wider Reading

Opening Skinner's Box – Lauren Slater

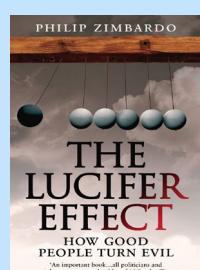
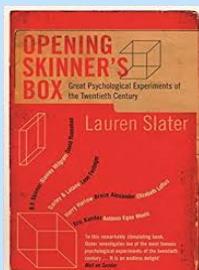
The Lucifer Effect – Phillip Zimbardo

Obedience to authority - Stanley Milgram

The Man who Mistook his Wife for a Hat- Oliver Sacks

Before I go to Sleep – S.J Watson

The Curious Incident of the Dog in the Night-Time – Mark Haddon



Ted Talks

How reliable is your memory?

Elizabeth Loftus

Why eyewitnesses get it wrong?

Scott Fraser

The psychology of time

Phillip Zimbardo

How can groups make good decisions?

Mariano Sigman

Why teens confess to crimes they didn't commit

Lindsay Malloy



Public Lectures & Events

Please click on the links below for key lectures and events:

[University of Oxford](#)

[British Psychological society](#)

[University College London](#)

[King's college London](#)

[University of Exeter](#)

[Goldsmith University](#)

Websites

<http://www.bbc.co.uk/search?q=psychology>

<https://www.ted.com/talks?topics%5B%5D=psychology>

<https://www.psychologytoday.com/gb/news>

<https://thepsychologist.bps.org.uk>

https://www.sciencedaily.com/news/mind_brain/psychology/

Religious Studies: Curriculum

A Level Religious Studies gives you the opportunity to study topics such as Ancient Greek philosophy, to exploring applied ethics of euthanasia and business ethics, whilst considering the developments within Christian theology and its impact on society today

Exam Board: OCR

Paper 1: Philosophy

Examination: 2 hours (120 marks)

Three out of four essays must be completed (student choice).

Content:

Ancient philosophy; Soul, mind and body; Arguments for the existence of God; Religious Experience; The problem of evil, The nature of God; Religious Language.

Paper 2: Ethics

Examination: 2 hours (120 marks)

Three out of four essays must be completed (student choice).

Content:

Natural Law; Situation Ethics; Kantian Ethics; Utilitarianism; Applied Ethics; Metaethics; Conscience; Sexual Ethics.

Paper 3: Developments of Christian Thought

Examination: 2 hours (120 marks)

Three out of four essays must be completed (student choice).

Content:

Human nature; Death and the Afterlife; Knowledge of God's existence; Jesus Christ; Christian moral principles; Christian moral action; Feminism; Pluralism and Secularism; Marxism.

Provided Textbooks and Resources

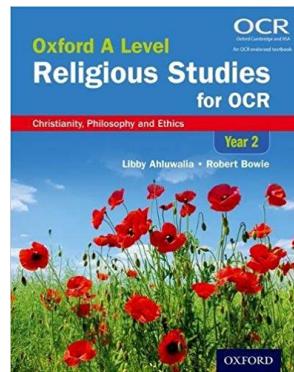
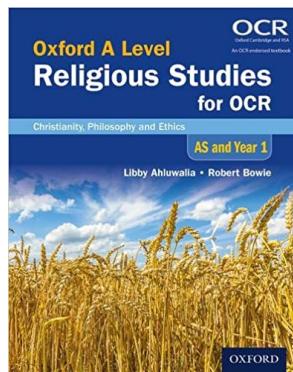
Textbooks:

Year 12: Oxford A Level Religious Studies for OCR: AS and Year 1 Student Book: Christianity, Philosophy and Ethics, by Libby Ahluwalia and Bob Bowie

Year 13: Oxford A Level Religious Studies for OCR: Year 1 Student Book: Christianity, Philosophy and Ethics, by Libby Ahluwalia and Bob Bowie

Resources for each unit:

- A section of your folder
- Resources booklet
- A3 Revision Overview

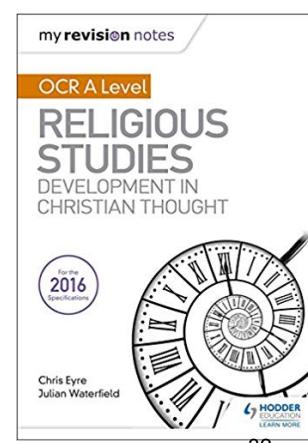
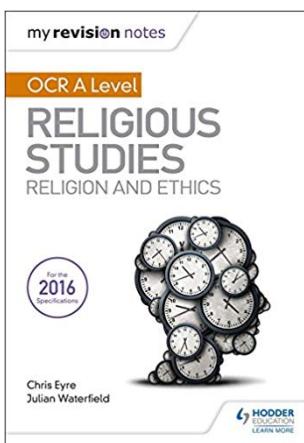
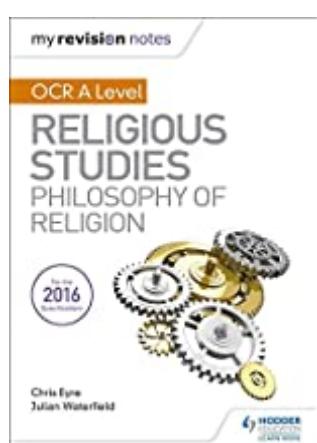
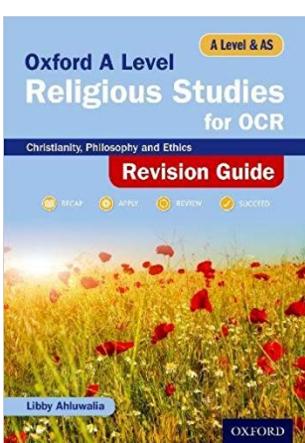


Students Required Equipment

- 2 ring binder folders (Year 1 and Year 2)
- 3 sets of 10 page dividers
- A4 Paper (lined or square)
- Black and green pens
- Highlighters
- Ruler
- Pencils



Revision Guides- Hyperlink on image





Magazines and Journals

[Oxford Philosophy](#)

[Dialogue](#)

[New Philosopher](#)

Public Lectures & Events

Please click on the links below for key lectures and events:

[Eventbrite](#)- Public lectures & events

[The London Institute](#)- Public lectures

[Kings College London](#)- Public lectures

[SOAS](#)- Public lectures

[New College of Humanities](#)- Taster Days

Recommended Wider Reading

Sophie's World, Jostein Gardener

The God Delusion and *The Blind*

Watchman, Richard Dawkins

The Story of God, Robert Winston

Think: A Compelling Introduction to Philosophy, Simon Blackburn

What does it all mean? Thomas Nagel

The Young Atheist's Handbook, Alom Shaha

An Introduction to the Philosophy of Religion, Brian Davies

The Miracle of Theism, J.L. Mackie

The Puzzle of God, Peter Vardy

Ethical Theory, Mel Thompson

The Puzzle of Ethics, Peter Vardy and Paul Grosch

Videos

[Philosophy Tube](#)

[Crash Course Philosophy](#)

[A History of Ideas](#)

[Harvard University Lectures- Michael Sandel](#)

Podcasts

[The Infinite Monkey Cage](#)

Physicist Professor Brian Cox and comedian Robin Ince examine various aspects of cosmology, science, philosophy and religion.

[In Our Time: Philosophy](#)

From Altruism to Wittgenstein, philosophers, theories and key themes.

[Panpsy Philosophy Podcast](#)

A podcast of the entire of the Developments of Christian Thought unit. Available on Spotify and iTunes.

[The University of Oxford](#)

Variety of podcasts on all aspects of philosophical study. Includes lectures, interviews with philosophers and talks.

Websites

[New College of Humanities Blogs](#)

[Cambridge University Philosophy Blogs](#)

[Cambridge University RS Blogs](#)

[British Society for the History of Philosophy](#)

[Ethics Online](#)

Sociology: Curriculum

A Level Sociology helps students develop a wide range of knowledge and understanding about society, and how sociologist's study and understand its structures, processes and issues. Sociology is exciting, interesting and relevant to students' lives. It allows them to think about the world they live in and makes them question why things are the way they are.

Exam Board: AQA

Paper 1: Education with methods in

**Examination: 2 hour written exam, 80 marks
33.3% of A-level**

Questions:

Education: short answer and extended writing, 50 marks

Methods in Context: extended writing, 20 marks

Theory and Methods: extended writing, 10 marks

Paper 2: Topics in Sociology Household

**Examination: 2 hour written exam, 80 marks
33.3% of A-level**

Questions:

Section A: extended writing, 40 marks

Section B: extended writing, 40 marks

Paper 3: Crime and Deviance

Examination: Examination: 2 hour written exam, 80 marks, 33.3% of A-level

Questions:

Crime and Deviance: short answer and extended writing, 50 marks

Supplementary Resources

Almost all television programmes have sociological value. From Soaps, reality shows to current affairs and documentaries. Ones to look out for include:

- Panorama (BBC1)
- Channel 4 News
- Cutting Edge (C4)
- Have I Got News For You

Provided Textbooks and Resources

Textbooks:

Year 12

AQA AS and A level Sociology Book One

- Education with methods in Context
- Families and Households

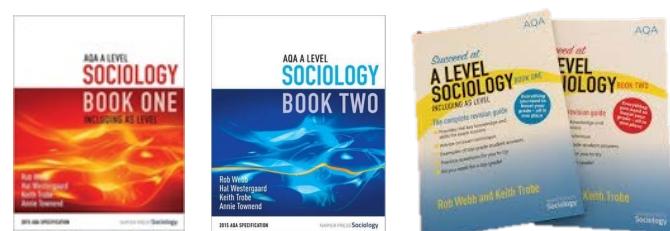
Year 13

AQA A level Sociology Book Two

- Beliefs in Society
- Crime and Deviance
- Theory and Methods

Resources for each unit:

- Contents page
- Personalised learning checklist (PLC)
- Assessment Tracker
- Guided Learning booklet (assessed homework)
- Exercise book



Students Required Equipment

- 2 ring binder folders (Pure, Statistics and Mechanics)
- 2 sets of 10 page dividers
- A4 Paper (lined or square)
- Black, blue, red and green pens
- Highlighters
- Ruler
- Pencils



Finished Your Homework?...

Create a revision mind maps for topics covered. Must include key concepts (AO1), relevant sociologists (AO2) and evaluation points (AO3).

Complete exam style questions from textbook/AQA website. Please ensure you complete each question in exam conditions and mark it using mark schemes.

Sociology: Super-Curricular Activities

Museums and Exhibitions

The V&A Museum of Childhood, Tate Modern and The Science Museum are interesting places to visit for students looking to have an understanding of key themes and topics within Sociology (such as Childhood, Modernism and Technological change in society)

Videos

Jesus Camp (religion, alienation, oppression, childhood)

The UP Series of documentaries, 7UP, 14UP...49UP etc. (longitudinal research, childhood, families, poverty)

Louis Theroux Documentaries (media, celebrity, culture, Western society)

Inside Death Row with Trevor MacDonald (punishment, prisons, class, ethnicity, crime reduction)

Unequal Opportunities BBC Documentary (Education, marketization, selection policies, deprivation)

Quiet Rage: The Stanford Prison Experiment (lab experiments, ethical issues)

East is East (extended family, Asian families, Gay/Lesbian culture)

OJ Simpson: Made in America (ethnicity, criminal justice, celebrity, murder, gender and crime)

Recommended Wider Reading

All newspapers are valuable resources for students. A number of key newspapers have sociologists writing articles, and cover stories in a very sociological in-depth way.

Key newspapers include:

- The Guardian – On Tuesday there is a useful 'Education' supplement, and on Wednesday there is a useful 'Society' supplement

Toxic childhood: How the world is damaging our children and what we can do about it by Sue Palmer

Gang Leader for the Day by Sudhir Venkatesh

Black Like me by John Howard Griffin

Ted Talks

Kandice Sumner – How America's public school keep kids in poverty.

https://www.ted.com/talks/kandice_sumner_how_america_s_public_schools_keep_kids_in_poverty

Tan Lee – My immigration story.

https://www.ted.com/talks/tan_le_my_immigration_story

Noy Thrupkaew – Human trafficking is all around you. This is how it works.

https://www.ted.com/talks/noy_thrupkaew_human_trafficking_is_all_around_you_this_is_how_it_works

Podcasts

Radio 4 podcast 'Do schools make a difference?'

<http://www.bbc.co.uk/programmes/b01b9hjs>

Podcast: Sociology of the personal life

<http://www.aqa.org.uk/resources/sociology/as-and-a-level/sociology/teach/podcasts-for-as-and-a-level-sociology>

Podcast – 'What is justice?'

<http://www.bbc.co.uk/programmes/b05pmpd>

A podcast of Melvyn Bragg talking to guests about Weber's The Protestant Ethic

<http://www.bbc.co.uk/programmes/b03yqj31>

Websites

AQA Homepage:

http://www.aqa.org.uk/qual/gce/sociology_new.php

S-Cool Revision Site: http://www.s-cool.co.uk/topic_index.asp?subject_id=64

Sociology Central: <http://www.sociology.org.uk/>

The BBC news website is worth a daily visit, or set up your phone to receive regular alerts.

BTEC Business: Curriculum

Vocational Business develops students' core skills and understanding of the requirements of the business sector. Students gain hands-on experience and have the opportunity to focus on specific topics such as human resources, marketing, accounting and business planning.

BTEC Business

- **Examination: 2 hours written paper (Unit 3)**
- **Unit 2- assessed by a task set and marked by Pearson and completed under supervised conditions**

Content:

Everyone taking this qualification will study three mandatory units.

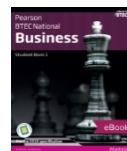
- Unit 1: Exploring the Business Environment
- Unit 2: Developing a Marketing Campaign-
- Unit 3: Personal and Business Finance
- Optional unit (Recruitment and selection)

Unit 1: Exploring the Business Environment and Unit 8: Recruitment & Selection are internally assessed, and unit 3 is an exam unit and externally assessed.

Provided Textbooks and Resources

Textbooks:

BTEC National Student Book 1



Students Required Equipment

- 1 A4 ring binder, plus exercise book
- Dividers
- A4 paper (lined and punched)
- Black, blue and green pens
- Highlighters
- Ruler
- Pencils

Finished Your Homework?...

Students should complete all homework set via Show My Homework using supplementary resources and PLC to support good quality work. Most of the time students will be carrying out research due to the nature of the course and these research tasks will then be used within the coursework unit.

Supplementary Resources

[Business workshop](#) This department is here to maximise our student's potential in meaningful and relevant ways. Students are encouraged to attend a workshop provided by Tutor2u in which they will spend the day reviewing key skills and concepts that relate to their exam unit.

[Exemplar work](#) These are provided to students so that they can critique and use as a model to plan and draft their own assessment depending on the units whether it's a team building task or an individual piece of assessment.

[Shared Area](#) The Sixth Form Business Shared area has copies of lesson resources and other activities.

[Bank of England](#) This presentation includes short animated videos that use a nautical theme to explain what the Bank of England does. The modules explain why low inflation and a stable financial system matter. They include a simple guide to the Bank's roles such as setting the Bank Rate and other types of monetary policy.

External Business Events

- *The Business Show - London Excel*
- *London Investor show*
- *Business Networking, Pitching and Refreshment- Free event*
- *The international Franchise show 2020- the only even of its kind in the UK to connect you with the largest selection of franchise brand.*
- *Chessington Business Expo*

Recommended Wider Reading

Financial times

Integrating quantitative and qualitative research: how is it done?

Qualitative research Sage Publication Vol. 6 (1) 97-113

Doing Research in the Real World. Sage. London

Research Design: Qualitative, Quantitative and Mixed Approaches

Digital Marketing Strategy: An integrated approach to online marketing By Simon Kingsnorth

Invisible woman

The Big nine

The Business Book: Big Ideas Explained Simply

Useful Websites

<https://www.tutor2u.net/business>
<https://revisionstation.co.uk/>

<https://www.bbc.com/bitesize/subjects/zw26n39>

<https://www.s-cool.co.uk/a-level/business-studies>

<https://www.tutor2u.net/business>
<http://www.beebusinessbee.co.uk/index.php/business-qualifications/btec-nationals-business-level-3>

Business Apprenticeships/Startups

Barclays life skills

Barclays Foundation and higher apprenticeship

Marks and Spencer's Apprenticeships

Deutsche Bank Analyst Internship Programme – Finance

L'Oréal Degree Apprenticeship

Finance Assistant Apprentice-HORIZON

ACCOUNTS LIMITED

Marketing Internship: Coinrule

Government Grant and Funding for Small Business: The GrantsHub

The British Small Grants

The Prince Trust Grants

Top UK Businesses you might consider to work as well as to use within coursework

1. **Amazon**, internet
2. **JPMorgan Chase & Co.**, financial services
3. **Barclays**, financial services
4. **TUI**, leisure, travel & tourism
5. **Aviva**, financial services
6. **Associated British Foods**, food production
7. **Marks & Spencer**, retail
8. **Schroders**, Investment management
9. **Deloitte**: Accountancy and financial management, Management consulting
10. **Goldman Sachs International**, Investment banking and Investment
11. **Sainsbury's**, retail
12. **Asda (Walmart)**, retail



CTEC MEDIA: Curriculum

Cambridge Technical Extended Certificate in Digital Media is aimed at people who enjoy learning about the media, as well as creating media products. The course has been designed to provide a high-quality alternative to A levels and is industry and university recognised. You will develop creative and academic skills, knowledge and understanding of the media industry, together with the processes, values and job roles involved. The aims of the course are to:

- develop theoretical and technical knowledge;
- develop key skills required in the production of media texts;
- develop professional and social skills through interaction with performers, clients and peers;
- encourage creativity through the design and production of media products.

Unit 1

Students are required to complete an on-screen supervised exam which lasts for two hours. The exam will consist on short and long answer questions.

Learners will study a range of media products and how these represent individuals, groups, places and issues and how audience respond to these. They will apply a number of media theories to demonstrate academic knowledge and a deeper level of understanding.

Unit 2

This is a mandatory unit that forms the foundation of the course. The knowledge and understanding developed in this unit are transferable to a number of other units.

Pre-production and planning are key aspects of any media production, time spent well leading up

to a production can save time and money. By completing this unit, you will understand the preproduction process that the creative media industry follows

Unit 3

Pre-production and planning are key aspects of any media production, time spent well leading up

to a production can save time and money. By completing this unit, you will understand the preproduction process that the creative media industry follows when creating a product.



Provided Textbooks and Resources

- Unit 1: Media products and audiences
- Unit 2: Pre-production and planning
- Unit 3: Create a media product
- Unit 20: Advertising media
- Unit 21: Planning and delivering a pitch
- Unit 22: Scripting for media products

Technical Skills

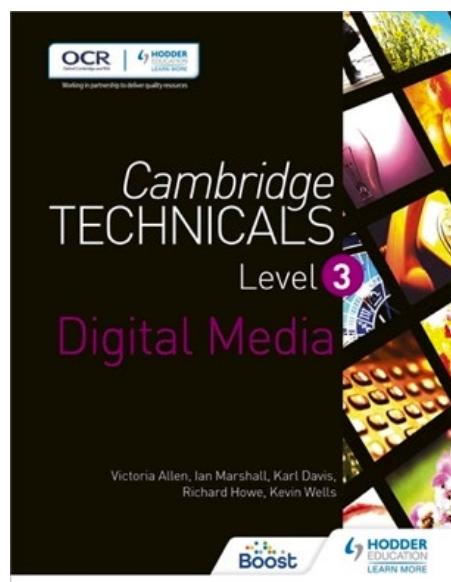
You will gain a vast range of technical skills using industry-standard filming and editing equipment and software, knowledge of pre-production practices, and post-production skills.

Facilities and Equipment

- State of the art facilities
- Greenscreen
- Industry standard Cameras
- Industry standard lights
- Adobe cc packages for use in school and at home
- Brand new Apple iMac

Student Required Equipment (Theory work)

2 ring binder folders ·
2 sets of dividers ·
A4 Paper (lined or square) ·
Black, blue, red and green pens ·
Highlighters ·
Ruler ·
Pencils
Cambridge Technical level 3 textbook



Students have full access to booking out Equipment for In and Out of school hours.

CTEC Media:

Curriculum CTEC Media

Super-Curricular Activities

Museums and Exhibitions

London Film Museum

The museum was founded in 2008 and is the only one of its kind in Britain – it is self-supporting and reinvests in community initiatives. Situated in the cultural hub of Covent Garden, exhibitions include video, film stills, props and industry paraphernalia;

BFI

Guardian Newsroom

Creative Media Skills Institute Workshops

The Museum of Brands Workshop

Podcast

The Media Show social media, anti-social media, breaking news, faking news: this is a programme about a revolution in media.

- The BBC Academy Podcast
- Media Voices Podcast Media Voices is a weekly look at all the news and views from across the world, featuring leading figures from media & publishing businesses.
- The Tip-Off
- Demystifying Media

Recommended Wider Reading

"In the Blink of an Eye: A Perspective on Film Editing" by Walter Murch

This book delves into the art and craft of film editing, offering insights and techniques for aspiring filmmakers.

"Story: Substance, Structure, Style, and the Principles of Screenwriting" by Robert McKee

An excellent resource for aspiring screenwriters that explores the principles of storytelling for film and television.

"The Filmmaker's Handbook: A Comprehensive Guide for the Digital Age" by Steven Ascher and Edward Pincus

A practical guide that covers various aspects of filmmaking, from pre-production to post-production.

"Inventing Reality: The Politics of News Media" by Michael Parenti

A critical examination of the media's role in shaping public perception, which can provide valuable insights for documentary filmmakers and journalists.

Recommended Ted Talks

- **J.J. Abrams: The Mystery Box**
- J.J. Abrams, a renowned filmmaker, discusses the magic of mystery in storytelling and the power of the unknown in media.
- **Chris Anderson: How Web Video Powers Global Innovation**
- The curator of TED, Chris Anderson, explains how online video has transformed media and the ways it can be harnessed for global change.
- **Eli Pariser: Beware Online "Filter Bubbles"**
- Eli Pariser talks about the personalization of online content and the potential impact of algorithms on the diversity of information in media.
- **Shonda Rhimes: My Year of Saying Yes to Everything**
- The prolific television producer Shonda Rhimes shares her experience and insights into storytelling and the power of saying "yes" to creative challenges.
- **Raghava KK: Shake Up Your Story**
- Raghava KK, an artist, talks about the importance of creative storytelling and the way multimedia can be used to tell stories.

Useful Websites

BBC sounds: Unreal
BBC sounds: Newscast
Netflix: The Great Hack
YouTube: Corridor Crew
YouTube: Pony Smasher
Video essays on narrative: Jacon Gellar

New York Times Daily Newsletter
Guardian long-read

Anything by Wes Anderson = mise en scene ideas
Anything by Edgar Wright = transition ideas

Super-Curricular & Extra-Curricular Activities

ALL equipment and resources are available for BOTH personal and schoolwork. This means you have everything required to produce high quality products for personal products.

121 training sessions with head of department and media technician

Club opportunities: podcast club, film club, editing club, BBC news reporter

CTEC IT: Curriculum

CTEC IT allows students to gain insight into IT and cybersecurity. A wide range of units provide students with practical and project-based opportunities to develop knowledge and skills in areas such as infrastructure, application, development and data analysis.

Exam Board: OCR

Mandatory Exam units

- Unit 1 : Fundamentals of IT
- Unit 2: Global Information
- Unit 3: Cyber Security

Assignment Units

- Unit 6 Application Design
- Unit 8 Project Management
- Unit 9 Product Development
- Unit 13 Social media and digital marketing
- Unit 15 Game design and Prototyping

Supplementary Resources

ICT & Computer Science department

This department is here to support ICT and Computer Science students. Our computer suites are available for students to complete work.

Exemplar Work We store examples of exam answers and coursework to support you with your work. These are available on request.

OneDrive Teachers share a OneDrive folder with all Sixth Form students to allow students to have access to all resources. This allows students to have access to the materials remotely.

Provided Textbooks and Resources

Textbooks:

Cambridge Technicals Level 3 IT

Author:

Victoria Ellis, Graham Manson, Saundra Middleton (editor: Mo Everett)

ISBN:

9781471874918

Folder Requirements:

- Printed specification
- Personal Learning Checklist (PLC)
- Unit content
- Assessed work with DIRT tasks completed
- Notes organised chronologically

Students Required Equipment

- 1 ring binder folders
- 4 sets of dividers
- A4 Paper (lined or square)
- Black, blue, red and green pens
- Highlighters
- Ruler
- Pencils



Finished You're Homework?...

•Use an A3 grid to apply each element of the topic and create a knowledge organizer. Remember context.

•Create a mind map of the topic and outline the advantages and disadvantages of the technology/method.

•Watch Craig 'n' Dave YouTube channel for revision.

CTEC IT: Super-Curricular Activities

Extension Through Fiction

William Hertling *The Turing Exception*

William Hertling *Avogadro Corp*

Ted Chiang *The lifecycle of software objects*

Neal Stephenson *Anathem*

Museums and Exhibitions

Bletchley Park

Science Museum

National Museum of Computing

Centre of computing history

Ted Talks

Shohini Ghose:

A beginner's guide to quantum computing

Misha Glenny:

Hire the hackers

Glenn Cantave:

The case for AR and VR in activism

Simona Francese:

Your fingerprints reveal more than you think

Pratik Shah:

How AI is making it easier to diagnose disease

Keller Rinaudo:

How we're using drones to deliver blood and save lives

Podcasts

•Software engineering radio

Listeners can expect to learn about the newest in technology and method through in-depth breakdowns, interviews, current event analysis and more.

•Security Now

This podcase, co-hosted by TechTV's own Leo Laporte provide listeners with an up-to-date rundown of all things related to computer security today.

•Linux Action Show

It is an active podcast sharing all of the latest and greatest information on Linus and other related computer tech developments.

•Twit

This podcast on todays computer science focuses specifically on Microsoft products.

•Spark with Nora Young

Subject covered can range from AI in vehicles to smart phones programming or computer science used in the financial industry.

Recommended wider reading

Computational Fairy Tales by Jeremy Kubica.

ISBN: 978-1477550298

Artificial Intelligence: A ladybird Expert Book by Michael Wooldridge. ISBN: 978-0718188757

Code: The hidden language of computer hardware and software by Charles Petzold

ISBN: 978-0735611313

BBC's Make IT digital interactive

CS4FN (Computer Science for Fun) magazine

Websites

<http://www.teach-ict.com/>

https://www.youtube.com/channel/UC0HzEBLIJxlrwBAHJ5S9JQg/playlists?view=50&sort=dd&shelf_id=10

Cambridge Technicals: Sport and Physical Activity



Bacon's College Sixth Form
The best in everyone™
Part of Unite Learning

Cambridge Technicals (CTEC) in Sport and Physical Activity gives you the opportunity to study topics such as sports coaching, Anatomy and Physiology, sports development, sports psychology and practical skills within sport and physical activity. We run the extended certificate (1 A Level equivalent) which consists of 5 units over the 2 years.

Paper 1: Body systems and the effects of Physical Activity

Examination: 1 hour 60 marks

All questions must be completed.

Content: In this unit you will gain an understanding of the structures and functions of the key body systems, how these support and impact performance in sport and physical activity and the effects that physical activity, training and lifestyle can have on them.

Paper 2: Sports Organisation and Development

Examination: 1 hour 60 marks

All questions must be completed.

Content: This will give you an understanding of the organisations in sport in the UK, their roles and responsibilities and how they work together. Topics on development, who is involved and who is targeted and why. Also, how we measure developmental success.

Exam Board: OCR

Provided Textbooks and Resources

Textbooks:

Year 12 and 13

Cambridge Technical's Level 3

Sport and Physical Activity:

- For both year 12 and 13 all units are covered in this textbook.
- You will each be provided one in the necessary lessons and some will be available in the library.

Resources for each unit:

- Contents page
- Personalised learning checklist (PLC)
- Exam Paper Tracker
- Assessed Homework Tracker/OCR Assessment Tracker
- Exercise book for classroom notes

Mechanics	Pure	Statistics
Unit 1: Mechanics 1	Unit 1: Pure 1	Unit 1: Statistics 1
Unit 2: Mechanics 2	Unit 2: Pure 2	Unit 2: Statistics 2
Unit 3: Mechanics 3	Unit 3: Pure 3	Unit 3: Statistics 3
Unit 4: Mechanics 4	Unit 4: Pure 4	Unit 4: Statistics 4
Unit 5: Mechanics 5	Unit 5: Pure 5	Unit 5: Statistics 5
Unit 6: Mechanics 6	Unit 6: Pure 6	Unit 6: Statistics 6
Unit 7: Mechanics 7	Unit 7: Pure 7	Unit 7: Statistics 7
Unit 8: Mechanics 8	Unit 8: Pure 8	Unit 8: Statistics 8
Unit 9: Mechanics 9	Unit 9: Pure 9	Unit 9: Statistics 9
Unit 10: Mechanics 10	Unit 10: Pure 10	Unit 10: Statistics 10
Unit 11: Mechanics 11	Unit 11: Pure 11	Unit 11: Statistics 11
Unit 12: Mechanics 12	Unit 12: Pure 12	Unit 12: Statistics 12
Unit 13: Mechanics 13	Unit 13: Pure 13	Unit 13: Statistics 13
Unit 14: Mechanics 14	Unit 14: Pure 14	Unit 14: Statistics 14
Unit 15: Mechanics 15	Unit 15: Pure 15	Unit 15: Statistics 15
Unit 16: Mechanics 16	Unit 16: Pure 16	Unit 16: Statistics 16
Unit 17: Mechanics 17	Unit 17: Pure 17	Unit 17: Statistics 17
Unit 18: Mechanics 18	Unit 18: Pure 18	Unit 18: Statistics 18
Unit 19: Mechanics 19	Unit 19: Pure 19	Unit 19: Statistics 19
Unit 20: Mechanics 20	Unit 20: Pure 20	Unit 20: Statistics 20
Unit 21: Mechanics 21	Unit 21: Pure 21	Unit 21: Statistics 21
Unit 22: Mechanics 22	Unit 22: Pure 22	Unit 22: Statistics 22
Unit 23: Mechanics 23	Unit 23: Pure 23	Unit 23: Statistics 23
Unit 24: Mechanics 24	Unit 24: Pure 24	Unit 24: Statistics 24
Unit 25: Mechanics 25	Unit 25: Pure 25	Unit 25: Statistics 25
Unit 26: Mechanics 26	Unit 26: Pure 26	Unit 26: Statistics 26
Unit 27: Mechanics 27	Unit 27: Pure 27	Unit 27: Statistics 27
Unit 28: Mechanics 28	Unit 28: Pure 28	Unit 28: Statistics 28
Unit 29: Mechanics 29	Unit 29: Pure 29	Unit 29: Statistics 29
Unit 30: Mechanics 30	Unit 30: Pure 30	Unit 30: Statistics 30
Unit 31: Mechanics 31	Unit 31: Pure 31	Unit 31: Statistics 31
Unit 32: Mechanics 32	Unit 32: Pure 32	Unit 32: Statistics 32
Unit 33: Mechanics 33	Unit 33: Pure 33	Unit 33: Statistics 33
Unit 34: Mechanics 34	Unit 34: Pure 34	Unit 34: Statistics 34
Unit 35: Mechanics 35	Unit 35: Pure 35	Unit 35: Statistics 35
Unit 36: Mechanics 36	Unit 36: Pure 36	Unit 36: Statistics 36
Unit 37: Mechanics 37	Unit 37: Pure 37	Unit 37: Statistics 37
Unit 38: Mechanics 38	Unit 38: Pure 38	Unit 38: Statistics 38
Unit 39: Mechanics 39	Unit 39: Pure 39	Unit 39: Statistics 39
Unit 40: Mechanics 40	Unit 40: Pure 40	Unit 40: Statistics 40
Unit 41: Mechanics 41	Unit 41: Pure 41	Unit 41: Statistics 41
Unit 42: Mechanics 42	Unit 42: Pure 42	Unit 42: Statistics 42
Unit 43: Mechanics 43	Unit 43: Pure 43	Unit 43: Statistics 43
Unit 44: Mechanics 44	Unit 44: Pure 44	Unit 44: Statistics 44
Unit 45: Mechanics 45	Unit 45: Pure 45	Unit 45: Statistics 45
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Unit 47: Mechanics 47	Unit 47: Pure 47	Unit 47: Statistics 47
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Unit 49: Mechanics 49	Unit 49: Pure 49	Unit 49: Statistics 49
Unit 50: Mechanics 50	Unit 50: Pure 50	Unit 50: Statistics 50
Unit 51: Mechanics 51	Unit 51: Pure 51	Unit 51: Statistics 51
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Unit 60: Mechanics 60	Unit 60: Pure 60	Unit 60: Statistics 60
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Unit 63: Mechanics 63	Unit 63: Pure 63	Unit 63: Statistics 63
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Unit 66: Mechanics 66	Unit 66: Pure 66	Unit 66: Statistics 66
Unit 67: Mechanics 67	Unit 67: Pure 67	Unit 67: Statistics 67
Unit 68: Mechanics 68	Unit 68: Pure 68	Unit 68: Statistics 68
Unit 69: Mechanics 69	Unit 69: Pure 69	Unit 69: Statistics 69
Unit 70: Mechanics 70	Unit 70: Pure 70	Unit 70: Statistics 70
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Unit 198: Mechanics 198	Unit 198: Pure 198	Unit 198: Statistics 198
Unit 199: Mechanics 199	Unit 199: Pure 199	Unit 199: Statistics 199
Unit 200: Mechanics 200	Unit 200: Pure 200	Unit 200: Statistics 200
Unit 201: Mechanics 201	Unit 201: Pure 201	Unit 201: Statistics 201

Sport: Super-Curricular Activities

Extra Activities

Year 12: Body world Trip linked to Unit 1

Year 12/13 Adur Residential trip for rock climbing, paddle boarding, mountain biking linked to Unit 18 practical sport June

Year 13: Brighton University residential university experience

Public Lectures & Events

Please click on the links below for key lectures and events:

<https://bodyworlds.co.uk/>

<https://internationalsportsconvention.com/>

<https://www.eventbrite.co.uk/d/united-kingdom--london/sports-and-fitness--events/coaching/>

Recommended Wider Reading

Unit 1

<https://www.livestrong.com/article/217679-differences-between-ligaments-tendons/>
<https://www.fitday.com/fitness-articles/fitness/cardio/what-is-oxygen-debt-after-exercise.html>

Unit 2

<https://believeperform.com/personality-in-sport-everyone-is-different/>

Unit 3

<http://www.sportsthinktank.com/uploads/the-labour-party-more-sport-for-all-labours-consultation-on-government-backing-for-more-sport-and-physical-activity-for-all-ages-in-all-areas-july-2014-2.pdf>
<https://www.telegraph.co.uk/athletics/2016/06/17/russian-olympic-ban-decision-and-doping-scandal-live/>

Unit 5

<https://www.sportperformanceanalysis.com/article/what-is-a-performance-analyst-in-sport>

Videos

Unit 1 -

<https://www.youtube.com/watch?v=uBGI2BujkPQ>

Unit 2 -

<https://thepegeek.com/2019/03/collaborative-video-highlights/>

Unit 5-

https://www.youtube.com/watch?v=_7Rsdj-Aol

Podcasts

Unit 1

<https://podcasts.apple.com/sk/podcast/biology-2110-2120-anatomy-and-physiology-with-doc-c/id290170401>

Unit 2

<http://risingcoaches.libsyn.com/>

Unit 11

<https://thepegeek.com/2018/10/episode-106-fitness-testing/>

Websites

OCR

<https://www.ocr.org.uk/qualifications/cambidge-technicals/sport-and-physical-activity/planning-and-teaching/#level-3>

PE4Learning

<https://www.pe4learning.com/download-pe-resources/>

UK Coaching

<https://www.ukcoaching.org/>
<https://www.bettersportscoach.com/>
<https://www.teachpe.com/>

Training for sport

<https://www.stack.com/>

NGB's

<https://www.sportengland.org/>

Youth sports trust

<https://www.youthsporttrust.org/>