

*Inspire to be Inspired*

# St Brigid's School



6th Form Transition Booklet

*Respect Love Faith Truth Excellence*

# St Brigid's School



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DENBIGH HIGH SCHOOL



## Using your GCSE knowledge and skills .....

It is important to keep the knowledge and skills you have gained at GCSE fresh in your mind ready to start your A levels in September. The AS level course has similar Learning Outcomes as the GCSE.

*AO1: Develop ideas through sustained and focused investigations informed by contextual and other sources, demonstrating analytical and critical understanding.*

*AO2: Explore and select appropriate resources, media, materials, techniques and processes, reviewing and refining ideas as work develops.*

*AO3: Record ideas, observations and insights relevant to intentions, reflecting critically on work and progress.*

*AO4: Present a personal and meaningful response that realises intentions and, where appropriate, makes connections between visual and other elements.*

Look back over your GCSE work. How did you develop the skills linked to each assessment objective? Where are your strengths and areas of weakness?



## The A Level course....

The course is 100% coursework. You will have a choice of how you specialize in fine art, Photography, textiles, 3D Design, Graphic communication, critical and contextual studies, or art, craft and design.

### Year 12

UNIT 1: Personal Creative Enquiry.

In this unit you will develop your coursework portfolio through your own chosen theme. You will look at the work of a wide range of artists and study their work or techniques. You will build upon and explore skills in drawing, painting, printmaking, textiles, ICT, photography and mixed media.

### Year 13

UNIT 2: You will develop your coursework portfolio through your own chosen theme. This will be accompanied by a short essay.

UNIT 3: In the Spring term of year 13 you will be given the exam paper, where you will select a question to create a portfolio on, the will produce a final piece during a 15hr exam which will be taken in April/May.

## Planning Ahead.....

In order to prepare yourself for further study, have a look at the specification from WJEC below:

AS Level examination specification <https://www.wjec.co.uk/media/4b5ftor0/wjec-gce-art-and-design-spec-from-2015-e.pdf>

### Useful links.....

Drawing predates the written language which in itself is a form of mark making. Drawing and mark making is at the root of all visual communication. Through this practice we are able to organise the world visually and to see and understand.

Why is Drawing Important? <https://www.youtube.com/watch?v=NEliUs7eg7c>

Why We Should Draw More (and Photograph Less) <https://www.youtube.com/watch?v=k1eHm0PNnjo>

Matisse <https://www.youtube.com/watch?v=t4Fc0NbX51s>

Picasso <https://www.youtube.com/watch?v=X59U4mUqWtw>

Watch Alberto Giacometti draw! <https://www.youtube.com/watch?v=QS0PzOwfmHo>

George Condo Interview: The Way I Think <https://www.youtube.com/watch?v=BhRdIVcQnjK>





Michael Craig-Martin's "Drawings": Installation Timelapse <https://www.youtube.com/watch?v=eaAf61yF8gE>

Contemporary Drawing <https://www.youtube.com/watch?v=KaSmuAPJ9lw>

Drawing Is Coming Back In A Big Way <https://www.youtube.com/watch?v=fd5ObM-QKfM>

Artist Draws With One Line <https://www.youtube.com/watch?v=8Z38jh2eeIU>

Mr Doodle <https://www.youtube.com/watch?v=1UgQsaC9c6A>

Artist Spends Hours Creating One 6-Second Video [https://www.youtube.com/watch?v=aNpRneyS\\_ml](https://www.youtube.com/watch?v=aNpRneyS_ml)

## Online Museums

[Google Arts & Culture: Virtual Museums](#)

[Online Tours: The Louvre](#)

[The Museum of the World](#)

[Guggenheim Online Collection](#)

[Moma Learning](#)

## Getting ready to study.....

Completing the following activity will help prepare you for studying A Level Art in September:

### Task 1

Create a handmade Sketchbook with at least 12 pages. Investigate how to make your own by looking on Youtube or Pinterest.



In this sketchbook, research into 2 artists or art movements/styles from the grids below. For each one, take a page of your sketchbook. For each artist/style/genre include:

*Information about the art movement/artist from a historical viewpoint. Why did the movement start? Who were the main artist involved? What does the work visually look like?*

*Information about the way the artwork was made e.g. media. Describe the techniques and materials used.*

*Information based on what you think of the work, your own opinions.*

*Examples of an artists work*

Be as creative as possible with how you display this information Use a combination of drawings, paintings, and text/words to illustrate your artist research, using a range of appropriate materials, techniques and processes.

### Page inspiration and layout ideas

You can use small titles using a relevant font as a way to give context to your page

Use annotation to write notes or add further information about the things you have drawn

Use more than one media or technique per double page. Try using different techniques, such as cross hatching, continuous line, detailed tonal studies etc

You can write down the location, date and the time that you do your page entry.

Think about literacy when you annotate your pages, and use these to create a flow and visual story which travels across different pages.

Use a range of different size drawings on the page and add small images and boxes

Think carefully about layout and composition. Some pages can be filled with images and others can have lots of empty space.

# St Brigid's School



Landscape	Culture/ Pattern	Nature	Photography	Street/Urban Art
Kyffin Williams	Polynesian	Angie Lewin	Howard Schatz (in character)	Banksy
Monet	Adinkra	Richard Shilling	Muybridge	Roadsworth
Alexis Snell	Aboriginal	Andy Goldsworthy	David Hockney (Joiners)	The Boyle Family
L.S. Lowry	Maori	Georgia Okeeffe	Dianne Arbus	Slinkachu
The Boyle Family	Tribal	William Morris	Daniel Kukla	Invader
David Hockney	Tjapaltjarri	Henri Rousseau	Man Ray	Ben Wilson (gum)
Mondrian	Arabic	Richard Long	Jerry Uelsmann	J. M. Basquiat
Van Gogh	Egyptian	Eugene Seguy	Light Drawing	Ian Cook
Edward Hopper	N.A. Indian	Michael Mew	John Stezaker	Mark Jenkins (sellotape)
Victor Enrich	Sonia De-launey	Ernst Haeckel	Cyanotype/Photogram	Phillipa Lawrence
Fauvism	M.C. Escher	Lorenzo Duran	Levitation Photography	Julianna Santacruz Herrera
Turner	Zentangles	Jason Scarpace	Aperture/Shutter speed	Raubdruckerin

# St Brigid's School



Sculpture	Fashion	Figure	Image & Text	Still Life
Barbara Hepworth	Mary Quant (60's OpArt)	Gustav Klimt	Dada	Cezanne
Henry Moore	Vivien Westwood (Punk)	Edward Hopper	Isaac Salazar	Vanitas
Claes Oldenburg	Alexander McQueen	Picasso	Barbara Kruger	Morandi
Anthony Gormley	Philip Traey	Modigliani	Wes Wilson	Dennis Wojtkiewicz
Anish Kapoor	Nicholas Kirkwood	Van Gogh	WWI/WWII Posters	Mat Collishaw
Giacometti	Recycled Fashion	Ilaria Marutti	Propaganda Poster	Cubism
Alexander Calder	Christian Louboutin	Lucian Freud	Robert Ryan	Wayne Thiebaud
Ron Muek	Manolo Blahnik	Derek Gores	Peter Blake	Pieter Claesz
Rachel Whiteread	Piers Atkinson	Michelle Caplan	Billboard Adverts	Lisa Milroy
Anthony Caro	Madeleine Vionnet	Dominik Jasinski	Fiona Banner	Michael Craig Martin
Grayson Perry	Stephen Jones	Egon Schiele	Book Covers	Claes Oldenburg
Joan Miro	Victorian Fashion	Chuck Close	Fiodor Sumkin	Sarah Graham
Picasso		Paula Rego	Cecil Touchon	Raymond Logan
Thomas Hill		Toulouse Lautrec	Lance Letscher	Margret Morrison



Photography Areas of study;

- Portraiture
- Environmental
- Experimental
- Still Life

### Photography: embracing images created by digital means.

During the Photography course at St. Brigid's you will explore relevant images, artifacts and resources relating to Photography and a wider range of art, craft and design.

Underpinning your work will be the use of sketchbooks/workbooks and journals.

There is no specific requirement for you to demonstrate drawing skills in this option unless you wish to.





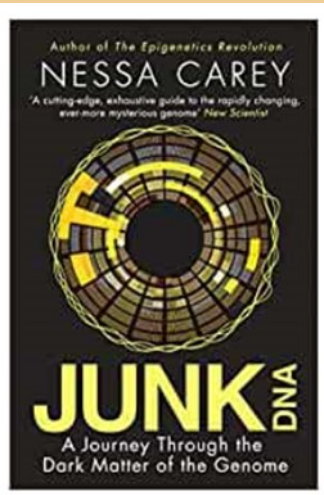


A guide to help you prepare yourself for studying AS Level Biology





## Book Recommendations

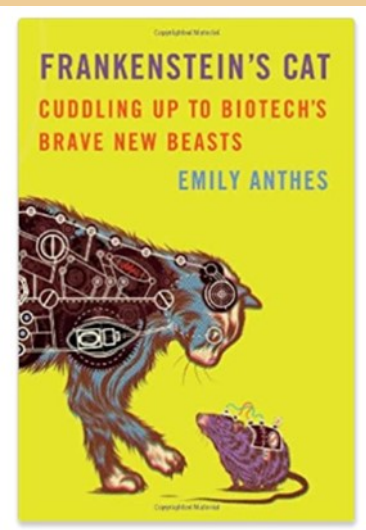
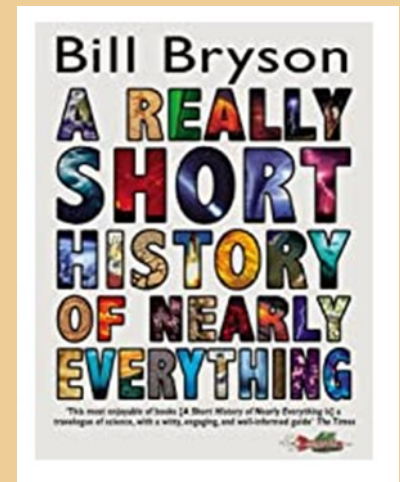


### Junk DNA

Our DNA is so much more complex than you probably realise; this book will really deepen your understanding of the work you will do on Genetics.

### A Short History of Nearly Everything

A whistle-stop tour through many aspects of history from the Big Bang to now. This is a really accessible read that will re-familiarise you with common concepts and introduce you to some of the more colourful characters from the history of science!



### An easy read.. Frankenstein's cat

Discover how glow in the dark fish are made and more great Biotechnology breakthroughs



## Movie Recommendations

Here are some films based on real life scientists and discoveries - great watching for a rainy day!



### **Gorillas in the Mist (1988)**

An absolute classic that retells the true story of the life and work of Dian Fossey and her work studying and protecting mountain gorillas from poachers and habitat loss. A tear jerker.



### **Something the Lord Made (2004)**

Professor Snape (the late great Alan Rickman) in a very different role. The film tells the story of the scientists at the cutting edge of early heart surgery as well as issues surrounding racism at the time.



### **Lorenzo's Oil (1992)**

Based on a true story. A young child suffers from an autoimmune disease. The parents research and challenge doctors to develop a new cure for his disease.





## TED Talks

How the gut microbes you're born with affect your lifelong health

Your lifelong health may have been decided the day you were born, says microbiome researcher Henna-Maria Uusitupa. In this fascinating talk, she shows how the gut microbes you acquire during birth and as an infant impact your health into adulthood -- and discusses new microbiome research that could help tackle problems like obesity and diabetes.



How a long-forgotten virus could help us solve the antibiotics crisis

Viruses have a bad reputation -- but some of them could one day save your life, says biotech entrepreneur Alexander Belcredi. In this fascinating talk, he introduces us to phages, naturally-occurring viruses that hunt and kill harmful bacteria with deadly precision, and shows how these once-forgotten organisms could provide new hope against the growing threat of antibiotic-resistant superbugs.



5 challenges we could solve by designing new proteins

Proteins are remarkable molecular machines: they digest your food, fire your neurons, power your immune system and so much more. What if we could design new ones, with functions never before seen in nature? In this remarkable glimpse of the future, David Baker shares how his team at the Institute for Protein Design is creating entirely new proteins from scratch -- and shows how they could help us tackle five massive challenges facing humanity.



Can we cure genetic diseases by re-writing DNA?

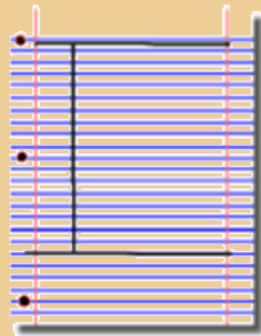
In a story of scientific discovery, chemical biologist David R. Liu shares a breakthrough: his lab's development of base editors that can rewrite DNA. This crucial step in genome editing takes the promise of CRISPR to the next level: if CRISPR proteins are molecular scissors, programmed to cut specific DNA sequences, then base editors are pencils, capable of directly rewriting one DNA letter into another. Learn more about how these molecular machines work -- and their potential to treat or even cure genetic diseases.



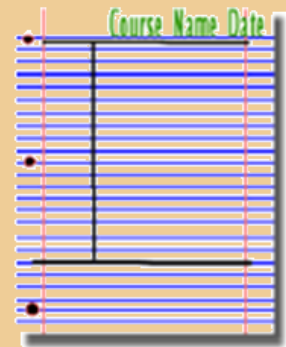


## Research Activities

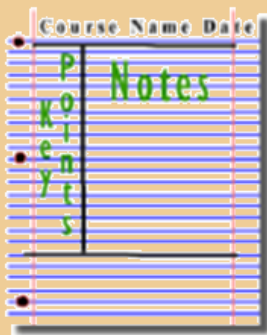
1. Divide your page into three sections like this



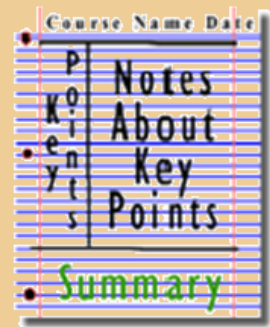
2. Write the name, date and topic at the top of the page



3. Use the large box to make notes. Leave a space between separate idea. Abbreviate where possible.



4. Review and identify the key points in the left hand box



5. Write a summary of the main ideas in the bottom space





## Research Activities

The **Big Picture** is an excellent publication from the **Wellcome Trust**. Along with the magazine, the company produces posters, videos and other resources aimed at students studying for GCSEs and A level. For each of the following topics, you are going to use the resources to produce one page of Cornell style notes.

Use the links or scan the QR code to take you to the resources.



### Topic 1: The Cell

Available at: <http://bigpictureeducation.com/cell>

The cell is the building block of life. Each of us starts from a single cell, a zygote, and grows into a complex organism made of trillions of cells. In this issue, we explore what we know –and what we don't yet know –about the cells that are the basis of us all and how they reproduce, grow, move, communicate and die.



### Topic 2: The Immune System

Available at: <http://bigpictureeducation.com/immune>

The immune system is what keeps us healthy in spite of the many organisms and substances that can do us harm. In this issue, explore how our bodies are designed to prevent potentially harmful objects from getting inside, and what happens when bacteria, viruses, fungi or other foreign organisms or substances breach these barriers.



### Topic 3: Exercise, Energy and Movement

Available at: <http://bigpictureeducation.com/exercise-energy-and-movement>

All living things move. Whether it's a plant growing towards the sun, bacteria swimming away from a toxin or you walking home, anything alive must move to survive. For humans though, movement is more than just survival –we move for fun, to compete and to be healthy. In this issue we look at the biological systems that keep us moving and consider some of the psychological, social and ethical aspects of exercise and sport.



### Topic 4: Populations

Available at: <http://bigpictureeducation.com/populations>

What's the first thing that pops into your mind when you read the word population? Most likely it's the ever-increasing human population on earth. You're a member of that population, which is the term for all the members of a single species living together in the same location. The term population isn't just used to describe humans; it includes other animals, plants and microbes too. In this issue, we learn more about how populations grow, change and move, and why understanding them is so important.



### Topic 5: The effect of humans on the earth

Available at: <http://bigpictureeducation.com/health-and-climate-change>

The Earth's climate is changing. In fact, it has always been changing. What is different now is the speed of change and the main cause of change –human activities. This issue asks: What are the biggest threats to human health? Who will suffer as the climate changes? What can be done to minimise harm? And how do we cope with uncertainty?





## Getting ready to study.....

A level Biology will use your knowledge from GCSE and build on this to help you understand new and more demanding ideas. Complete the following tasks to make sure your knowledge is up to date and you are ready to start studying.

### DNA and the Genetic Code

In living organisms nucleic acids (DNA and RNA) have important roles and functions related to their properties. The sequence of bases in the DNA molecule determines the structure of proteins, including enzymes.

The double helix and its four bases store the information that is passed from generation to generation. The sequence of the base pairs adenine, thymine, cytosine and guanine tell ribosomes in the cytoplasm how to construct amino acids into polypeptides and produce every characteristic we see. DNA can mutate leading to diseases including cancer and sometimes anomalies in the genetic code are passed from parents to babies in disease such as cystic fibrosis, or can be developed in unborn foetuses such as Down's Syndrome.

Read the information on these websites (you could make more Cornell notes if you wish):  
<http://www.bbc.co.uk/education/guides/z36mmp3/revision>

<http://www.s-cool.co.uk/a-level/biology/dna-and-genetic-code>

And take a look at these videos:

<http://ed.ted.com/lessons/the-twisting-tale-of-dna-judith-hauck>

<http://ed.ted.com/lessons/where-do-genes-come-from-carl-zimmer>

#### Task:

**Produce a poster or PowerPoint presentation using images, keywords and simple explanations to:**

Define gene, chromosome, DNA and base pair

Describe the structure and function of DNA and RNA

Explain how DNA is copied in the body

Outline some of the problems that occur with DNA replication and what the consequences of this might be.



## Cells

The cell is a unifying concept in biology, you will come across it many times during your two years of A level study. Prokaryotic and eukaryotic cells can be distinguished on the basis of their structure and ultrastructure. In complex multicellular organisms cells are organised into tissues, tissues into organs and organs into systems. During the cell cycle genetic information is copied and passed to daughter cells. Daughter cells formed during mitosis have identical copies of genes while cells formed during meiosis are not genetically identical.

Read the information on these websites (you could make more Cornell notes if you wish):  
<http://www.s-cool.co.uk/a-level/biology/cells-and-organelles>

<http://www.bbc.co.uk/education/guides/zvjycdm/revision>

And take a look at these videos:

<https://www.youtube.com/watch?v=gcTuQpuJyD8>

<https://www.youtube.com/watch?v=L0k-enzoeOM>

<https://www.youtube.com/watch?v=qCLmR9-YY7o>

### Task:

**Produce a one-page revision guide summarising one of the following topics: Cells and Cell Ultrastructure, Prokaryotes and Eukaryotes, or Mitosis and Meiosis.**

Whichever topic you choose, your revision guide should include:

- Key words and definitions

- Clearly labelled diagrams

- Short explanations of key ideas or processes.



## Biological Molecules

Biological molecules are often polymers and are based on a small number of chemical elements. In living organisms carbohydrates, proteins, lipids, inorganic ions and water all have important roles and functions related to their properties. DNA determines the structure of proteins, including enzymes. Enzymes catalyse the reactions that determine structures and functions from cellular to whole-organism level. Enzymes are proteins with a mechanism of action and other properties determined by their tertiary structure. ATP provides the immediate source of energy for biological processes.

Read the information on these websites (you could make more Cornell notes if you wish):  
<http://www.s-cool.co.uk/a-level/biology/biological-molecules-and-enzymes>

<http://www.bbc.co.uk/education/guides/zb739j6/revision>

And take a look at these videos:

<https://www.youtube.com/watch?v=H8WJ2KENIK0>

<http://ed.ted.com/lessons/activation-energy-kickstarting-chemical-reactions-vance-kite>

### Task:

**Krabbe disease occurs when a person doesn't have a certain enzyme in their body. The disease effects the nervous system. Write a letter to a sufferer to explain what an enzyme is.**

Your letter should:

- Describe the structure of an enzyme
- Explain what enzymes do inside the body



International Space Station @cmdrhadfield

Tiktaalik roseae –a 375 million year old fossil fish with its own Twitter account!  
@tiktaalikroseae



## Exchange and Transport

Organisms need to exchange substances selectively with their environment and this takes place at exchange surfaces. Factors such as size or metabolic rate affect the requirements of organisms and this gives rise to adaptations such as specialised exchange surfaces and mass transport systems. Substances are exchanged by passive or active transport across exchange surfaces. The structure of the plasma membrane enables control of the passage of substances into and out of cells.

Read the information on these websites (you could make more Cornell notes if you wish):

<http://www.s-cool.co.uk/a-level/biology/gas-exchange>

<http://www.s-cool.co.uk/a-level/biology/nutrition-and-digestion/revise-it/human-digestive-system>

And take a look at these videos:

<http://ed.ted.com/lessons/insights-into-cell-membranes-via-dish-detergent-ethan-perlstein>

<http://ed.ted.com/lessons/what-do-the-lungs-do-emma-bryce>

### Task:

**Create a poster or PowerPoint presentation. Your work should either compare exchange surfaces in mammals and fish or compare exchange surfaces in the lungs and the intestines. You could use a Venn diagram to do this.**

Your poster should:

Describe diffusion, osmosis and active transport

Explain why oxygen and glucose need to be absorbed and waste products removed

Compare and contrast your chosen focus.





## Keeping it Fresh.....

It is important to keep the knowledge you have gained at GCSE fresh in your mind ready to start your A levels in September.

Why not spend some time looking over some past papers and using the mark schemes to assess how well you've done.

Biology GCSE Units 1 and 2 – Past Papers and Marking Schemes:

<https://www.wjec.co.uk/qualifications/qualification-resources.html?subject=Biology&level=gcsefrom2016&pastpaper=true>

Science Double Award GCSE Units 1 and 4 – Past Papers and marking Schemes

<https://www.wjec.co.uk/qualifications/qualification-resources.html?subject=sciencedoubleAward&level=gcsefrom2016&pastpaper=true>

## Planning Ahead.....

In order to prepare yourself for further study, have a look at the resources below:

WJEC Specification – GCE AS/A Level in Biology

<https://www.wjec.co.uk/qualifications/science/as-a-level/biology-as-a-level-2015/wjec-gce-biology-spec-from-2015.pdf>

WJEC Specimen Assessment Materials

<https://www.wjec.co.uk/qualifications/science/as-a-level/biology-as-a-level-2015/wjec-gce-wjec-gce-biology-sams-from-2015.pdf>

WJEC Past Papers and Marking Schemes

<https://www.wjec.co.uk/qualifications/qualification-resources.html?subject=Biology&level=gceAsafrom2015&pastpaper=true>

Revision Booklet – Units 1 and 2

<https://resources.wjec.co.uk/Pages/ResourceSingle.aspx?rId=2957>

Revision Booklet – Unit 3

<https://resources.wjec.co.uk/Pages/ResourceSingle.aspx?rId=2733>

Revision Booklet – Unit 4

<https://resources.wjec.co.uk/Pages/ResourceSingle.aspx?rId=2772>





## A guide to help you prepare yourself for studying AS Level Business Studies





## Book Recommendations

The 7 Habits of Highly Effective People by Stephen Covey

Finding my Virginity: The new Autobiography by Richard Branson

Legacy by James Kerr

Age of Discovery: Navigating the Risks and Rewards of Our New Renaissance:  
(Ian Goldin & Chris Kutarna)

Alibaba: The House that Jack Ma Built (Duncan Clark) – The rise of the Chinese corporate giant

Art of Strategy (Dixit and Nalebuff) – especially good for Game Theory examples and analysis

If I Could Tell You Just One Thing...: Most Valuable Advice from Remarkable People:  
(Richard Reed)

Risk Savvy - How to make good decisions (Gerd Gigerenzer) – the world of heuristics and risk management

The Everything Store: Jeff Bezos and the Age of Amazon (Brad Stone) – a great page turner

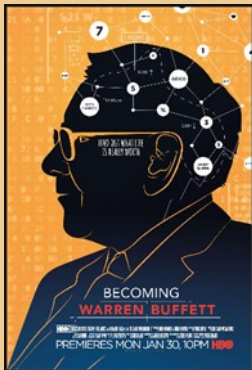
The Great Convergence: Information Technology and the New Globalization  
(Richard Baldwin)

The Upstarts: How Uber and Airbnb are changing the world (Brad Stone) Follow up to his work on Amazon

Thinking Fast and Thinking Slow: (Professor Daniel Kahneman) – the classic Kahneman epic.



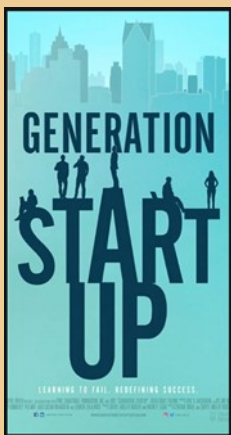
## Movie/Documentary Recommendations



### Becoming Warren Buffett (2017)

With a net worth of over \$60 billion, Warren Buffett is truly a one-of-a-kind billionaire. An enormous amount of invaluable knowledge is offered up in [Becoming Warren Buffett](#), from which we can extract important life lessons from the humble billionaire, his family and his peers.

The legendary investor still lives in a modest home in Omaha and drives himself to the office every morning to manage Berkshire Hathaway. This documentary chronicles Buffett's evolution into one of the wealthiest and most respected men in the world. The film takes us on a journey in which we see how the legendary investor started out as an ambitious, numbers-obsessed boy from Nebraska and ended up becoming one of the richest and most respected men in the world.



### Generation Startup (2016)

Follow 6 recent college graduates who are would-be entrepreneurs over 17 months. We watch how they put everything on the line as they try to launch startups in Detroit. [Generation Startup](#) puts a human face on the Millennial startup culture by showcasing these young entrepreneurs' successes and failures, how they wrestle with self-doubt and uncertain rewards.

The film takes us to the front lines of entrepreneurship in America. It celebrates risk-taking and urban revitalization, and gives an honest and in-the-trenches look at what it really takes to launch a startup. The film received rave reviews from successful entrepreneurs like Arianna Huffington and Daymond John



### Burt's Buzz (2013)

This humorous, authentic and compelling documentary tells the story of Burt Shavitz, a reclusive beekeeper who reluctantly became one of the world's most recognizable brand identities. [Burt's Buzz](#) pays tribute to Shavitz, the man behind Burt's Bees.

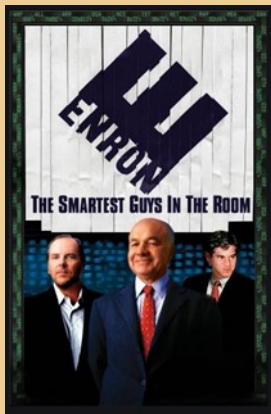
He is a quiet curmudgeon who dislikes middle-class comforts, enjoys solitude and forgoes nearly all technology. Viewers also learn about Shavitz's complicated relationship with co-founder Roxanne Quimby, who eventually bought Shavitz out of the business. Quimby later sold the business to the Clorox company for a staggering \$177 million.



### Steve Jobs: One Last Thing (2011)

The PBS documentary [Steve Jobs: One Last Thing](#) is a tribute to the visionary entrepreneur who was the co-founder and CEO of Apple. Jobs died in 2011. During his time at the helm of Apple he managed to change much of how we work, interact and communicate with one another.

The documentary examines how his talent, style and imagination have shaped all of our lives and looks at the influences that molded the man himself. The film takes viewers through Jobs' career trajectory and the development of his memorable product presentations. It's a moving look at the life of a man who pursued his passions and changed the world.



### Enron: The Smartest Guys in the Room (2005)

This documentary tells the incredible story of Enron and the executives that ran the company. [Enron: The Smartest Guys in the Room](#) is the inside story of the spectacular rise and fall of one of the most scandal-ridden corporations in American history.

Based on the best-selling book of the same name, this film takes a look at the collapse of the once seventh-largest company in the United States, where executives misappropriated billions of dollars, leaving investors scrambling and ruining the life savings of thousands of employees.

However, while they may have committed terrible crimes and gotten away with them for close to a decade, you can't ignore the fact that these guys were actually brilliant men and brilliant leaders.

## Getting ready to study.....

A level Business Studies will use your knowledge from GCSE and build on this to help you understand new and more demanding ideas. You are able to study Business Studies



Task 1:

Find two Business articles that you find interesting, one on a UK based business and the other on a business that operates in another country. Summarise them in 50 words per article. The news articles must be within the last 3 months. Please include a link to the article you are summarising.







### Task 2

Vicky Morgan is the managing director of Yorkshire Vets. She currently employs 18 staff; this includes a mixture of vets, vet nurses and administrative staff. As she has seen profits rise over the last few years Vicky is looking to expand her practice. Her two options are to invest in a Hydrotherapy pool for dogs, or to buy another x-ray machine that she can use in house. The x-ray machine would mean that her competitors would send their patients to her for a fee. The Hydrotherapy pool will cost £2,400 and the x-ray will cost £5,500.

She already has staff that are trained in Hydrotherapy but would need to get some of her staff trained to use the x-ray at a probable cost of £250 per member of staff.

The following table represents the return that Vicky expects the new machines to bring to the business over the next five years.

	Hydrotherapy Pool £	X-Ray Machine £
Year 1	450	1120
Year 2	600	1220
Year 3	875	1000
Year 4	960	1800
Year 5	1020	1600

Which one should Vicky invest in? Fully justify your answer.

Your answer should be a minimum of half an A4 page.



### Task 3:

Businesses all over the country are feeling the effects of the Coronavirus as the whole of UK and many part of the world remain on lockdown. Your task is to investigate the types of businesses in the table below and the impact the lockdown is having on them. A challenge task will be to consider actions that they may take to alleviate the problems they are facing in the short, medium or long term.

Create a table like the one below to record your findings:

Types of Business Ownership	Benefits of type of ownership	Drawbacks of type of ownership	Real life examples of this type of ownership (at least 2)	Impact of Coronavirus/ Lockdown	Challenge: How can each business respond to ensure the survival of their business?
Sole Trader			e.g. Plumber		
Public Limited Company (UK)			e.g. Sainsbury's		
Multinational Company			e.g. Disney		

It is important that you undertake research to complete this task e.g. Watch news reports and read newspaper articles. List your sources on information.

One useful resource is the tutor2u website;

<https://www.tutor2u.net/business/reference/business-impact-and-response-to-the-coronavirus-crisis>



### Task 4

**Read** the BBC news Article on the boss who decided to pay everyone 70K.

<https://www.bbc.co.uk/news/stories-51332811>

1. Write a paragraph explaining whether you agree or disagree with this approach.
2. Explain what you feel are:
  - a. The benefits of such a scheme?
  - b. The drawbacks of such a scheme?

In BOTH a. and b. consider and comment on SHORT TERM [immediate] and LONG TERM [in a year or more] issues.

### Task 5

Use the following website to make notes of the first unit content Business Opportunities

<https://resources.wjec.co.uk/Pages/ResourceSingle.aspx?rlid=737>.

Notes should be take on the following topics -

- 1 - Enterprise and business planning
- 2 - Market structure types and segmentation
- 3 - Demand and supply
- 4 - Market research
- 5 - Consumer protection
- 6 - Business structure
- 7 - Stakeholders
- 8 – Location
- 9 - Business finance
- 10 - Costs and break even





### Task 6

**Listen** to the Podcast- Business of Music

<https://www.bbc.co.uk/sounds/play/b0785ppx>

Answer the following questions:

1. What is a royalty regarding the music industry?
2. How has the music industry changed over the last 10 years?
3. Why did the album industry collapse?
4. Why did Taylor Swift withdraw her music from Spotify?
5. Give three new facts you have learnt about the business of music.

### Task 7

**WATCH:** Episode 1 of Tricky Business

<https://www.channel4.com/programmes/tricky-business/on-demand/39825-001>

Write an A4 information profile about Oli (The entrepreneur)

You should include:

- I. About him as an entrepreneur
- II. About his business
- III. Risks he has taken and is going to take going into London.



## Task 8

**Watch** the Business as usual Podcast

<https://www.youtube.com/watch?v=FgObj6HmSaU>

1. Make notes of the various topics
2. Create a PROS and CONS table about furloughing.
3. What might be the long-term issues for the economy?

## Task 9

Watch the Channel 5 documentary 'Inside Aldi'

<https://www.channel5.com/show/inside-aldi-britains-biggest-budget-supermarket/>

Visit this website to download and complete 4 interactive worksheets:

<https://time2resources.co.uk/blog/preparing-year-11-students-for-year-12-business-qualifications-with-inside-aldi/>



## Social Media



Suggestions of people to follow on Twitter:

Mrs Briggs – Business and Economics teacher @thebizteach

Adrian Murray – Creator of BusinessEd (formerly Business Studies Online) and it's associated digital resources @BusinessStudies

Tutor2u Business – All the latest teaching and learning resources and support from the tutor2u Business Channel @tutor2uBusiness

## Keeping it Fresh.....

It is important to keep the knowledge you have gained at GCSE fresh in your mind ready to start your A levels in September.

Why not spend some time looking over some past papers and using the mark schemes to assess how well you've done.

Business GCSE Units 1 and 2 – Past Papers and Marking Schemes:

[https://www.wjec.co.uk/qualifications/business-gcse/#tab\\_pastpapers](https://www.wjec.co.uk/qualifications/business-gcse/#tab_pastpapers)

**NB – You do not need to have studied GCSE Business in order to move on to A Level Business Studies.**



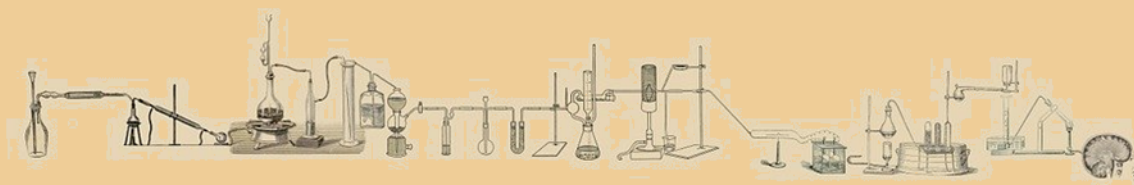
## Planning Ahead.....

In order to prepare yourself for further study, have a look at the resources below:

WJEC Specification – GCE AS/A Level in Business	<a href="https://www.wjec.co.uk/media/qdyp1wcl/wjec-gce-as-a-level-business-specification-formatted-2.pdf">https://www.wjec.co.uk/media/qdyp1wcl/wjec-gce-as-a-level-business-specification-formatted-2.pdf</a>
WJEC Specimen Assessment Materials	<a href="https://www.wjec.co.uk/media/ipcdv10q/wjec-gce-as-a-level-business-sams-formatted.pdf">https://www.wjec.co.uk/media/ipcdv10q/wjec-gce-as-a-level-business-sams-formatted.pdf</a>
WJEC Past Papers and Marking Schemes	<a href="https://www.wjec.co.uk/qualifications/business-as-a-level/#tab_pastpapers">https://www.wjec.co.uk/qualifications/business-as-a-level/#tab_pastpapers</a>
Summer stay at home business challenges	<a href="https://resources.wjec.co.uk/Pages/ResourceSingle.aspx?rId=3246">https://resources.wjec.co.uk/Pages/ResourceSingle.aspx?rId=3246</a>



## A guide to help you prepare yourself for studying AS Level Chemistry



### Before starting AS level Chemistry

It is really important that you thoroughly understand the core principles of Chemistry that you studied at GCSE as it will be expected that you know how to confidently and competently complete questions of this level from GCSE during the AS level course.

In the table below are some links to resources that will help you refresh and build upon your GCSE studies.



Area of Study	Link
Mole Calculations	<a href="https://www.youtube.com/watch?v=dO0kjefmunk">https://www.youtube.com/watch?v=dO0kjefmunk</a>
% Yield	<a href="https://www.youtube.com/watch?v=-3gzdOpz9I">https://www.youtube.com/watch?v=-3gzdOpz9I</a>
Hydrocarbons	<a href="https://www.youtube.com/watch?v=S5et1nz_5po">https://www.youtube.com/watch?v=S5et1nz_5po</a>
Concentrations	<a href="https://www.youtube.com/watch?v=x4QxYDyHst0">https://www.youtube.com/watch?v=x4QxYDyHst0</a>
Chemical Formula	<a href="https://drive.google.com/drive/folders/1dwS-Ah-UYBECXcfL7RA7N9FwGO6_DBwm">https://drive.google.com/drive/folders/1dwS-Ah-UYBECXcfL7RA7N9FwGO6_DBwm</a>
Relative Molecular Mass	<a href="https://drive.google.com/drive/folders/11m4ra6GaOeb24JwB0qhEnRyXahZbMWIT">https://drive.google.com/drive/folders/11m4ra6GaOeb24JwB0qhEnRyXahZbMWIT</a>
Balancing Equations	<a href="https://drive.google.com/drive/folders/1dwS-Ah-UYBECXcfL7RA7N9FwGO6_DBwm">https://drive.google.com/drive/folders/1dwS-Ah-UYBECXcfL7RA7N9FwGO6_DBwm</a>



A guide to help you prepare yourself for studying AS  
Level Cymraeg Ail Iaeth



## Course Breakdown

AS Unit 1 Oral Examination: Section A approx. 20 mins. per group Section B approx. 5 mins. per candidate Film and Oracy 15% of qualification	60 marks
<b>Section A:</b> Discussing a film <b>Section B:</b> Personal response	
AS Unit 2 Non-examination Assessment 10% of qualification	60 marks
Candidates to write 3 extended pieces. Total of between 1,500 and 2,000 words	
AS Unit 3 Written Paper: 2 hours The Use of Language, and Poetry 15% of qualification	120 marks
<b>Section A:</b> A composite question which includes different types of linguistic exercises. <b>Section B:</b> 3 questions based on the prescribed texts.	

## Ymarfer ar gyfer Uned 1: Practice for Unit 1

Ceisiwch ymarfer siarad Cymraeg o leiaf tair gwaith yr wythnos. Beth am greu cwis Zoom Cymraeg efo'ch ffrindiau neu'r teulu? Neu ffonio perthynas neu ffrind sy'n siarad Cymraeg i sgwrsio efallai am raglen deledu y byddwch eich dau wedi gwyllo. Os oes perthynas Cymraeg yn byw efo chi, siaradwch Gymraeg efo nhw!

*Try to practice speaking Welsh at least three times a week over the coming months. You could, perhaps, create a Welsh Zoom Quiz with friends or family. Or how about phoning a friend who speaks Welsh to discuss a film or programme that you will both have watched? If you have a Welsh speaking relative living with you, practise your Welsh with them!*

Gwylwch raglenni Cymraeg ar y teledu – o leiaf un rhaglen bob wythnos. Cadwch gofnod o beth rydych wedi wylio ac ysgrifennu adolygiad byr ar gyfer eich ffolder. Beth am gychwyn efo Priodas Pum Mil?

*Watch Welsh programmes on TV – at least one programme a week. Keep a record of what you've watched and write a brief review (about 100 words) for your viewing record. How about starting with Priodas Pum Mil?*





## Paratoi ar gyfer Uned 2: Preparation for Unit 2

I ymarfer eich ysgrifennu, hoffwn i chi ysgrifennu erthygl: **Dyma Fi!** Hoffwn ichi anelu at ysgrifennu 500 gair. Plis gwnewch hyn heb gymorth Google Translate.

*To practise your writing, I would like you to write an article so that I can start to get to know you: This is Me! I would like you to aim for 500 words. Please do this without the 'aid' of Google Translate.*

**Cofdiadur:** Unwaith yr wythnos – efallai ar nos Sul – ysgrifennch gofnod o'ch wythnos. Dylech ysgrifennu ar ffurf blog neu ddyddiadur. Plis gwnewch hyn heb gymorth Google Translate.

**Diary:** *Once a week – perhaps on a Sunday night – write an account of your week. You should write in the form of a diary or blog. Please do this without the 'aid' of Google Translate. Aim for 300 words a week.*

Useful online dictionary: <https://geiriaduracademi.org/>



To study Drama and Theatre Studies you must be creative, imaginative and willing to take on new challenges in this exciting course.

### What you will study

There are two units of study at AS (40%):

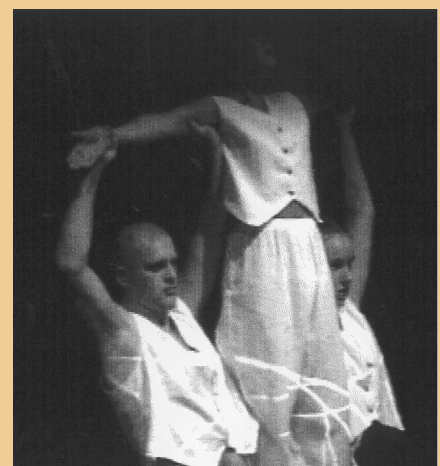
- Unit 1 — Theatre Workshop—Non-exam assessment: internally assessed, externally moderated
- Unit 2 — Written examination: A series of questions based on 'Medea' by Euripides

There are two units of study at A2 (60%):

- Unit 3 — Text in Action—Non-exam assessment: externally assessed by a visiting examiner
- Text in Performance — Written examination:

Candidates will be expected to work in response to a theme set by WJEC and prepare one performance in Year 12 and two performances in Year 13. In each case candidates will either act or demonstrate a technical production skill with a group of performers. The performance will include:

- scenes / extracts from a published text
- a piece devised by the group. An evaluation of performance work for both pieces will be required. The unit is externally marked.





### How you will study

5 hours a week of formal teaching, with extra rehearsals where necessary. Independent study is a key feature of the course. Homework is also an important element for personal progression.

### How you will be assessed

The examination board is WJEC. Further information on this specification is available on [www.wjec.co.uk](http://www.wjec.co.uk)

Each unit is assessed by an exam, which will take place in June of the first year for AS. A2 units are examined in June of the second year. Papers may be retaken to improve upon grades.

### *'To Inspire and Be Inspired'*

The performing arts have transformative power. More than just entertainment, the performing arts interpret society, and whether satirising, educating, or celebrating, help us to understand our world.

Our intention is to provide our students with a positive and creative environment in which to inspire the imagination through a range of ideas, techniques and rehearsal methods.

Students will have the opportunity to develop linguistic and communication skills and improve confidence and self-belief.

### Further Progression

We have a strong reputation for preparing students to go on to some of the most prestigious Performing Arts establishments in the country. But whether you wish to tread the boards or simply enjoy the experience, the skills learnt are transferable, and will help in all aspects of future career progression

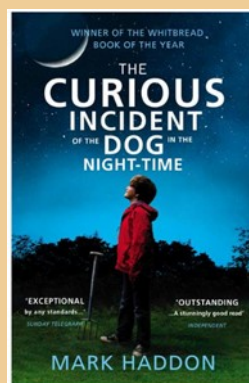
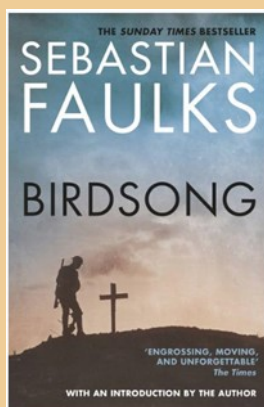




*Get ready for literature.....*



## Book Recommendations





## Reading for and beyond the course:



Arundhati Roy *The God of Small Things*.

Anne Tyler *Digging to America*.

Khaled Hosseini *The Kite Runner*.

Andrea Levy *Small Island*.

Ian McEwan *Enduring Love*.

Sebastian Faulks *Birdsong*.

Mark Haddon *The Curious Incident of the Dog in the Night Time*.

Jane Austen *Pride and Prejudice*

Charles Dickens *Great Expectations*

James Joyce *Dubliners*

F Scott Fitzgerald *The Great Gatsby*

William Shakespeare *Macbeth*

Christopher Marlowe *Dr Faustus*

John Webster *The White Devil*

John Milton *Paradise Lost Books 1 and 2*

Geoffrey Chaucer *The Pardoner's Tale*

Mary Shelley *Frankenstein*

Emily Bronte *Wuthering Heights*

Bram Stoker *Dracula*

Angela Carter *The Bloody Chamber*

Charlotte Bronte *Jane Eyre*

## Poets to read:

Andrew Marvell:

John Donne

William Wordsworth

John Keats

William Blake

Alfred Tennyson

Robert Browning

Elizabeth Barrett Browning

Samuel Taylor Coleridge

Thomas Hardy

Christina Rossetti

Dylan Thomas





## Set Texts

You will need to check with your teacher to find out which texts you will be studying. You may need your own copies of these texts before starting the A level English Literature course in September.

### WJEC GCE AS/A Level English Literature

#### Set Texts List

#### AS Unit 1 Prose and Drama (closed-book)

##### Section A: Prose fiction pre-1900

Candidates are required to answer **one** question from a choice of two based on the reading of **one** prose fiction text from the list below.

Jane Austen	<i>Sense and Sensibility</i> (Penguin Classics) (9780141439662)
Charlotte Brontë	<i>Jane Eyre</i> (Penguin Classics) (9780141441146)
Elizabeth Gaskell	<i>North and South</i> (Penguin Classics) (9780140434248)
Charles Dickens	<i>David Copperfield</i> (Penguin Classics) (9780140439441)
Thomas Hardy	<i>The Mayor of Casterbridge</i> (Penguin Classics) (97801414397585)

##### Section B: Drama

Candidates are required to answer **one** question from a choice of two based on the reading of one drama text from the list below:

Christopher Marlowe	<i>Doctor Faustus</i> (Longman) (9780582254091)
Oscar Wilde	<i>Lady Windermere's Fan</i> (New Mermaids) (9780713666670)
Tennessee Williams	<i>A Streetcar Named Desire</i> (Penguin) (9780141190273)
Caryl Churchill	<i>Top Girls</i> (Methuen) (9781408106037)
Joe Orton	<i>Loot</i> (Methuen) (9780413567604)

#### AS Unit 2 Poetry Post-1900 (open-book, clean copy)

For this unit learners are required to read **two** paired poetry texts from the list below.

<b>Edward Thomas: <i>Selected Poems</i></b> (Faber) (9780571235698) (prescribed section: poems listed in Appendix B) & <b>Alun Lewis: <i>Collected Poems</i></b> (Seren) (9781854113160) (prescribed section: poems listed in Appendix B)
<b>D H Lawrence: <i>Selected Poems</i></b> (Penguin Classics, edited by James Fenton) (9780140424584) (prescribed sections: Love Poems and Others, Amores, New Poems, Birds, Beasts and Flowers, Last Poems) & <b>Gillian Clarke: <i>Making the Beds for the Dead</i></b> (Carcenet) (978185747375)
<b>Ted Hughes: <i>Poems selected by Simon Armitage</i></b> (Faber) (9780571222957) (prescribed section: all poems up to and including page 68) & <b>Sylvia Plath: <i>Poems selected by Ted Hughes</i></b> (Faber) (9780571222971)
<b>Philip Larkin: <i>The Whitsun Weddings</i></b> (Faber) (9780571097104) & <b>Carol Ann Duffy: <i>Mean Time</i></b> (Picador) (9780330516778)
<b>Seamus Heaney: <i>Field Work</i></b> (Faber) (9780571114337) & <b>Owen Sheers: <i>Skirrid Hill</i></b> (Seren) (9781854114037)



## Movie Recommendations

### ***The Miniaturist***

Based on: Jessie Burton, *The Miniaturist* (2014).  
This three-part miniseries begins as a familiar story: a young bride is sent off to her mysterious new husband's creaky, secret-filled home. But instead of finding a closet full of dead women or similar, Nella is given a dollhouse that looks exactly like her new home—filled with figures that look remarkably like those who live there, and whose movements, coordinated by an unseen miniaturist, seem to predict the future.



### **Midnight in Paris (2011)**

A fantastic **Woody Allen film**, which is literally a **nostalgic trip** down memory lane, featuring some of the greatest figures of not only literature but also the bygone era. Surprise followed by surprise

### **Dead Poets Society (1989)**

**Robin Williams** shines as an English teacher who inspires his students through his teaching of poetry. **Carpe diem!**



### **Big Fish (2003)**

Another **fantasy film**, it beautifully portrays the art of **storytelling**. It is the enchanting story of a father and son, but it's really the story of stories themselves. Stories are only as great as they are told.

### **Finding Neverland (2004)**

Starring **Johnny Depp**, the **semi-biographical film** is about playwright **J. M. Barrie** and his relationship with a family who inspired him to create **Peter Pan**.







### Shakespeare in Love (1998)

How can we miss anything about the father of literature? The film depicts an **imaginary love affair** involving Viola de Lesseps and playwright **William Shakespeare** while he was writing **Romeo and Juliet**.



## TED Talks

### The danger of a single story

Our lives, our cultures, are composed of many overlapping stories. Novelist Chimamanda Adichie tells the story of how she found her authentic cultural voice -- and warns that if we hear only a single story about another person or country, we risk a critical misunderstanding.



### What adults can learn from kids

Child prodigy Adora Svitak says the world needs "childish" thinking: bold ideas, wild creativity and especially optimism. Kids' big dreams deserve high expectations, she says, starting with grownups' willingness to learn from children as much as to teach.



### 3 ways to speak English

Jamila Lyiscott is a "tri-tongued orator;" in her powerful spoken-word essay "Broken English," she celebrates — and challenges — the three distinct flavors of English she speaks with her friends, in the classroom and with her parents. As she explores the complicated history and present-day identity that each language represents, she unpacks what it means to be "articulate."



### Why a good book is a secret door

Childhood is surreal. Why shouldn't children's books be? In this whimsical talk, award-winning author Mac Barnett speaks about writing that escapes the page, art as a doorway to wonder -- and what real kids say to a fictional whale.



### What reading slowly taught me about writing

Reading slowly -- with her finger running beneath the words, even when she was taught not to -- has led Jacqueline Woodson to a life of writing books to be savored. In a lyrical talk, she invites us to slow down and appreciate stories that take us places we never thought we'd go and introduce us to people we never thought we'd meet. "Isn't that what this is all about -- finding a way, at the end of the day, to not feel alone in this world, and a way to feel like we've changed it before we leave?" she asks.





## Getting ready to study.....

Completing some of the following activities will help prepare you for studying A Level English Literature in September:

Read a book from the booklist or by the same author. Create a 10 slide PPT on aspects of the book.

Record yourself reciting one or more soliloquies from any of Shakespeare's plays.

Read a play by a well-known playwright. Write a scene of your own play inspired by what you have read.

Read some poetry by a poet or from a poetic movement. Annotate one of the poems you have admired most and write one poem of your own as a homage.

Write a 300-400 word report explaining what three books you would take with you onto a desert island and why.

Read one book from the booklist or by the same author and write a 300-400 letter to the author saying why you enjoyed it.

Create a time line of all the different literary movements in literature beginning with the 14th century and ending with modern literature.

Speak to at least 5 people and record what their favourite piece of children's fiction and adult literature is and why.

Create a colourful learning mat with 20 different features to help you in your study of English Literature

Find a poem that has been written by a poet who is in the literary canon (you may need to begin with finding out what the literary canon is and who is in it!). Bring your chosen poem to our first lesson back – be prepared to tell us why you chose the poem and what you think the poem is about... Happy poem hunting!

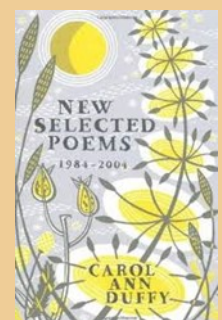
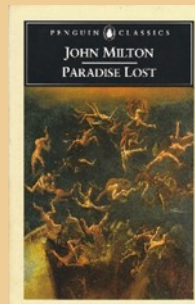
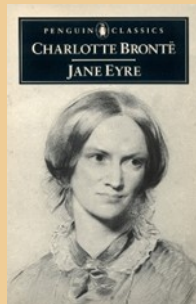
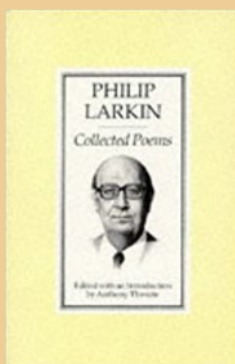
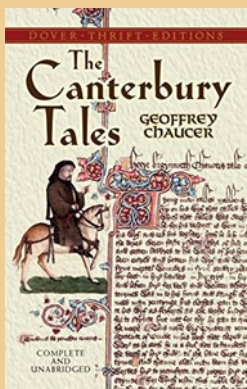
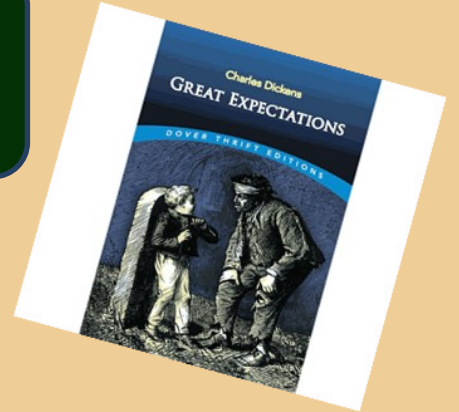
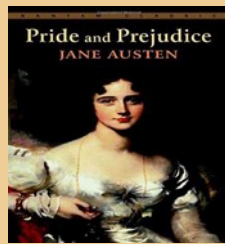
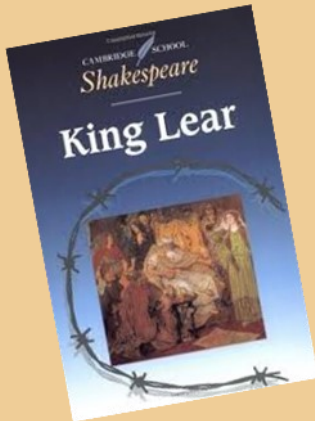
# St Brigid's School



A/S Level English Literature

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Where would you put the following writers and their works on this timeline?





## Tips

- Keep a blog on your reading and what you have found – far easier than carrying around a big file
- Read a couple of the set texts over the summer – remember to be successful you will need to read them a few times before the exams in order to have a really good understanding – If you have not been given this information ask someone in your English department.
- Download electronic copies of your set texts on your device and make notes on it which you can then print
- Download the audio book of the text – listen and read at the same time
- Get an understanding of what Marxism, feminism etc. are and how they help our understanding of literature
- Historical reading of specific periods in history – Victorian period, Renaissance, Romantic period etc.
- Create a profile of an author you will be studying
- Download an app called Pocket (available on Android and Apple devices) – keeps all your reading saved in one place
- Write a weekly reflection of what you have learnt each week – these notes can build up to some great revision notes
- For some useful resources on context and different interpretations of texts, try The British Library's 'Discovering Literature' site. You can find critics' views, articles and videos on specific texts and writers as well as overarching themes from different periods from the medieval to the late 20<sup>th</sup> century.

*“There are worse crimes than burning books. One of them is not reading them.”  
- Ray Bradbury*



## Social Media



Suggestions of people to follow on Twitter:

MASSOLIT – short video lectures in the arts, humanities and social sciences for secondary schools

[@themassolit](#)

The English & Media Centre, a not-for-profit trust, providing publications and CPD on English & Media for teacher and students.

[@EngMediaCentre](#)

The British Library

[@britishlibrary](#)

British Council Literature – Connecting British writers with readers and festival audiences internationally.

[@LitBritish](#)

National Centre for Writing - The National Centre for Writing is a place of discovery, exchange, ideas and learning for writers, translators, readers and everyone who loves words.

[@WritersCentre](#)





## Keeping it Fresh.....

It is important to keep the knowledge you have gained at GCSE fresh in your mind ready to start your A levels in September.

Why not spend some time looking over some past papers and using the mark schemes to assess how well you've done.

English Literature GCSE – Past Papers and Marking Schemes:

[https://www.wjec.co.uk/en/qualifications/english-literature-gcse/#tab\\_pastpapers](https://www.wjec.co.uk/en/qualifications/english-literature-gcse/#tab_pastpapers)

## Planning Ahead.....

WJEC Specification – GCE AS/A Level in English Literature

<https://www.wjec.co.uk/media/rwdp2iff/wjec-gce-english-lit-spec-from-2015-e-18-12-2019.pdf>

WJEC Specimen Assessment Materials

<https://www.wjec.co.uk/media/bual13jq/wjec-gce-english-literature-sams-from-2015-e.pdf>

WJEC Past Papers and Marking Schemes

[https://www.wjec.co.uk/en/qualifications/english-literature-as-a-level/#tab\\_pastpapers](https://www.wjec.co.uk/en/qualifications/english-literature-as-a-level/#tab_pastpapers)

A level English Literature: Effective writing

<https://resources.wjec.co.uk/Pages/ResourceSingle.aspx?rId=2409>

Writing Skills (student focused)

<https://resources.wjec.co.uk/Pages/ResourceSingle.aspx?rId=3055>

Analysing unseen text (student focused)

<https://resources.wjec.co.uk/Pages/ResourceSingle.aspx?rId=3054>

A level English Literature: Approached to different interpretations

<https://resources.wjec.co.uk/Pages/ResourceSingle.aspx?rId=2433>

A level English Literature: Close textual analysis

<https://resources.wjec.co.uk/Pages/ResourceSingle.aspx?rId=2432>



# St Brigid's School



A/S Level Geography @ Denbigh High School

Page 49

DENBIGH HIGH SCHOOL



BELIEVE  
EXCEED

A guide to help you prepare for your studies



Geography material produced by Mrs D Howlett,

Denbigh High School





We are delighted that you have made the choice to study AS Geography with us! If you have studied Geography at GCSE, you may encounter some topics that you are familiar with, but there are many aspects of the content that are new, or come at the topic from a different perspective.

If you have not studied GCSE Geography, no problem! We cover all of the content that you need to cover the specification, and anything you are not sure of, we can support you with. It has never been an issue with past students, the majority of whom went on to attain the highest grades!

## Course Essentials

We don't want you to have to try to write copious notes in the lesson – we want you to be able to interact with us and each other to consolidate your learning. We will provide you with a printout of our lesson materials that you can add notes to and fit additional research within. For this to work, you need to be organised from lesson 1 though! Please invest in a **lever arch file** to hold your AS notes in order. You will need to have the most recent lesson notes with you for reference but not all of them! We recommend you use an A4 ring binder with a divider for your geography work day-to-day, and transfer these notes into your ring binder once we move on to a new key idea.

## Developing as a Geographer

To be a great geographer you need to develop the ability to think synoptically. This means being able to see the greater overview and how everything begins to link together. Geography is not just about studying people and landscapes; it is also the relationships that exist between people and their environment.

The best geographers at A Level keep reading the news and generally seek to improve their geographical understanding by engaging with geographical discussions regarding key issues. It's not all about reading books. Keeping up to date can come from watching film clips, documentaries, news articles etc. Social media is a great way to keep up to date with new geographical events and case studies as information is regularly updated and you get notifications when something new is available. If you're on Twitter, try following the following as a starting point:

Geography Review

Geogabout

Geography Revision

InternetGeog

A level Geography

ZigZagGeography

Geographical Association

Royal Geographical Society



Equally, you can visit their websites (you just don't get notifications when there has been an update).

## Always walking around with your earphones in?

Why not listen to something that will help you with your studies? There are some great podcasts out there that deal with topical issues linked to the course. Why not give the following a try!

**Costing the Earth** – There are some great podcasts here to pick from on a wide variety of geographical issues <https://www.bbc.co.uk/programmes/b006r4wn/episodes/player> (many topics, including amongst others.. climate change, carbon, urban greening, deforestation, alternative power, plastics etc.)

**Royal Geographical Society – “Ask the Geographer” podcasts** - <https://www.rgs.org/schools/teaching-resources/ask-the-expert-podcasts/> is a fantastic set of podcasts to keep A Level studies up-to-date with the latest geographical research

## Often got your head in a reading book?

Why not give one of the following a try? You should be able to order from the library:

**Adventures in the Anthropocene** (Vince, G) (2016) – this looks at the effects that humans are having on the surface and structure of the planet with a balanced view on recognising threats and dangers whilst also look for practical answers and solutions.

**Prisoners of Geography** (Marshall, T) – an insightful book which helps understand how physical geography impacts on political reality and really helps to understand how decisions of world leaders have been shaped by geography – a great introduction to geopolitics.

## Factfulness: Ten reasons we're wrong about the world – and why things are better than you think

(Rosling, H 2019) – this is a must-read book from a geography perspective – this takes a more realistic view of the world, presenting issues in fact-based context. It is a rational look at actually how far the world has measurably improved and what's left to be done.

These are not essential reading or course books, just another way to engage in wider reading and get you thinking.



## The A/S Course

Y12 Geography consists of the following modules:

Unit 1 Physical Geography: Changing Landscapes

Unit 2 Human Geography: Changing Places

Take a look at the links in the following table as an introduction to some of the things we'll be studying.

**Video:** Power of the Planet (Volcano) <https://www.dailymotion.com/video/x5af4kg> - a GREAT introduction to the work we will be doing on plate tectonics at the start of Year 12

### Plate Tectonics

**Reading:** Plate Tectonics (The Geological Society) – this will be a good step up from your GCSE work to A Level and is definitely worth reading / working through <https://www.geolsoc.org.uk/Plate-Tectonics>

**Reading:** USGS Natural Hazards – FAQ <https://www.usgs.gov/faq/natural-hazards> – some excellent reading here in bitesize chunks – well worth exploring

**Reading** <https://geography-revision.co.uk/a-level/physical/glacial-systems-and-processes/>

**Reading** <https://revisionworld.com/a2-level-level-revision/geography-level-revision/glacial-environments>

### Glaciated Landscapes

**Video** <https://www.youtube.com/watch?v=dBll0veV11c>

**Video** <https://www.youtube.com/watch?v=B8d8kNMcp7Q>

**Video** <https://www.youtube.com/watch?v=jdXV4MBfJ5o>

### Changing place; changing places

relationships and connections

meaning and representation

### Reading

[http://www.coolgeography.co.uk/advanced/Concept\\_of\\_Place.php](http://www.coolgeography.co.uk/advanced/Concept_of_Place.php)

[http://www.coolgeography.co.uk/advanced/Places\\_Relationships\\_connections.php](http://www.coolgeography.co.uk/advanced/Places_Relationships_connections.php)

[http://www.coolgeography.co.uk/advanced/Place\\_Economic\\_change\\_social\\_inequalities\\_.php](http://www.coolgeography.co.uk/advanced/Place_Economic_change_social_inequalities_.php)

[http://www.coolgeography.co.uk/advanced/Investigating\\_places.php](http://www.coolgeography.co.uk/advanced/Investigating_places.php)



Changes over time in the economic characteristics of place

**Reading**

<https://geographyiseasy.wordpress.com/2014/02/19/gcse-revision-economic-change/>

**Video**

[https://www.youtube.com/watch?v=KONQrlux\\_4A](https://www.youtube.com/watch?v=KONQrlux_4A) Secondary sector

**Reading**

<https://www.liverpool-one.com/> Tertiary sector – retail

**Video**

<https://www.youtube.com/watch?v=EVLN1tJsBkY>

Strategies for creating sustainable rural communities

**Video**

<https://www.youtube.com/watch?v=EJbAOn9khwk>

**Reading**

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

Rebranding process and players in urban places

**Reading**

<http://regeneratingliverpool.com/>

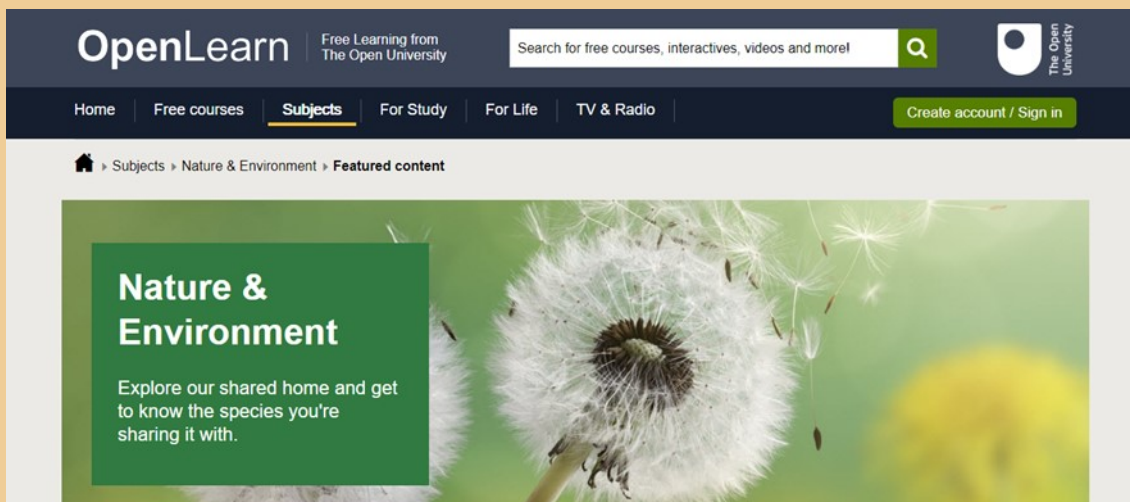
<https://liverpool.gov.uk/business/land-and-property/regenerating-liverpool/>



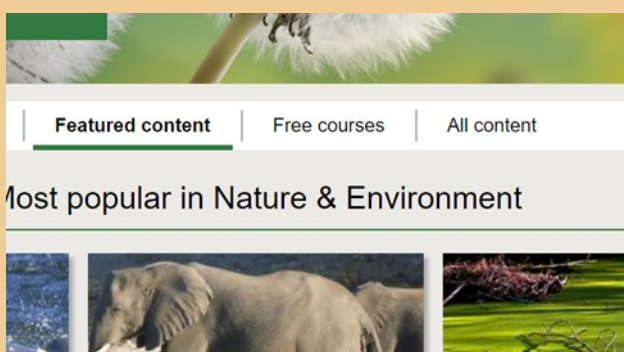
## Open University Courses

The following are free courses run by the Open University. Once you complete the course you get a 'statement of completion' which you should print out and keep. They are excellent to get a background understanding of some of the modules we are going to study in AS Geography from September.

OpenLearn website address: <https://www.open.edu/openlearn/nature-environment>



Click on free courses







## We recommend:

- Underlying AS concept: Understanding the Environment – a systems approach
- Underlying AS concept: Understanding the Environment - Flows & Feedback
- Glaciated Landscapes: Climate Change
- Changing Places: Changing Cities
- Tectonic Landscapes: Earthquakes

Tectonic Landscapes: Volcanoes (in the Science, Maths and Technology category)

## Specification links and Past Papers


Here is a link to the WJEC AS Level Geography specification for you to download:

<https://www.wjec.co.uk/media/wijlspii/wjec-gce-geography-spec-from-2016-e.pdf>

### AS/A Level Geography .

Teaching: Sep 2016 • Reference Codes ⓘ

**Overview** Past Papers Resources



AS/A Level Geography Specification

Download

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> Key Documents





The following are links to TED talks that discuss new topics you will study in Year 12:

[https://www.ted.com/talks/liz\\_ogbu\\_what\\_if\\_gentrification\\_was\\_about\\_healing\\_communities\\_instead\\_of\\_displacing\\_them](https://www.ted.com/talks/liz_ogbu_what_if_gentrification_was_about_healing_communities_instead_of_displacing_them)

[https://www.ted.com/talks/stefan\\_al\\_why\\_isn\\_t\\_the\\_netherlands\\_underwater](https://www.ted.com/talks/stefan_al_why_isn_t_the_netherlands_underwater)

If you have Netflix, these documentaries are worth watching to get a basic understanding of several topics that you will be studying in Year 12 Geography.

## Documentaries

- Océans.
- Dancing with the Birds.
- Growing Up Wild.
- Chasing Coral.
- National Parks Adventure.
- Untamed Romania.
- Tales by Light.
- A Plastic Ocean.

[More items...](#)

[www.netflix.com](http://www.netflix.com) > browse > genre ▾

[Nature & Ecology Documentaries | Netflix Official Site](#)

There are, of course on BBC iPlayer, the following David Attenborough box sets to watch.

**Sir David Attenborough Box Sets**

Explore the natural world with landmark series from Sir David Attenborough.

9 PROGRAMMES AVAILABLE

<p><b>BLUE PLANET II</b></p> <p>Nature <b>Blue Planet II</b> Take a deep breath...</p>	<p><b>Life</b></p> <p>Nature <b>Life</b> The incredible challenges animals face to survive</p>	<p><b>AFRICA</b></p> <p>Nature <b>Africa</b> It's like nowhere else</p>	<p><b>PLANET EARTH II</b></p> <p>Nature <b>Planet Earth II</b> Say hello to the wonders of the world</p>
<p><b>frozen planet</b></p> <p>Nature</p>	<p><b>LIFE ON EARTH</b></p> <p>Nature</p>	<p><b>THE BLUE PLANET</b></p> <p>Science &amp; Nature</p>	<p><b>planet earth</b></p> <p>Nature</p>



## *A Guide to help you get ready to study A Level History*



### **Don't forget your GCSE!**

If you studied GCSE History, it is likely that the topics or periods in History you studied will not be the same as the AS level topics. But the skills of enquiry, interpretation, analysis, evaluation, and synthesis that you developed at GCSE will be needed at A Level. So, it is important to keep the History skills and ways of working as an historian fresh in your mind ready to start your A levels in September.

Why not spend some time looking over your GCSE notes, and consider:

*How did you use and evaluate sources as an Historian?*

*How did you evaluate the validity of different interpretations?*

*How did Historians analyse and explain causation, consequence, significance, continuity and change?*

If you did not study GCSE History, have a look at these articles to get you thinking about the understanding and skills you will need to develop:

<https://www.open.edu/openlearn/history-the-arts/history/what-history>

[https://www.open.edu/openlearn/history-the-arts/history/what-history-being-historian?in\\_menu=1051263](https://www.open.edu/openlearn/history-the-arts/history/what-history-being-historian?in_menu=1051263)





## What is the AS level course?

There are a lot of choices of topics in the AS level course. Find out which topics have been chosen by your school/college to study in Year 12.

### AS Level

#### Unit 1 – Period Study.

The period study is a topic covering around 100 years. The period study focuses on continuity and change over a substantial period of time.

The examination is extended writing, essay style questions.

Topic options for Unit 1 (you will study 1):

1. Government, rebellion and society in Wales and England c.1485- 1603
2. Government, revolution and society in Wales and England c.1603- 1715
3. Politics, protest and reform in Wales and England c.1780-1880
4. Politics, people and progress in Wales and England c.1880-1980
5. Political and religious change in Europe c.1500-1598
6. Europe in the age of absolutism and revolution c.1682-1815
7. Revolution and new ideas in Europe c.1780-1881
8. Europe in an age of conflict and co-operation c.1890-1991



### Unit 2 – Depth Study (Part 1)

A shorter period is studied in depth for unit 2 and is continued in Unit 4 at A level in year 13. In Unit 2, the focus is on using and analysing historical evidence and considering a range of interpretations of events.

The unit 2 examination has a range of sources with open ended questions.

Topic options for unit 2 (you will study 1):

1. The mid Tudor crisis in Wales and England c.1529-1570. Part 1: problems, threats and challenges c.1529-1553
2. Royalty, rebellion and republic c.1625-1660. Part 1: the pressure on the monarchy and the drift to civil war, c.1625-1642
3. Reform and protest in Wales and England c.1783-1848. Part 1: radicalism and the fight for parliamentary reform, c.1783-1832
4. Politics and society in Wales and England c.1900-1939. Part 1: politics, society and the war: Wales and England c.1900 -1918
5. Religious reformation in Europe c.1500-1567  
Unit 2 (AS): Part 1: THE Outbreak and spread of the reformation of Germany c.1500- 1531
6. France in Revolution c.1774-1815 Unit 2 (AS):  
Part 1: France: The causes and course of Revolution. c.1774-1792
7. The crisis of the American Republic c.1840-1877 Unit 2 (AS): Part 1: Sectional differences and The road to Civil War.c.1840-1861.
8. Germany: Democract to dictatorship. c.1918-1945 Unit 2 (AS): Part 1: Weirmar and its challenges .1918-1933



### Finding out more about the course...

The following documents are designed for teachers, but some sections will be of use to you to help you to find out more about the course.

WJEC GCE  
Specification

<https://www.wjec.co.uk/media/uwlondvv/wjec-gce-history-spec-from-2015-e.pdf>

Page 2 outlines the AS and A Level course. If you know the topics chosen by your school/college, you could read about each one from pages 18 onwards.

WJEC Past  
papers and  
marking  
schemes

[https://www.wjec.co.uk/en/qualifications/history-as-a-level/#tab\\_pastpapers](https://www.wjec.co.uk/en/qualifications/history-as-a-level/#tab_pastpapers)

Have a look at what the examination papers look like for AS level – choose the papers for the topics your school/college covers. See how the examination papers are marked in the marking schemes.

### Book and Magazine Recommendations

Depending on which periods you are studying for the AS course, your teachers will direct you to specific set books that you will use during your course. But, to do well in History, wide reading is important.

The Historical association has put together a list of suggested reading for a range of topic areas: <https://www.history.org.uk/student/resource/3213/reading-at-a-level>





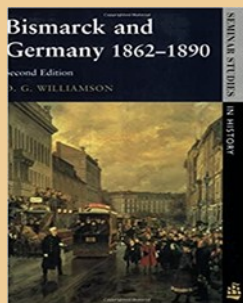
Other suggested things to read:



History today magazine. Available online or in the shops. A range of articles about different historical periods and topics.

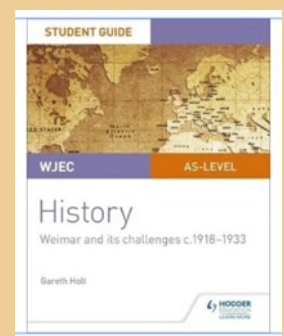
<https://www.historytoday.com/>

BBC History magazine. Great selection of articles on a range of themes. BBC also makes a BBC world Histories and a BBC Histories revealed magazine. <https://www.historyextra.com/>



The Seminar studies books are a series of small books focused on specific areas of the AS and A Level course. This is a good series to look at once you know the specific topics you will be studying.

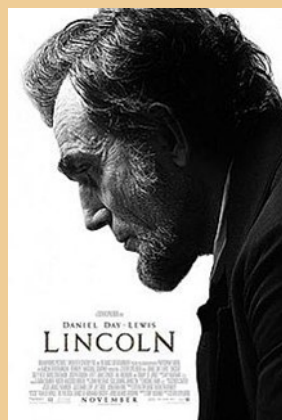
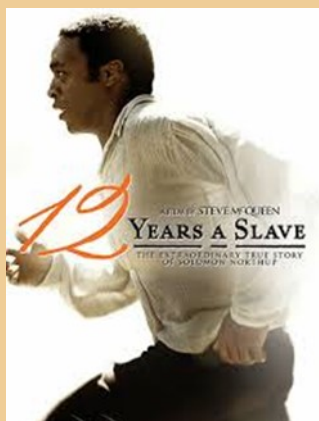
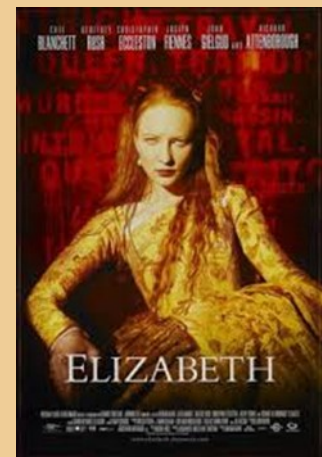
WJEC produced student guides are available to purchase from various websites. Look for the specific topics you will be covering.





## Movie and TV Recommendations

Again, depending on your AS level topic choices, there are likely to be some films that your teachers will recommend. These ideas below should appeal to historians regardless of what topic you are studying.



There are lots of really good History documentaries, many available on demand. Try Simon Sharma's 'History of Britain' or Lucy Worsley's 'Six Wives'.



## Website Recommendations

Historical Association. Resources are free once you are registered. Some resources require a student membership fee. The site has topic guides, notes and reading lists for a range of topics.

<https://www.history.org.uk/student/categories/16-18>

WJEC resources

Lots of information about each of the units you will study. There are lesson activities for you to work

<https://resources.wjec.co.uk/Pages/ResourceByArqs.aspx?subId=17&lvlId=1>

## Social Media



Suggestions of people to follow on Twitter:

@EAS\_Humanities Our EAS twitter account for all things Humanities, including History!

@histassoc Historical Association twitter account

@RoyalHistSoc Royal Historical Society twitter account

@thehistoryguy Dan Snow

@HISTORY

Also, look up the academics from your local university – follow them as well.



## Getting ready to study.....

Have a go at the following activities to help you to get ready for your AS level course:

### **Task 1 – practice your skills of analysing Historical sources.**

Read the guidance on analysing sources here:

<https://www.history.org.uk/student/categories/916/resource/3211/using-historical-sources>

Choose a source from the past paper for the depth study you are going to study: [https://www.wjec.co.uk/en/qualifications/history-as-a-level#tab\\_pastpapers](https://www.wjec.co.uk/en/qualifications/history-as-a-level#tab_pastpapers)

For the source you choose, make notes about each aspect of source evaluation. You could stick the source on an A3 sheet and make your notes around it.

The first link also has examples of cartoons to analyse – complete those activities as well.

### **Task 2 - Practice your note making skills**

Making notes from what you read and from your lessons is a very useful skill to have. Writing notes helps you to process and remember the key facts. The notes are then ready for revision.

Read the guidance here on making notes: <https://www.history.org.uk/student/categories/916/resource/3208/taking-notes-at-a-level-history>

Search on Youtube for videos about good ways of making notes.

Practise – Choose an article from one of the BBC History magazines: <https://www.historyextra.com/> or from a relevant book or magazine, and practise making notes in a clear and concise way.



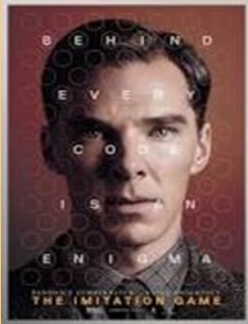
## A guide to help you prepare yourself for studying AS Level Mathematics







## Movie recommendations



The Imitation Game is a 2014 American historical drama film directed by Morten Tyldum and written by Graham Moore, based on the biography *Alan Turing: The Enigma* by Andrew Hodges. It stars Benedict Cumberbatch as British cryptanalyst Alan Turing, who decrypted German intelligence messages for the British government during the Second World War

*A Beautiful Mind* is a 2001 American biographical drama film based on the life of the American mathematician John Nash, a Nobel Laureate in Economics and Abel Prize winner. The film was directed by Ron Howard, from a screenplay written by Akiva Goldsman. It was inspired by a bestselling, Pulitzer Prize-nominated 1998 book of the same name by Sylvia Nasar.



*Good Will Hunting* is a 1997 American drama film directed by Gus Van Sant, and starring Robin Williams, Matt Damon, Ben Affleck, Minnie Driver, and Stellan Skarsgård. Written by Affleck and Damon, the film follows 20-year-old South Boston janitor Will Hunting, an unrecognized genius who, as part of a deferred prosecution agreement after assaulting a police officer, becomes a client of a therapist and studies advanced mathematics with a renowned professor.





### TED Talks

**Is Maths discovered or invented**

Would mathematics exist if people didn't? Did we create mathematical concepts to help us understand the world around us, or is math the native language of the universe itself? Jeff Dekofsky traces some famous arguments in this ancient and hotly debated question.

[Link](#)

**Maths is forever**

With humour and charm, mathematician Eduardo Sáenz de Cabezón answers a question that's wracked the brains of bored students the world over: What is math for? He shows the beauty of math as the backbone of science — and shows that theorems, not diamonds, are forever. In Spanish, with English subtitles.

[Link](#)

### Websites/Social Media

[Hegarty Maths](#)

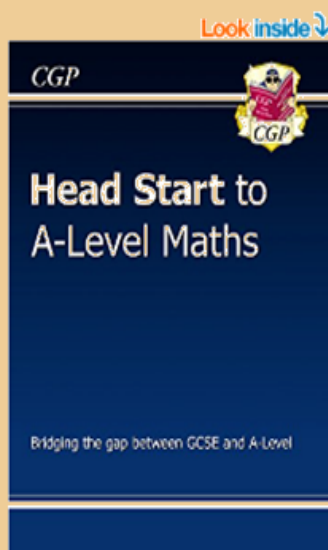
There are numerous resources on his website and Colin Hegarty is also running free tutorials for Yr 11 pupils between now and September! Follow him on Twitter @hegartymaths.

[Mathemateg.com \(Welsh Language\)](#)

Numerous videos and resource, including for the Additional Mathematics bridging qualification from Yr11 to Yr12! Follow on Dr Gareth Evans on twitter @mathemateg.

### Reading List

If you require more practice CGP Head Start to A-Level Mathematics is currently available for free as a Kindle Edition



New Head Start to A-Level Maths (CGP A-Level Maths 2017-2018) Kindle Edition

by CGP Books (Author, Editor) | Format: Kindle Edition

★★★★★ 65 ratings

[See all 2 formats and editions](#)

Kindle Edition  
£0.00

Paperback  
£5.95

[Read with Our Free App](#)

2 New from £5.95

Level & Subject: AS/A-Level Maths

First Teaching: September 2017 | First Exams: June 2018

It's a big step up from GCSE Maths to the new AS-Level and A-level Maths courses - which is why we've rustled up this brilliant Head Start book! It recaps all the crucial topics students will need to remember

[Read more](#)



## Further Mathematics Support Programme Wales - COVID-19: Opportunities for Yr11 (Summer 2020)

Title/release date/ FMSP contact for more info	Description	What is this resource (W -Welsh, E-English or B-Bilingual)	Does the resource require communication with learn- ers?
<p>FMSPW Bridging Mathematics sessions for Y11,</p> <p>Date available from: <b>4<sup>th</sup> May 2020.</b></p> <p><b>Contact:</b> Adrian Wells <a href="mailto:adw16@aber.ac.uk">adw16@aber.ac.uk</a></p>	<p>An introduction to AS Mathematics and Further Mathematics with an emphasis on fun and enjoyment of mathematics covering the topics on mathematical Investigations, Algebra, Introduction to applied mathematics, Mathematical proof, Differential calculus, Introduction to complex numbers, Problems and algorithms, Areas and volume: integration, Coordinate Geometry,</p> <p>Further Maths taster: Pure and Applied.</p>	<p>A set of 10 pre-recorded tutorials followed by self-study tasks and materials with an end of study online assessment test (English and Welsh).</p>	<p>Students will be required to subscribe to the programme through their school. Pre-recorded tutorials will be released weekly and available for limited time of 2 weeks, release of the solutions to self-study tasks will be delayed.</p>
<p>Mathematical Worlds,</p> <p>Date available from: <b>18<sup>th</sup> May 2020</b></p> <p>Sofya Lyakhova <a href="mailto:s.lyakhova@swansea.ac.uk">s.lyakhova@swansea.ac.uk</a></p>	<p>A set of 10 rich mathematical tasks prepared for Wales by mathematicians across the world (Germany, Australia, USA, Japan and UK). These are resources for slow contemplative mathematical thinking and problem solving for developing resilience and creativity in learners when approaching unseen mathematical problems.</p>	<p>10 sets with an intro video from Dr Ian Roberts (Charles Darwin University), each set includes an introductory video (E), worksheet (B) and guidance/solutions (B).</p> <p>Year 11 students could pursue each world to the level they are comfortable with. Recommended for all SEREN students.</p>	<p>Students will be required to subscribe to the programme through their school. Suitable for asynchronous learning. Learners could contact FMSPW by email if they need help or would like to share the results of their investigations.</p>
<p>Careers in Mathematics talks,</p> <p>Date available from: <b>4<sup>th</sup> May 2020</b></p> <p>Elian Rhind <a href="mailto:E.O.T.Rhind@Swansea.ac.uk">E.O.T.Rhind@Swansea.ac.uk</a></p>	<p>Pre-recorded video presentation with info about A-level and career choice. Session is 45 minutes.</p>	<p>A series of 6 online live sessions recorded and uploaded to website. Weekly in June and July - held on Saturday mornings – each session 1.5 hours.</p>	<p>Students will be required to subscribe to the programme. Learners can apply through their school or directly through FMSP Wales email <a href="mailto:fmspwwales@swansea.ac.uk">fmspwwales@swansea.ac.uk</a></p>



As a student who is choosing to study Mathematics at A Level, it is logical to assume that you have an interest in the subject!

With that said, the following books may be of interest to you.

50 Mathematical Ideas You Really Need to Know (Tony Crilly)

Alex's Adventures in Numberland (Alex Bellos)

Cabinet of Mathematical Curiosities (Ian Stewart)

The Calculus Wars (Jason Socrates Bardi)

The Code Book (Simon Singh)

The Curious Incident of the Dog in the Night-time by Mark Haddon

How Many Socks Make a Pair?: Surprisingly Interesting Maths (Rob Eastway)

Hello World: How to be Human in the Age of the Machine (Hannah Fry)

Humble Pi: A Comedy of Maths Errors (Matt Parker)

The Life-Changing Magic of Numbers (Bobby Seagull)

The Num8er My5teries (Marcus du Sautoy)

## Mathematical connections (understanding not memorising!)

Mathematics is a hierarchical subject and it would be extremely useful for you to ensure a solid understanding of basic algebra before commencing AS study. Good mathematicians make mathematical connections and do not look at topics in isolation. Consider the following example (don't worry if some of the maths is unfamiliar!):

Solve the equation  $2x^2 + x - 10 = 0$

I can answer in different ways (there are explanation videos underneath that might be useful):



By factorising:

$$2x^2 + x - 10 = 0$$

$$(2x + 5)(x - 2) = 0$$

$$2x + 5 = 0 \text{ neu } x - 2 = 0$$

$$x = -\frac{5}{2} \text{ neu } x = 2$$

By applying the quadratic formula:

$$2x^2 + x - 10 = 0$$

a=2 b=1 c=-10

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$x = \frac{-1 \pm \sqrt{1^2 - (4 \times 2 \times -10)}}{2 \times 2}$$

$$x = -\frac{5}{2} \text{ neu } x = 2$$

By Completing the Square :

$$2x^2 + x - 10 = 0$$

$$2(x^2 + \frac{1}{2}x - 5) = 0$$

$$2((x + \frac{1}{4})^2 - \frac{1}{16} - 5) = 0$$

$$2((x + \frac{1}{4})^2 - 5\frac{1}{16}) = 0$$

$$2(x + \frac{1}{4})^2 - 10\frac{1}{8} = 0$$

$$2(x + \frac{1}{4})^2 = 10\frac{1}{8}$$

$$(x + \frac{1}{4})^2 = 5\frac{1}{16}$$

$$(x + \frac{1}{4}) = \pm \sqrt{5\frac{1}{16}}$$

$$x = -\frac{5}{2} \text{ neu } x = 2$$

[Linc Cymraeg:](#)



[Linc Cymraeg:](#)



[Linc Cymraeg:](#)



[English link:](#)



[English link:](#)



[English link:](#)





We can make further connections with graph work here e.g. if I plot:

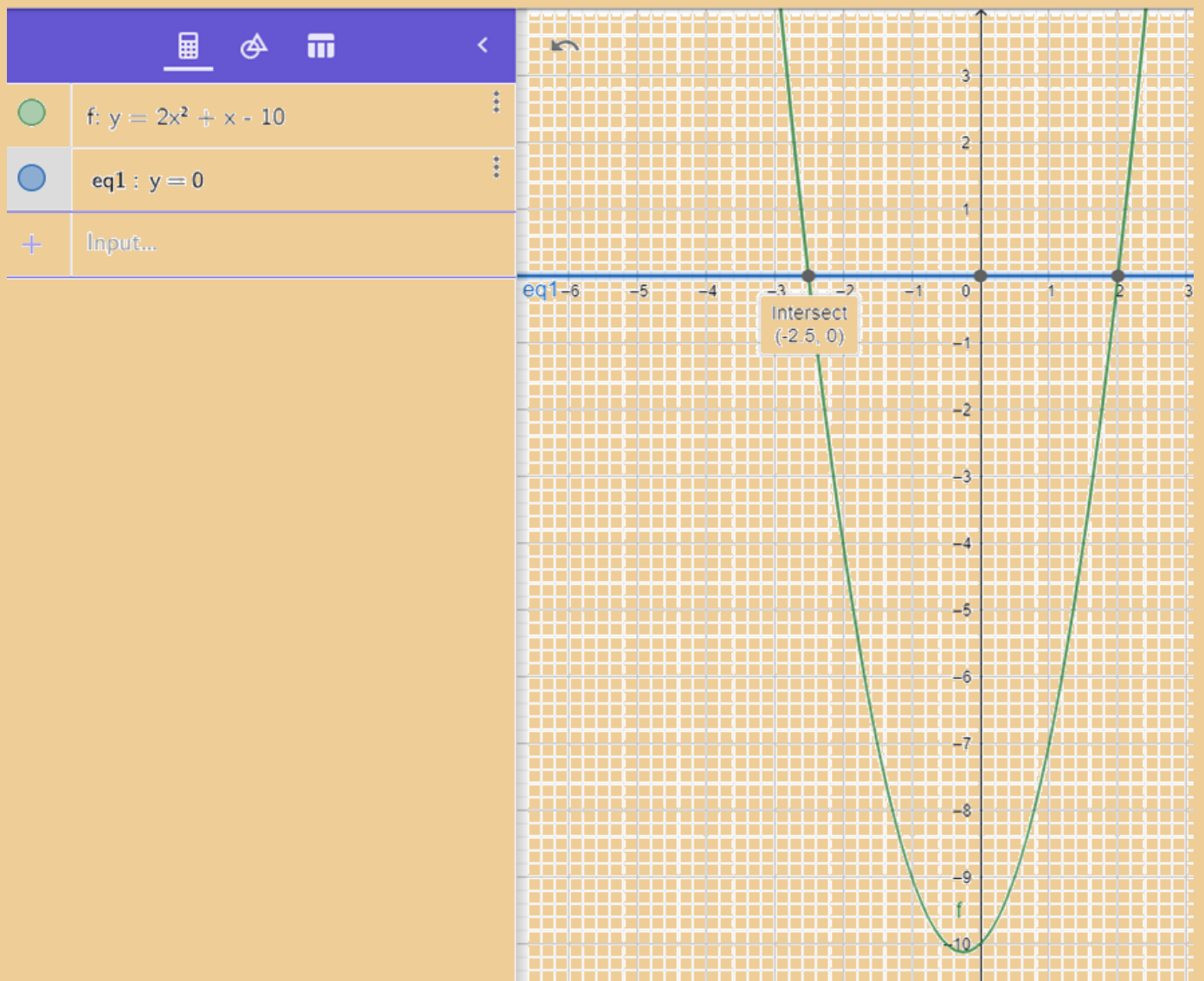
$$y = 2x^2 + x - 10 \text{ and } y = 0$$

The points of intersection will be  $x = -\frac{5}{2}$  or  $x = 2$ , which are the solutions to the equation  $2x^2 + x - 10 = 0$

This is solving simultaneous equations graphically!

Here's a screenshot from Geogebra (which is freely available online – have a go!)

≡ GeoGebra Graphing Calculator





The following worked examples, QR codes with link to explanations and exercises have been carefully selected to help you reinforce your understanding of key subject areas before you start AS Mathematics!

## BASIC ALGEBRA SKILLS

Having basic algebra skills is essential to start the A Level Mathematics course. Have a look over the notes and examples below before trying the 'test yourself' exercise.

If you need further support and guidance use the video links.

### Expanding brackets

This means multiplying the brackets out.

#### Examples

$$1) 5(3y - 7) \\ 1)(2x + 3)$$

We need to multiply everything in the bracket by

$$9x - 35 = 3 \\ = 15y - 35$$

$$2) 3x(x^2 - 2y)$$

$$= 3x^3 - 6xy$$

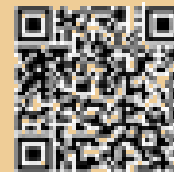
$$3) (3x - 2y)(2x + 3)$$

$$= 6x^2 +$$

#### Video links



[Expanding brackets](#)  
[Expanding double brackets](#)



### Simplifying

Collecting like terms

#### Examples

Simplify:

$$1) 3x - 2y + 7x + 5y = 10x + 3y$$

Always look at what is in front of each term, if it helps circle the terms like this:  $3x - 2y + 7x + 5y$  you can see you have  $3x + 7x = 10x$  and  $-2y + 5y = 3y$

$$2) -3x + 5y - 2x - 7y = -5x - 2y$$





$$3) 2(3x + 2y) - 7x + y = 6x + 4y - 7x + y = -x + 5y$$

Expand the brackets first!

$$4) 3(5x - 6y) + 3(x + 2y) = 15x - 18y + 3x + 6y = 18x - 12y$$

Video links



[Collecting like terms](#)

Solving a linear equation means working out the value of the unknown that's represented by a letter.

### Examples

$$1) \begin{array}{l} 7x + 1 = 36 \\ -1 \\ \hline 7x = 35 \\ \div 7 \\ \hline x = 5 \end{array}$$

$$9 = 25 - 4x$$

$$7$$

$$x = 1.6$$

$$2) \begin{array}{l} 8x - 1 = 2x + 41 \\ -2x \\ \hline 6x - 1 = 41 \\ +1 \\ \hline 6x = 42 \\ \div 6 \\ \hline x = 7 \end{array}$$

$$10x = 16$$

$$3) \begin{array}{l} 3(2x + 4) = 10 \\ +4x \\ \hline 6x + 12 = 10 \\ -12 \\ \hline 6x = -2 \\ \div 6 \\ \hline x = -\frac{1}{3} \end{array}$$

$$4) \begin{array}{l} \frac{x}{7} = 11 \\ \times 7 \\ \hline x = 77 \end{array}$$

$$5) \begin{array}{l} \frac{3x}{8} = 8 \\ \times 8 \\ \hline 3x = 64 \\ \div 3 \\ \hline x = \frac{64}{3} \end{array}$$

Video links



[Solving equations](#)  
[Equations with letters on both sides](#)





## BASIC ALGEBRA TEST YOURSELF EXERCISE

Expand the following brackets:

$2a(4b - 3a)$

b)  $4y^2(2y + 3x)$

c)  $(x - 3)(3x + 4)$

d)

$(x - 2y)^2$

Simplify:

$3x - 2y + 5x - 7y$

b)  $3x^2 + 7y - 5x^2 + y$

c)  $8y - 2(3y + 5)$

d)  $2(3a - 4) + 3(4a + 2)$

e)  $5(c - 2d^2) - 3c + 7d^2$

f)

$3(2x - 5y) - 2(3x - 4y)$

3) Solve the following linear equations:

a)  $6x - 2 = 2x + 8$

b)  $5x + 7 = 2x + 25$

c)  $x + 11 = 3x - 3$

d)  $2(x + 3) = 5x - 6$

*\*Answers can be found at the back of this booklet\**



## INDICES

The small number tells you how many times you multiply the number by itself.

eg  $2^3$  means  $2 \times 2 \times 2 = 8$ . It does NOT mean  $2 \times 3$ !

### Examples

$$\begin{array}{lll}
 1) 3^4 = 3 \times 3 \times 3 \times 3 = 81 & 2) 2^3 \times 5^3 = 2 \times 2 \times 2 \times 5 \times 5 \times 5 & 3) 7^3 + 3^3 = \\
 7 \times 7 + 3 \times 3 \times 3 & = 8 \times 25 & = 49 \\
 \bullet 27 & = 200 & = 76
 \end{array}$$

Any number to the power of zero is equal to 1!

Examples:  $3^0 = 1$        $14^0 = 1$        $343^0 = 1$   
 $x^0 = 1$

### Negative powers

$$x^{-n} = \frac{1}{x^n}$$

### Examples

$$2^{-3} = \frac{1}{2^3} = \frac{1}{8} \qquad 4^{-2} = \frac{1}{4^2} = \frac{1}{16} \qquad 5^{-3} = \frac{1}{5^3} = \frac{1}{125}$$

## Fractional powers

### Examples

$$\begin{array}{lll}
 25^{\frac{1}{2}} = \sqrt{25} = 5 & 81^{\frac{1}{4}} = \sqrt[4]{81} = 3 & 8^{\frac{1}{3}} = \sqrt[3]{8} = 2 \\
 27^{\frac{1}{3}} = \sqrt[3]{27} = 3 & &
 \end{array}$$

A power of a half ( $\frac{1}{2}$ ) means the same as working out the square root of that

A power of a third ( $\frac{1}{3}$ ) means the same as working out the cube root of that

## Laws of indices

$$x^m \times x^n = x^{m+n}$$

$$\frac{x^m}{x^n} = x^{m-n}$$

$$(x^m)^n = x^{m \times n}$$

### Examples

$$\begin{array}{lll}
 1) x^3 \times x^7 = x^{3+7} & 2) y^0 \div y^2 = y^{0-2} & 3) 3x^2y^{-5} \times 2x^4y^3 = \\
 (3 \times 2)x^{3+4}y^{-5+3} & = y^{-2} & = 6x^6y^{-2} \\
 = x^{10} & &
 \end{array}$$

$$\begin{array}{lll}
 4) \frac{24x^2y^8}{6x^2y^{-3}} = (24 \div 6)x^{2-2}y^{8-(-3)} & 5) (3x^4)^2 = 3^2x^{4 \times 2} & 6) 8^{\frac{2}{3}} = \\
 (8^{\frac{2}{3}})^2 & = 9x^8 & = 2^3 = 8
 \end{array}$$



Video links



[Laws of Indices](#)  
[Fractional Indices](#)



## CALCULATING WITH FRACTIONS

### Simplifying

A fraction is in its simplest form if the numerator and denominator do not have a common factor other than 1. I.e.  $\frac{4}{6}$  is not in its simplest form as 2 is a common factor in the numerator and denominator. To simplify a fraction, divide the numerator and denominator by a common factor.

Examples:  $\frac{12}{16} = \frac{3}{4}$       $\frac{27}{36} = \frac{3}{4}$       $\frac{18}{45} = \frac{2}{5}$       $\frac{63}{77} = \frac{9}{11}$

### Adding or Subtracting

To add or subtract fractions, the first thing you need to do is ensure the denominators are the same

Examples:  $\frac{3}{4} - \frac{1}{9} = \frac{6}{9} - \frac{1}{9} = \frac{5}{9}$       $\frac{3}{10} + \frac{2}{5} = \frac{3}{10} + \frac{4}{10} = \frac{7}{10}$       $\frac{3}{4} - \frac{1}{2} = \frac{3}{4} - \frac{2}{4} = \frac{1}{4}$

$\frac{1}{5} = \frac{2}{10} = \frac{4}{20}$       $\frac{11}{20} = \frac{11}{20}$       $\frac{4}{20} = \frac{4}{20}$

$= \frac{11}{20}$

### Multiplying

Multiply the denominators together and the numerators together. **Example:**

$$\frac{7}{11} \times \frac{3}{4} = \frac{7 \times 3}{11 \times 4} = \frac{21}{44}$$

### Dividing

Use the fact that dividing by  $\frac{a}{b}$  will give you the same answer as multiplying by  $\frac{b}{a}$

Examples:  $\frac{7}{10} \div \frac{3}{4} = \frac{7}{10} \times \frac{4}{3} = \frac{28}{30}$  ( $= \frac{14}{15}$  if simplified)      $\frac{4}{5} \div \frac{2}{3} = \frac{4}{5} \times \frac{3}{2} = \frac{12}{10}$  ( $= \frac{6}{5}$  if simplified)



Video link:



[Fractions: Addition](#)  
[Fractions: Multiplication](#)  
[Fractions: Division](#)

## EXERCISE

"You should attempt these questions without a calculator and show every step of your calculation"

1) Evaluate the following:

- |                     |                |                        |                        |                         |
|---------------------|----------------|------------------------|------------------------|-------------------------|
| a) $3^2 \times 5^2$ | b) $5^3 - 7^2$ | c) $64^{\frac{2}{3}}$  | d) $400^{\frac{1}{2}}$ | e) $64^{\frac{3}{4}}$   |
| f) $11^{-2}$        | g) $9^{-3}$    | h) $27^{-\frac{1}{3}}$ | i) $32^{\frac{3}{5}}$  | j) $125^{-\frac{1}{3}}$ |

2) Simplify:

- |                                |                                      |                                   |
|--------------------------------|--------------------------------------|-----------------------------------|
| a) $3x^2 \times 4x^3$          | b) $4x^8y^3 \times 2x^{-3}y^4$       | c) $\frac{49a^2b^2}{28a^{-1}b}$   |
| d) $\frac{6(x-2)^2}{2(x-2)^3}$ | e) $(3x^4)^2 + \frac{6x^2}{2x^{-4}}$ | f) $\frac{(2x^{-1}y^2)^4}{25x^5}$ |

3) Work out the following:

- |                                 |                                    |                                 |                                       |                                  |
|---------------------------------|------------------------------------|---------------------------------|---------------------------------------|----------------------------------|
| a) $\frac{6}{7} + \frac{2}{14}$ | b) $\frac{11}{48} - \frac{11}{18}$ | c) $\frac{2}{9} + \frac{8}{18}$ | d) $\frac{8}{13} \times \frac{6}{13}$ | e) $\frac{7}{18} + \frac{8}{11}$ |
|---------------------------------|------------------------------------|---------------------------------|---------------------------------------|----------------------------------|

"Answers can be found at the back of this booklet"

## Rearranging formulae

Formulae are used in everyday life, from working out areas and volumes of shapes to converting units of measurement. Knowing how to use and rearrange formulae will be very useful in Pure and Applied Mathematics.

### Step-by-Step Guide

**Step 1:** Firstly decide what needs to be on its own.

**Step 2:** Secondly move all terms that contain that letter to one side. If the letter appears in more than one term then move all of these terms to one side.

**Step 3:** Thirdly separate out the required letter on its own – this can be done by factorising.



### Examples:

Rearrange the formulae to make

a the subject:

$$v = u + at$$

$$v - u = at$$

$$\frac{v - u}{t} = a$$

Rearrange the formulae to make g the subject:

$$p = q + gf$$

$$p - q = gf$$

$$\frac{p - q}{f} = g$$

Rearrange the formulae to make n the subject:

$$m(x^2 + n) = n(t^2 - s)$$

$$mx^2 + mn = nt^2 - ns$$

$$mx^2 = nt^2 - ns - mn$$

$$mx^2 = n(t^2 - s - m)$$

$$\frac{mx^2}{t^2 - s - m} = n$$

### Video links



[Changing the subject \(easier\)](#)  
[Changing the subject \(harder\)](#)

## REARRANGING FORMULAE TEST YOURSELF

### EXERCISE

1. Make a the subject of  $14a + 6w = ac + 8w$
2. Make w the subject of the formula  $4(g - w) = 5w - 3$
3. Make x the subject of  $y = \frac{x+3}{x-8}$
4. Make v the subject of the formulae  $s = \frac{1}{2}(u + v)t$

*\*Answers can be found at the back of this booklet\**





## SIMULTANEOUS EQUATIONS

Consider two linear equations in two variables (unknowns) such as  $2x + 3y = 2$  and  $5x - 2y = 24$ . We have two equations and two unknowns. We call a pair of equations like these 'simultaneous equations' if the values of the unknowns are the same in both. That is, the values of the 'x's' would have to be the same in both equations and the values of the 'y's' would have to be the same.

### Example

$$\begin{array}{r} 2x + 3y = 2 \text{ ————— } \textcircled{1} \quad \times 2 \\ 5x - 2y = 24 \text{ ————— } \textcircled{2} \quad \times 3 \end{array}$$

$$\begin{array}{r} 4x + 6y = 4 \text{ ————— } \textcircled{3} \\ 15x - 6y = 72 \text{ ————— } \textcircled{4} \end{array}$$

Adding equation  $\textcircled{3}$  and  $\textcircled{4}$  will give:

$$\begin{array}{l} 19x = 76 \\ x = 4 \end{array}$$

Choosing equation  $\textcircled{1}$  :

$$\begin{array}{l} 2x + 3y = 2 \\ \text{As } x = 4, \quad 2 \times 4 + 3y = 2 \\ \quad \quad \quad 8 + 3y = 2 \\ \quad \quad \quad 3y = -6 \\ \quad \quad \quad y = -2 \end{array}$$

**Step 1:** Get either the 'y's or the 'x's the same. Here we've gone for getting the 'y's the same by multiplying the first equation with the coefficient of y from the second equation and multiplying the second equation with the coefficient of y from the first equation.

**Step 2:** Either add or subtract both equations - whichever one will cancel the terms with 'y' out. In this case if we subtract ( $6y - 6y = 0$ ) we would still have a term with y, whereas if we add ( $6y + -6y = 0$ ) the terms with 'y' would cancel out. We therefore need to add in this example.

**Step 3:** Solve the equation to find the value of x

**Step 4:** Now choose any equation (we've gone for the first equation in this example as the numbers were smaller), sub the x value in and find the y value.

Video links



[Simultaneous equations \(elimination\)](#)



## SIMULTANEOUS EQUATIONS TEST YOURSELF EXERCISE

Solve the following pairs of simultaneous equations using an algebraic (not graphical) method

$$\begin{aligned} 1) \quad & 4x - 3y = 2 \\ & 6x - 5y = 1 \end{aligned}$$

$$\begin{aligned} 2) \quad & 3x + 4y = 7 \\ & 2x - 3y = 16 \end{aligned}$$

*\*Answers can be found at the back of this booklet\**

## MAINLY QUADRATICS

### Factorising by extracting a common factor

Means putting one bracket in by extracting the highest common factor of all the terms in the expression.

#### **Examples**

$$\begin{aligned} 1) \quad & 21a + 14 = 7(3a + 2) \\ & 12xy^2 = 6xy(2 + 2y) \end{aligned}$$

$$2) \quad 12c - 18c^2 = 6c(2 - 3c)$$

$$3) \quad 6x^2y +$$

You take the 7 out as it is a factor of 21 and 14, then ask yourself 7 times what is 21a and 7 times what

Video links



[Factorising](#)



## Factorising quadratic expressions

If the coefficient of  $x^2$  is 1 then there is a short cut. The examples below demonstrate the steps needed to factorize quadratic expressions.

$$x^2 + 5x - 24$$

$$\begin{array}{r|l} x & \\ -24 & 5 \end{array}$$

$$\begin{array}{l} 8x - 3 = -24 \\ 8x - 3 = 5 \end{array}$$

$$(x + 8)(x - 3)$$

$$2x^2 + 11x + 12$$

$$\begin{array}{r|l} x & \\ 12 & 11 \end{array}$$

$$\begin{array}{l} 2x^2 + 8x + 3x + 12 \\ (2x + 4)(x + 3) \end{array}$$

$$(2x + 4)(x + 3)$$

$$3x^2 - x - 10$$

$$\begin{array}{r|l} x & \\ -10 & -1 \end{array}$$

$$\begin{array}{l} 3x^2 - 6x + 5x - 10 \\ (3x - 5)(x + 2) \end{array}$$

$$(3x - 5)(x + 2)$$

$$\begin{array}{l} 4x - 5 = -10 \\ 4x - 5 = 2 \end{array}$$

### Video links



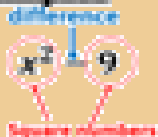
[Factorising quadratics \(easier\)](#)

[Factorising quadratics \(harder\)](#)

## Difference between 2 squares

This means when you have two terms which are square numbers and you're subtracting one from the other. If this is the case then there's an easy way to factorise such an expression.

### Examples



$$(x - 3)(x + 3)$$

$$y^2 - 36$$

$$(y - 6)(y + 6)$$

$$25x^2 - 100$$

$$25(x^2 - 4)$$

$$25(x - 2)(x + 2)$$

$$64y^2 - 25$$

$$(8y - 5)(8y + 5)$$

### Video links



[Factorising \(difference between 2 squares\)](#)



## Solving quadratic equations

There are three ways to solve quadratic equations algebraically, here we will focus on recapping two ways you should already be familiar with from the GCSE course.

### 1) Solving by factorising:

$$4x^2 - 8x - 5 = 0$$

$$\begin{array}{r} 20 \\ -8 \end{array}$$

$$-10 \times 2 = -20$$

$$-10 + 2 = -8$$

$$4x^2 + 2x - 10x - 5 = 0$$

$$2x(2x + 1) - 5(2x + 1) = 0$$

$$(2x - 5)(2x + 1) = 0$$

$$2x - 5 = 0 \quad \text{or} \quad 2x + 1 = 0$$

$$x = \frac{5}{2} \quad \text{or} \quad x = -\frac{1}{2}$$

### 2) Solving by using the quadratic:

$$x^2 + 4x - 2 = 0$$

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$a = 1 \quad b = 4 \quad c = -2$$

$$x = \frac{-4 \pm \sqrt{4^2 - 4 \times 1 \times -2}}{2 \times 1}$$

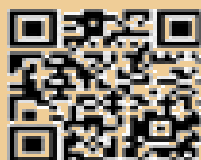
$$x = \frac{-4 \pm \sqrt{16 - -8}}{2}$$

$$x = \frac{-4 \pm \sqrt{24}}{2}$$

$$x = \frac{-4 + \sqrt{24}}{2} \quad \text{or} \quad x = \frac{-4 - \sqrt{24}}{2}$$

You now have to learn this formula!

#### Video links



[Solving by factorising](#)  
[Solving with the formula](#)  
[Solving graphically](#)

## MAINLY QUADRATICS TEST YOURSELF EXERCISE

### 1) Factorise the following expressions:

a)  $9x - 6$

b)  $12x^2y + 8xy^2$

c)  $x^2 + 7x + 12$

d)  $x^2 - 7x - 18$

e)  $2x^2 - 18x + 28$

f)  $3x^2 + 7x - 6$

g)  $y^2 - 16$

h)  $25x^2 - 64$

### 2) Solve the following quadratic equations by factorising:

a)  $x^2 + 10x + 24 = 0$

b)  $3x^2 + 8x + 5 = 0$

### 3) Solve the following equations, write your answers to 2 decimal places:

a)  $2x^2 + 4x - 3 = 0$

b)  $2x^2 - 10x + 7 = 0$

*\*Answers can be found at the back of this booklet\**



## TRIGONOMETRY

We can use trigonometry to work out sides or angles in right angled triangles using the following ratios:

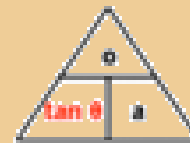
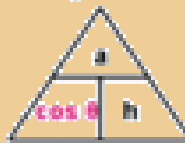
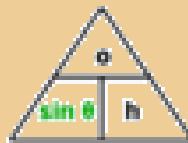
$$\sin \theta = \frac{\text{opposite side}}{\text{hypotenuse side}}$$

$$\cos \theta = \frac{\text{adjacent side}}{\text{hypotenuse side}}$$

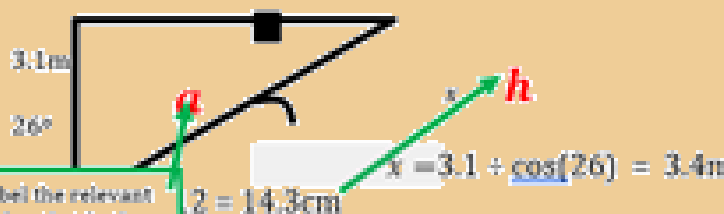
$$\tan \theta = \frac{\text{opposite side}}{\text{adjacent side}}$$

opposite side  
adjacent side

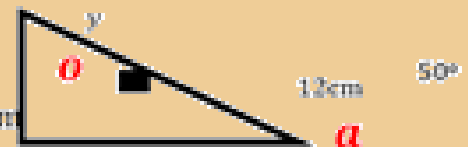
We can remember these ratios by learning 'SOH CAH TOA' with the following triangles:



### Examples of finding a missing side in a right angle triangle



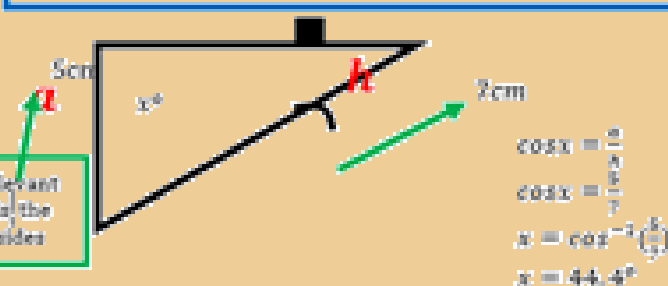
Label the relevant sides, that is, the one you know and the one you want to find out



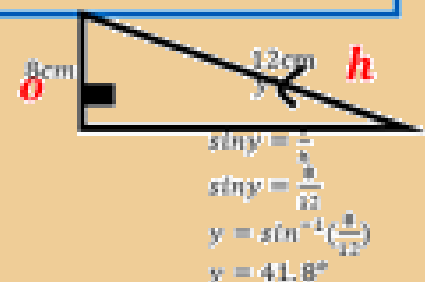
Video links



[Introduction](#)  
[Calculating a side](#)



Label the relevant sides, that is, the two given sides



Video links



[Calculating an angle](#)

Maths you will need to learn them as they will not be given!



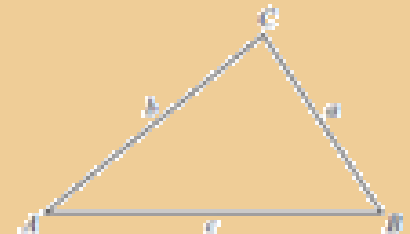
In any triangle ABC:  $\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$

Or this can be rearranged to be of the form:  $\frac{\sin A}{a} = \frac{\sin B}{b} =$

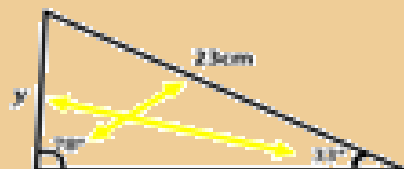
$\frac{\sin C}{c}$

$\frac{c}{\sin C}$

"The first format is most useful when finding a missing side and the second form is most useful when finding a missing angle"



## Finding a side with the Sine rule



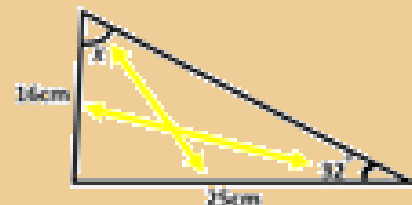
To use the SINE rule look out for a pair of opposites!

$$\frac{y}{\sin 78} = \frac{23}{\sin 33}$$

$$y = \frac{23}{\sin 33} \times \sin 78$$

$$y = 12.80655 \dots \text{cm}$$

## Finding an angle with the Sine rule



$$\frac{\sin x}{25} = \frac{\sin 11}{16}$$

$$\sin x = \frac{\sin 11}{16} \times 25$$

$$\sin x = 0.827 \dots$$

$$x = \sin^{-1}(0.827 \dots)$$

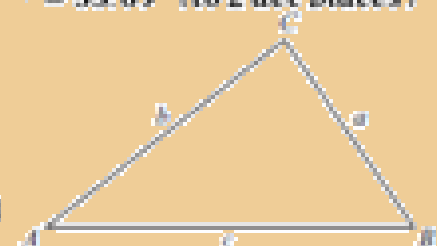
$$x = 55.89^\circ \text{ (to 2 dec places)}$$

## The Cosine rule

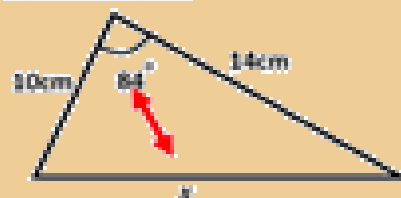
In any triangle ABC:  $a^2 = b^2 + c^2 - 2bc \cos A$

Or this can be rearranged to be of the form:  $\cos A = \frac{b^2 + c^2 - a^2}{2bc}$

"The first format is most useful when finding a missing side and the second form is most useful when finding a missing angle"



## Finding a side with the Cosine rule



It doesn't matter which sides 'b' and 'c' are, as long as you label 'a' as the opposite side of the angle in question!

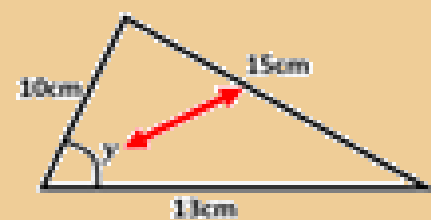
$$x^2 = 10^2 + 14^2 - 2 \times 10 \times 14 \times \cos(84)$$

$$x^2 = 266.7320 \dots$$

$$x = \sqrt{266.7320 \dots}$$

$$x = 16.3319 \dots \text{cm}$$

## Finding an angle with the Cosine rule



$$\cos y = \frac{10^2 + 15^2 - 11^2}{2(10)(15)}$$

$$\cos y = \frac{11}{30}$$

$$y = \cos^{-1}\left(\frac{11}{30}\right)$$

$$y = 80.2569 \dots^\circ$$





Video links:

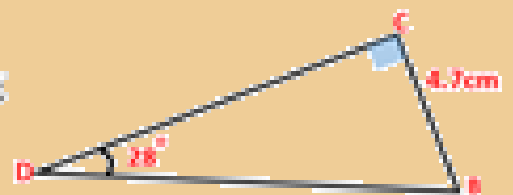


Sine rule  
(ambiguous)  
Cosine rule (side)  
Cosine rule (angle)

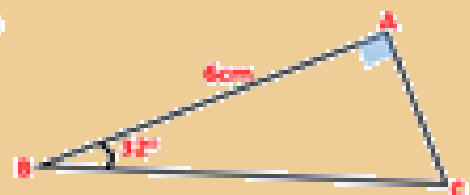
## TRIGONOMETRY TEST YOURSELF EXERCISE

Note: None of the diagrams below are drawn to scale

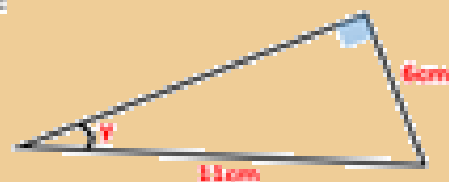
- 1) Work out the length of the side  $BD$  in the following triangle:



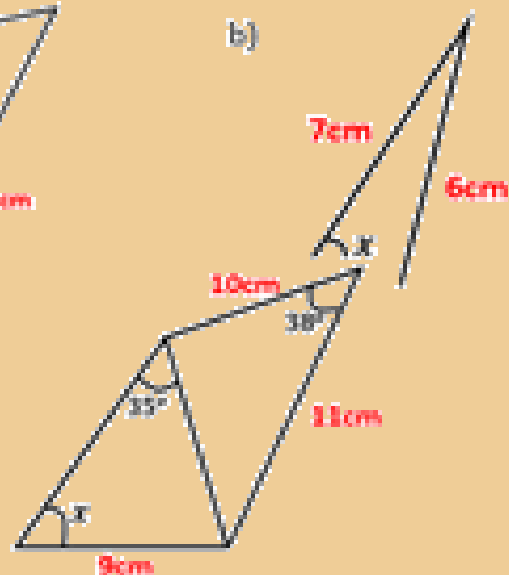
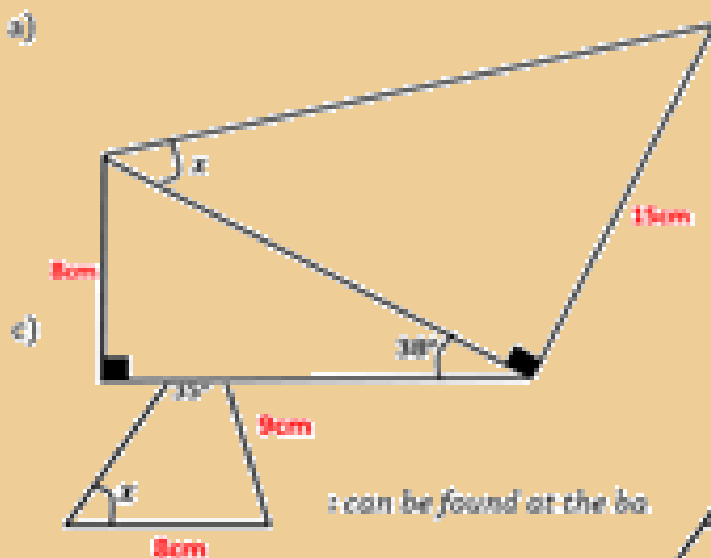
- 2) Work out the length of the side  $AC$  in the following triangle:



- 3) Calculate the size of angle  $y$  in the following triangle:



- 4) Calculate the size of angle  $x$  in the following diagrams:



$x$  can be found at the bottom



## EXTENSION TEST YOURSELF EXERCISE

1) Showing all your working, simplify each of the following

a)  $\frac{x^{-\frac{1}{2}}}{x^{\frac{1}{4}}} \times \sqrt{x^{-\frac{1}{2}}}$

b)  $\frac{y^{\frac{1}{2}} \times y^{-\frac{1}{3}}}{y^{\frac{1}{6}}}$

c)  $\frac{(a^{\frac{1}{2}} + a)(a^{\frac{1}{3}})^{\frac{1}{2}}}{(a^{\frac{1}{6}})^2}$

d)  $\frac{28x^{\frac{1}{2}} + 7x^{\frac{1}{2}}}{7x^{\frac{1}{2}}}$

2) Evaluate the following (without a calculator!)

a)  $\frac{18^{\frac{1}{2}} \times 2^{\frac{1}{2}}}{(32)^{\frac{1}{5}}}$

b)  $27^{\frac{1}{3}} \times 3^{\frac{1}{2}} \times \sqrt{27}$

c)  $\frac{9^{\frac{1}{2}} \times 27^{-\frac{1}{2}}}{3^{-\frac{1}{6}} \times 3^{-\frac{2}{3}}}$

3) Expand and simplify the following

a)  $(x + 4)(x - 1)(x + 1)$   
 $(x - 5)(x + 1)^2$

b)  $(x - 1)(2x + 1)(x - 3)$

c)

4) Solve the following equations

a)  $12 + 7x - 12x^2 = 0$

b)  $40x^2 - 17x - 12 = 0$

c)  $3 + \frac{x-6}{3x} =$

$\frac{3x+1}{2(x-3)}$

5) Prove that  $\frac{2x}{3} - \frac{x-7}{4} + \frac{3x+1}{5} \equiv \frac{61x+117}{60}$

6) A pyramid stands on a horizontal surface.  
The base of the pyramid is in the shape of a kite.  
The base of the pyramid is shown below.

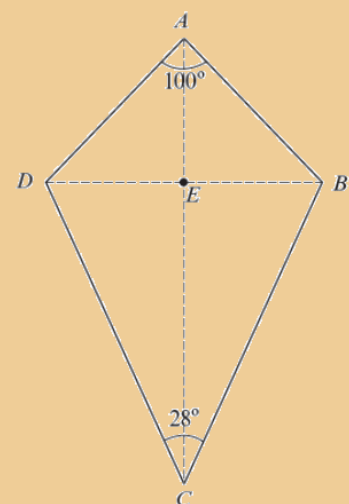


Diagram not drawn to scale



The apex (top vertex) of the pyramid is vertically above E.

The vertical height of the pyramid is 17.3cm.

The length of BD is 12.6cm and the angles are as shown on the diagram.

Use the line EC to calculate the angle of elevation of the apex of the pyramid from the point C.

## EXTENSION CHALLENGE!

You've applied the quadratic formulae in order to solve equations at GCSE. Can you derive it? Your starting point is  $ax^2 + bx + c = 0$

You need to rearrange until you get:

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

\*HINT: you need to learn how to complete the square (see page 5 in this booklet)\*

## TEST YOURSELF EXERCISE ANSWERS

### BASIC ALGEBRA

1) a)  $8ab - 6a^2$       b)  $8y^3 + 12xy^2$       c)  $3x^2 - 5x - 12$       d)  $x^2 - 4xy + 4y^2$

2) a)  $8x - 9y$       b)  $-2x^2 + 8y$       c)  $2y - 10$       d)  $18a - 2$       e)  $2c - 3d^2$   
 f)  $-7y$

3) a)  $x = 2.5$       b)  $x = 6$       c)  $x = 7$       d)  $x = 4$

### INDICES AND FRACTIONS

1) a) 225      b) 76      c) 8      d) 20      e) 4      f)  $\frac{1}{324}$       g)  $\frac{1}{729}$       h)  $\frac{1}{9}$       i) 8      j)  $\frac{1}{25}$

2) a)  $12x^2$       b)  $8x^3y^2$       c)  $3a^2b^4$       d)  $3(x-1)^4$       e)  $9x^8 + 3x^8 = 12x^8$       f)  
 $\frac{256x^{-3}y^{22}}{16} = 16x^{-3}y^{12}$

3) a)  $\frac{22}{14}$       b)  $\frac{8}{45}$       c)  $\frac{142}{117}$       d)  $\frac{36}{134} = \frac{9}{34}$       e)  $\frac{27}{128}$

### REARRANGING FORMULAE

#### SIMULTANEOUS EQUATIONS

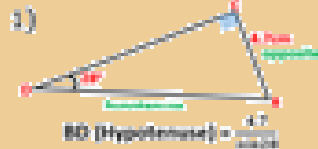
1) a)  $a = \frac{2c}{24+c}$       2)  $w = \frac{5c+2}{5}$       3)  $x = \frac{2+8y}{y-2}$       4)  $y = \frac{2a+1}{1}$       5)  $x = 3.5, y = 4$   
 4) 2)  $x = 5, y = -2$

#### MAINLY QUADRATICS

1) a)  $3(x-2)$       b)  $4xy(3x+2y)$       c)  $(x+3)(x+4)$       d)  $(x-9)(x+2)$   
 e)  $2(x^2 - 9x + 14) = 2(x-2)(x-9)$       f)  $(x+3)(3x-2)$       g)  $(y-4)(y+4)$       h)  $(5a - 4)(5a + 4)(a + 4) = 0$        $(3x+5)(x+1) = 0$        $\frac{-42 \pm \sqrt{42^2 - 4(2)(-1)}}{2(2)}$        $\frac{-(-10) \pm \sqrt{(-10)^2 - 4(2)(7)}}{2(2)}$   
 2) a)  $x + 6 = 0$  or  $x + 4 = 0$       b)  $3x + 5 = 0$  or  $x + 1 = 0$       3a)  $\frac{-42 \pm \sqrt{42^2 - 4(2)(-1)}}{2(2)}$       b)  $\frac{-(-10) \pm \sqrt{(-10)^2 - 4(2)(7)}}{2(2)}$   
 $x = -6$  or  $x = -4$        $x = -\frac{5}{3}$  or  $x = -1$        $x = 0.58$  or  $x = -2.58$        $x = 4.16$  or  $x = 0.84$



## TRIGONOMETRY



$$BD = 16.9112 \dots$$

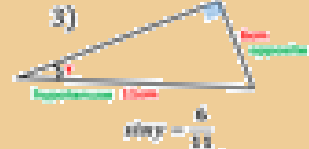


$$AC \text{ (opposite)} = 6 \sin(32) = 6$$

$$AC = 3.2482 \dots$$

$$= 3.25 \text{ cm}$$

(to 2 decimal places)

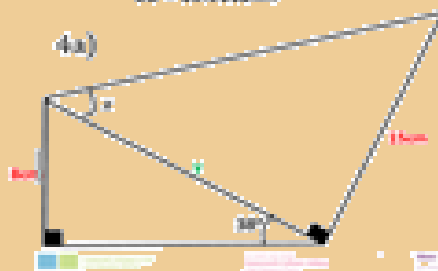


$$y \sin 11 = \frac{6}{11}$$

$$y = \sin^{-1} \left( \frac{6}{11} \right)$$

$$= 33.05573 \dots$$

$$= 33.06^\circ$$



$$\text{Hypotenuse} = \frac{10 \sin 90}{\sin 38}$$

$$y = \frac{10}{\sin 38}$$

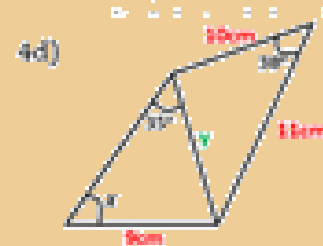
4b)  $\cos x = \frac{11}{12}$

$$\cos x = \frac{11}{12}$$

$$x = \cos^{-1} \left( \frac{11}{12} \right)$$

$$x = 58.421864 \dots$$

$$x = 58.42^\circ \text{ (to 2 decimal places)}$$



$$y^2 = 10^2 + 11^2 - 2(10)(11) \cos 38$$

## EXTENSION

1a)  $\frac{x^{-\frac{1}{2}}}{x^{-\frac{3}{2}}} \times \sqrt{x^{-\frac{1}{2}}}$

$$= \frac{x^{-\frac{1}{2}}}{x^{-\frac{3}{2}}} \times (x^{-\frac{1}{2}})^{\frac{1}{2}}$$

$$= x^{\frac{1}{2}} \times x^{-\frac{1}{4}}$$

$$= x^{\frac{1}{4}} = 1$$

1b)  $\frac{x^{\frac{1}{2}} \times x^{-\frac{1}{2}}}{x^{\frac{1}{2}}}$

$$= \frac{x^{\frac{1}{2} - \frac{1}{2}}}{x^{\frac{1}{2}}}$$

$$= \frac{x^0}{x^{\frac{1}{2}}}$$

$$= \frac{1}{x^{\frac{1}{2}}}$$

1c)  $\frac{(p^{\frac{1}{2}})^2 \times (p^{\frac{1}{2}})^{\frac{1}{2}}}{(p^{\frac{1}{2}})^{\frac{1}{2}}}$

$$= p^{\frac{1}{2}} \times p^{\frac{1}{2}} + p^{\frac{1}{2}}$$

$$= p^{\frac{1}{2}} + p^{\frac{1}{2}}$$

$$= p^{\frac{1}{2}} = 1$$

1d)  $\frac{28x^{\frac{1}{2}} + 7x^{\frac{3}{2}}}{7x^{\frac{1}{2}}}$

$$= \frac{28x^{\frac{1}{2}}}{7x^{\frac{1}{2}}} + \frac{7x^{\frac{3}{2}}}{7x^{\frac{1}{2}}}$$

$$= 4x^0 + x^{\frac{3}{2} - \frac{1}{2}}$$

$$= 4 + x^1$$

2a)  $\frac{18^{\frac{1}{2}} \times 2^{\frac{1}{2}}}{(32)^{\frac{1}{2}}} = \frac{\sqrt{18} \times \sqrt{2}}{\sqrt{32}} = y^{\frac{1}{24}} = \frac{1}{y^{\frac{12}}}$

b)  $27^{\frac{1}{2}} \times 3^{\frac{1}{2}} \times \sqrt{27} = : \quad 27^{\frac{1}{2}} \times 27^{\frac{1}{2}} \times 27^{\frac{1}{2}} = 27^{\frac{3}{2}} = 27$

c)  $\frac{9^{\frac{1}{2}} \times 27^{-\frac{1}{2}}}{3^{\frac{1}{2}} \times 3^{-\frac{1}{2}}} = \frac{9^{\frac{1}{2}} \times 27^{\frac{1}{2}}}{3^{\frac{1}{2}} \times 3^{\frac{1}{2}}} = \frac{9^{\frac{1}{2}} \times 27^{\frac{1}{2}}}{3^{\frac{1}{2}} \times 3^{\frac{1}{2}}} = \frac{9^{\frac{1}{2}} \times 27^{\frac{1}{2}}}{3^{\frac{1}{2}} \times 3^{\frac{1}{2}}} = 1$

3 a)  $(x+4)(x-1)(x+1) = (x+4)(x^2-1) = x^3 + 4x^2 - x - 4$

b)  $(x-1)(2x+1)(x-3) = (x-1)(2x^2-5x-3) = 2x^3 - 7x^2 + 2x + 3$

c)  $(x-5)(x+1)^2 = (x-5)(x^2+2x+1) = x^3 - 3x^2 - 9x - 5$

4 a)  $-12x^2 + 7x + 12 = 0$

$$-12x^2 - 9x + 16x + 12 = 0$$

$$-3x(4x+3) + 4(4x+3) = 0$$

$$(4x+3)(-3x+4) = 0$$

$$x = -\frac{3}{4} \text{ OR } x = \frac{4}{3}$$

b)  $40x^2 - 17x - 12 = 0$

$$40x^2 + 15x - 32x - 12 = 0$$

$$5x(8x+3) - 4(8x+3) = 0$$

$$(8x+3)(5x-4) = 0$$

$$x = -\frac{3}{8} \text{ OR } x = \frac{4}{5}$$

— 3x)

or  $\frac{4x^2 - 3x}{3x} = 3x + 1$  ( $\times 3x$ )

$$18x(x-3) + 2(x-3)(x-6) = 3x(3x+1)$$

$$18x^2 - 54x + 2x^2 - 18x + 36 = 9x^2 + 3x$$

$$18x^2 - 54x + 2x^2 - 18x + 36 - 9x^2 - 3x = 0$$

$$11x^2 - 75x + 36 = 0$$

$$a = 11 \quad b = 75 \quad c = 36$$

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$



$$x = \frac{-71 \pm \sqrt{(-71)^2 - 4(22)(84)}}{2(22)}$$

$$x = \frac{71 \pm \sqrt{5041}}{44} \quad \text{or} \quad x = \frac{71 - \sqrt{5041}}{44}$$

$$x = 6.30 \quad \text{or} \quad x = 0.52 \quad (\text{to 2 dec places})$$

5)  $\frac{2x}{3} - \frac{x-7}{4} + \frac{3x+1}{5} = \frac{61x+117}{60}$

LHS:  $\frac{2x}{3} - \frac{x-7}{4} + \frac{3x+1}{5}$

$$\frac{40x}{60} - \frac{15(x-7)}{60} + \frac{12(3x+1)}{60}$$

$$\frac{40x - 15(x-7) + 12(3x+1)}{60}$$

$$\frac{40x - 15x + 105 + 36x + 12}{60}$$

$$\frac{61x + 117}{60}$$

= RHS

6) Triangle 'DEC'

$$EC = \frac{e}{\sin 14}$$

$$EC = 25.2 \times \checkmark = 91.988 \text{ cm}$$

Triangle 'CEF'

$$\tan c = \frac{\text{opposite}}{\text{adjacent}}$$

$$\tan c = \frac{25.2 \sin 14}{27.3}$$

$$c = \tan^{-1} \left( \frac{25.2 \sin 14}{27.3} \right)$$

$$c = 34.3979 \dots$$

$$= 34.4^\circ \quad (\text{to 1 dec place})$$

**Extension challenge!**

$$ax^2 + bx + c = 0$$

$$x^2 + \frac{b}{a}x + \frac{c}{a} = 0$$

$$x^2 + \frac{b}{a}x = -\frac{c}{a}$$

$$x^2 + \frac{b}{a}x + \left(\frac{b}{2a}\right)^2 = -\frac{c}{a} + \left(\frac{b}{2a}\right)^2$$

$$\left(x + \frac{b}{2a}\right)^2 = -\frac{c}{a} + \left(\frac{b}{2a}\right)^2$$

$$x + \frac{b}{2a} = \pm \sqrt{-\frac{c}{a} + \left(\frac{b}{2a}\right)^2}$$

$$x = -\frac{b}{2a} \pm \sqrt{-\frac{c}{a} + \left(\frac{b}{2a}\right)^2}$$



$$x = -\frac{b}{2a} \pm \sqrt{-\frac{c}{a} + \frac{b^2}{(2a)^2}}$$

$$x = -\frac{b}{2a} \pm \sqrt{\frac{c}{a} + \frac{b^2}{4a^2}}$$

$$x = -\frac{b}{2a} \pm \sqrt{\left(-\frac{c}{a} \times \frac{4a}{4a}\right) + \frac{b^2}{4a^2}}$$

$$x = -\frac{b}{2a} \pm \sqrt{\frac{4ac}{4a^2} + \frac{b^2}{4a^2}}$$

$$x = -\frac{b}{2a} \pm \sqrt{\frac{b^2 - 4ac}{4a^2}}$$

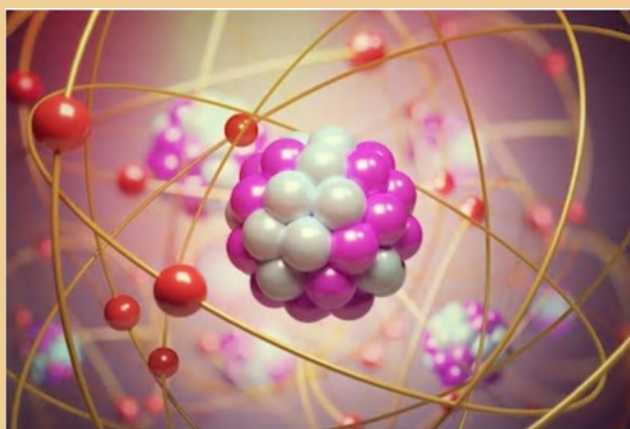
$$x = -\frac{b}{2a} \pm \frac{\sqrt{b^2 - 4ac}}{\sqrt{4a^2}}$$

$$x = -\frac{b}{2a} \pm \frac{\sqrt{b^2 - 4ac}}{2a}$$

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$



## A guide to help you prepare yourself for studying AS Level Physics



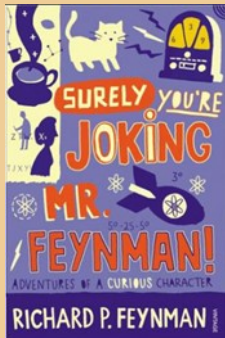
### Questions you may be asking yourself as a physicist:

- Do heavy objects fall faster than lighter ones, and is it any different on the moon?
- If I get thrown out of a cannon can I figure out how high I will go and where I will land, and does it depend on my weight or my speed?
- How does the speed camera know how fast I am going, and the Sat Nav know where I am? And what safety features does my car have built in when I find myself in a jam?
- What makes Christmas tree lights flash on and off, and how can I make them brighter?
- How does a microwave do what it does, and why can I hear around corners?





## Book Recommendations

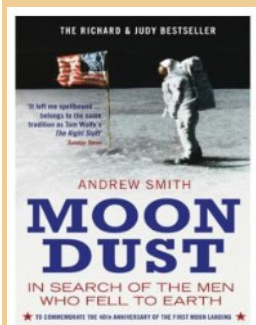
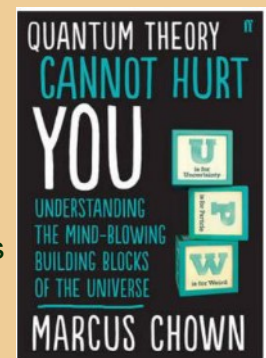


### Surely You're Joking Mr Feynman: Adventures of a Curious Character

Richard Feynman was a Nobel Prize winning Physicist. By reading this book, you will get insight into his life's work including the creation of the first atomic bomb, his bongo playing adventures and his work in the field of particle physics.

### Quantum Theory Cannot Hurt You: Understanding the Mind-Blowing Building Blocks of the Universe

Any Physics book by Marcus Chown is an excellent insight into some of the more exotic areas of Physics that require no prior knowledge. In your first year of A-Level study you will meet the quantum world for the first time. This book will fill you with interesting facts and handy analogies to whip out to impress your peers!

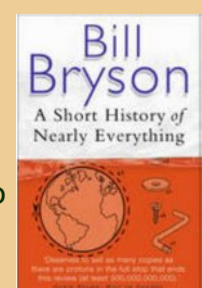


### Moon Dust: In Search of the Men Who Fell to Earth

One of the greatest scientific achievements of all time was putting man on the surface of the moon. Only 12 men made the trip to the surface, at the time of writing the book only 9 are still with us. The book does an excellent job of using the personal accounts of the 9 remaining astronauts and many others involved in the space program at looking at the whole space-race era, with hopefully a new era of space flight about to begin as we push on to put mankind on Mars in the next couple of decades.

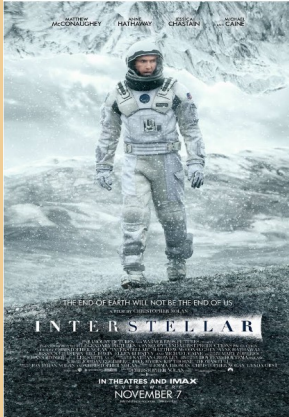
### A Short History of Nearly Everything

A modern classic. Popular science writing at its best. A Short History of Nearly Everything Bill Bryson's quest to find out everything that has happened from the Big Bang to the rise of civilization - how we got from there, being nothing at all, to here, being us. Hopefully by reading it you will gain an awe-inspiring feeling of how everything in the universe is connected by some fundamental laws.





## Movie Recommendations

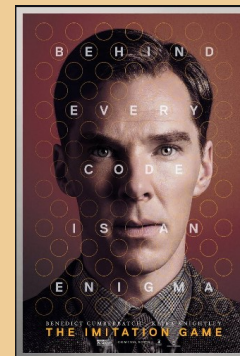


### Interstellar

In Earth's future, a global crop blight and second Dust Bowl are slowly rendering the planet uninhabitable. Professor Brand, a brilliant NASA physicist, is working on plans to save mankind by transporting Earth's population to a new home via a wormhole. But first, Brand must send former NASA pilot Cooper and a team of researchers through the wormhole and across the galaxy to find out which of three planets could be mankind's new home.

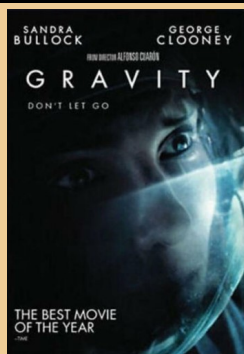
### The Imitation Game

Alan Turing, a British mathematician, joins the cryptography team to decipher the German enigma code. With the help of his fellow mathematicians, he builds a machine to crack the codes.



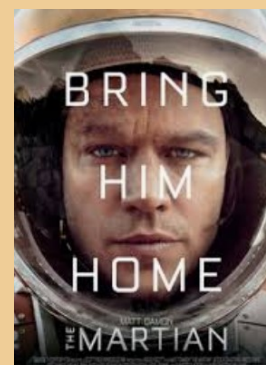
### Gravity

*Gravity* focuses on two astronauts as their Space Shuttle mission is torn apart (literally) by an orbiting field of space debris. The rest of the *film* focuses on their struggle to survive in the silent, zero-gravity, and zero-oxygen environment above earth.



### The Martian

When astronauts blast off from the planet Mars, they leave behind Mark Watney presumed dead after a fierce storm. With only a meagre amount of supplies, the stranded visitor must utilize his knowledge of science, wits and spirit to find a way to survive on the hostile planet. Meanwhile, back on Earth, members of NASA and a team of international scientists work tirelessly to bring him home, while his crew mates hatch their own plan for a daring rescue mission.





## Other on screen recommendations:

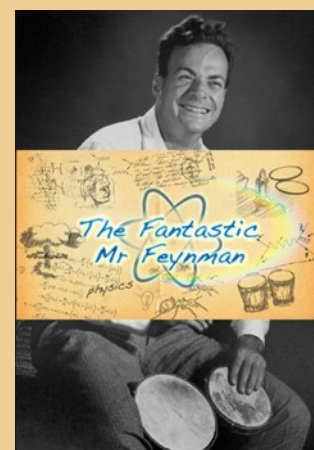
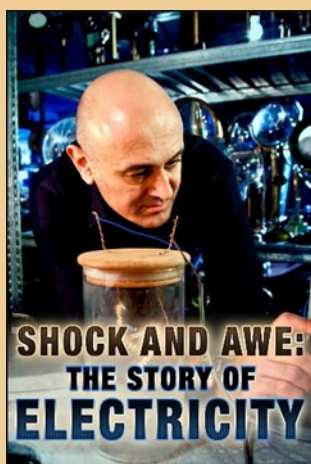
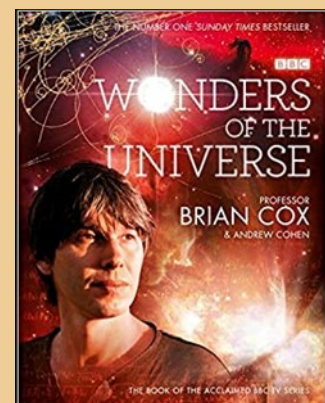
**Minute Physics** – Variety of Physics questions explained simply in a couple of minutes.

**Wonders of the Universe / Wonders of the Solar System** – Both available on Netflix – Brian Cox explains the Cosmos using some excellent analogies and wonderful imagery.

**Shock and Awe, The Story of Electricity** – A 3 part BBC documentary that is essential viewing if you want to see how our lives have been transformed by the ideas of a few great scientists a little over 100 years ago.





**NASA TV** – Online coverage of launches, missions, testing and the ISS. Plenty of clips and links to explore to find out more about applications of Physics in Space technology.

**The Fantastic Mr. Feynman** – See the life's work of the “great explainer”, a fantastic mind that created mischief in all areas of modern Physics.





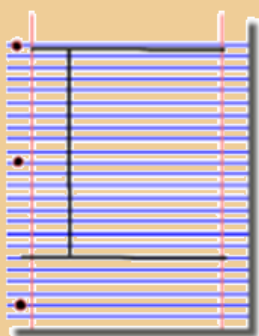
## TED Talks

<p><b>The search for dark matter – and what we've found so far</b></p>	<p>Roughly 85 percent of mass in the universe is "dark matter" -- mysterious material that can't be directly observed but has an immense influence on the cosmos. What exactly is this strange stuff, and what does it have to do with our existence? Astrophysicist Risa Wechsler explores why dark matter may be the key to understanding how the universe formed -- and shares how physicists in labs around the world are coming up with creative ways to study it.</p>	
<p><b>Have we reached the end of physics?</b></p>	<p>Why is there something rather than nothing? Why does so much interesting stuff exist in the universe? Particle physicist Harry Cliff works on the Large Hadron Collider at CERN, and he has some potentially bad news for people who seek answers to these questions. Despite the best efforts of scientists (and the help of the biggest machine on the planet), we may never be able to explain all the weird features of nature. Is this the end of physics? Learn more in this fascinating talk about the latest research into the secret structure of the universe.</p>	
<p><b>CERN's supercollider</b></p>	<p>"Rock-star physicist" Brian Cox talks about his work on the Large Hadron Collider at CERN. Discussing the biggest of big science in an engaging, accessible way, Cox brings us along on a tour of the massive project</p>	
<p><b>Is our universe the only universe?</b></p>	<p>Is there more than one universe? In this visually rich, action-packed talk, Brian Greene shows how the unanswered questions of physics (starting with a big one: What caused the Big Bang?) have led to the theory that our own universe is just one of many in the "multiverse."</p>	





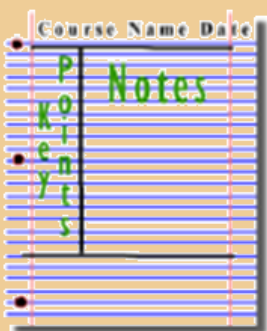
1. Divide your page into three sections like this



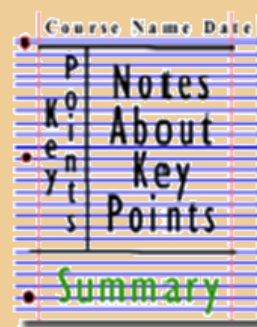
2. Write the name, date and topic at the top of the page



3. Use the large box to make notes. Leave a space between separate idea. Abbreviate where possible.



4. Review and identify the key points in the left hand box



5. Write a summary of the main ideas in the bottom space



## Research Activities

To get the best grades in A Level Physics you will have to get good at completing independent research and making your own notes on difficult topics. Below are links to 5 websites that cover some interesting Physics topics.

Using the Cornell notes system, make 1 page of notes from each site covering a topic of your choice.

# St Brigid's School



<http://home.cern/about>

CERN encompasses the Large Hadron Collider (LHC) and is the largest collaborative science experiment ever undertaken.

Find out about it here and make a page of suitable notes on the accelerator.



[http://joshworth.com/dev/pixelspace/pixelspace\\_solarsystem.html](http://joshworth.com/dev/pixelspace/pixelspace_solarsystem.html)

The solar system is massive and its scale is hard to comprehend. Have a look at this award-winning website and make a page of suitable notes.



<https://phet.colorado.edu/en/simulations/category/html>

PhET create online Physics simulations when you can complete some simple experiments online. Open up the resistance of a wire html5 simulation. Conduct a simple experiment and make a one page summary of the experiment and your findings.



<http://climate.nasa.gov/>

NASA's Jet Propulsion Laboratory has lots of information on Climate Change and Engineering Solutions to combat it. Have a look and make notes on an article of your choice.



<http://www.livescience.com/46558-laws-of-motion.html>

Newton's Laws of Motion are fundamental laws for the motion of all the object we can see around us. Use this website and the suggested further reading links on the webpage to make your own 1 page of notes on the topics.





## Getting ready to study.....

A level Physics will use your knowledge from GCSE and build on this to help you understand new and more demanding ideas. Complete the following tasks to make sure your knowledge is up to date and you are ready to start studying.

### Standard Form

At A level quantity will be written in standard form, and it is expected that your answers will be too.

This means answers should be written as  $\dots \times 10^y$ . E.g. for an answer of 1200kg we would write  $1.2 \times 10^3$ kg. For more information visit:

[www.bbc.co.uk/education/guides/zc2hsbk/revision](http://www.bbc.co.uk/education/guides/zc2hsbk/revision)

1. Write 2530 in standard form.
2. Write 280 in standard form.
3. Write 0.77 in standard form.
4. Write 0.0091 in standard form.
5. Write 1 872 000 in standard form.
6. Write 12.2 in standard form.
7. Write  $2.4 \times 10^2$  as a normal number.
8. Write  $3.505 \times 10^1$  as a normal number.
9. Write  $8.31 \times 10^6$  as a normal number.
10. Write  $6.002 \times 10^2$  as a normal number.





## Rearranging formulae

This is something you will have done at GCSE and it is crucial you master it for success at A level.

For a recap of GCSE watch the following links:

[www.khanacademy.org/math/algebra/one-variable-linear-equations/old-school-equations/v/solving-for-a-variable](http://www.khanacademy.org/math/algebra/one-variable-linear-equations/old-school-equations/v/solving-for-a-variable)

[www.youtube.com/watch?v=\\_WWgc3ABSj4](http://www.youtube.com/watch?v=_WWgc3ABSj4)

1.  $E = m \times g \times h$  to find  $h$

2.  $Q = I \times t$  to find  $I$

3.  $E = \frac{1}{2} m v^2$  to find  $m$

4.  $E = \frac{1}{2} m v^2$  to find  $v$

5.  $v = u + at$  to find  $u$

6.  $v = u + at$  to find  $a$

7.  $v^2 = u^2 + 2as$  to find  $s$

8.  $v^2 = u^2 + 2as$  to find  $u$

## Atomic Structure

You will study nuclear decay in more detail at A level covering the topics of radioactivity and particle physics. In order to explain what happens you need to have a good understanding of the model of the atom. You need to know what the atom is made up of, relative charges and masses and how sub atomic particles are arranged.

The following video explains how the current model was discovered

[www.youtube.com/watch?v=wzALbzTdnc8](http://www.youtube.com/watch?v=wzALbzTdnc8)

Describe the model used for the structure of an atom including details of the individual particles that make up an atom and the relative charges and masses of these particles. You may wish to include a diagram and explain how this model was discovered by Rutherford.



## Significant figures

At A level you will be expected to use an appropriate number of significant figures in your answers. The number of significant figures you should use is the same as the number of significant figures in the data you are given. You can never be more precise than the data you are given so if that is given to 3 significant your answer should be too. E.g. Distance = 8.24m, time = 1.23s therefore speed = 6.75m/s

The website below summarises the rules and how to round correctly.

<http://www.purplemath.com/modules/rounding2.htm>

Give the following to 3 significant figures:

1. 3.4527

2. 40.691

3. 0.838991

4. 1.0247

5. 59.972

Calculate the following to a suitable number of significant figures:

6.  $63.2/78.1$

7.  $39+78+120$

8.  $(3.4+3.7+3.2)/3$

9.  $0.0256 \times 0.129$

10.  $592.3/0.1772$



@PhysicsWorld



Dedicated to physics and astronomy lovers

@ZonePhysics

The Institute of Physics is a leading scientific membership society working to advance physics for the benefit of all

@PhysicsNews

Physics Today is the world's most popular physics magazine

@PhysicsToday

A journal for cutting-edge physics research

@NaturePhysics

## Keeping it Fresh.....

It is important to keep the knowledge you have gained at GCSE fresh in your mind ready to start your A levels in September.

Why not spend some time looking over some past papers and using the mark schemes to assess how well you've done.

Physics GCSE Units 1 and 2 – Past Papers and Marking Schemes:

<https://www.wjec.co.uk/qualifications/qualification-resources.html?subject=Physics&level=gcsefrom2016&pastpaper=true>

Science Double Award GCSE Units 3 and 6 – Past Papers and marking Schemes:

<https://www.wjec.co.uk/qualifications/qualification-resources.html?subject=sciencedoubleAward&level=gcsefrom2016&pastpaper=true>



## Planning Ahead.....

In order to prepare yourself for further study, have a look at the resources below:

WJEC Specification – GCE AS/A Level in Physics	<a href="https://www.wjec.co.uk/qualifications/science/as-a-level/physics-as-a-level-2015/wjec-gce-physics-spec-from-2015-english.pdf">https://www.wjec.co.uk/qualifications/science/as-a-level/physics-as-a-level-2015/wjec-gce-physics-spec-from-2015-english.pdf</a>
WJEC Specimen Assessment Materials	<a href="https://www.wjec.co.uk/qualifications/science/as-a-level/physics-as-a-level-2015/wjec-gce-physics-sams-from-2015.pdf">https://www.wjec.co.uk/qualifications/science/as-a-level/physics-as-a-level-2015/wjec-gce-physics-sams-from-2015.pdf</a>
WJEC Past Papers and Marking Schemes	<a href="https://www.wjec.co.uk/qualifications/qualification-resources.html?subject=Physics&amp;level=gceAsafrom2015&amp;pastpaper=true">https://www.wjec.co.uk/qualifications/qualification-resources.html?subject=Physics&amp;level=gceAsafrom2015&amp;pastpaper=true</a>
WJEC AS/A Level Physics Lab Book	<a href="https://www.wjec.co.uk/qualifications/science/as-a-level/physics-as-a-level-2015/Physics%20lab%20book%20English.pdf">https://www.wjec.co.uk/qualifications/science/as-a-level/physics-as-a-level-2015/Physics%20lab%20book%20English.pdf</a>
Revision Guide – Units 1 and 2	<a href="https://resources.wjec.co.uk/Pages/ResourceSingle.aspx?rId=2955">https://resources.wjec.co.uk/Pages/ResourceSingle.aspx?rId=2955</a>
Revision Guide – Unit 3	<a href="https://resources.wjec.co.uk/Pages/ResourceSingle.aspx?rId=2737">https://resources.wjec.co.uk/Pages/ResourceSingle.aspx?rId=2737</a>
Revision Guide – Unit 4	<a href="https://resources.wjec.co.uk/Pages/ResourceSingle.aspx?rId=2770">https://resources.wjec.co.uk/Pages/ResourceSingle.aspx?rId=2770</a>



## Planning Ahead.....

*In order to prepare yourself for further study, have a look at the resources below:*

<p>WJEC Specification – GCE AS/A Level in Religious Studies</p>		<p>WJEC Specimen Assessment Materials</p>	
<p>WJEC Past Papers and Marking Schemes</p>		<p>A level Religious Studies: Schemes of Learning</p>	



## Book Recommendations

*Reading for and beyond the course:*

### Christianity

- Gwilym, G. ap (2016) - WJEC/Eduqas Religious Studies for A Level Year 1 & AS Christianity, Illuminate, ISBN:9781908682956
- Ford, David (2013) - Theology: A Very Short Introduction (Oxford University Press), ISBN:0199679975
- McGrath, Alister (2011) - Christian Theology: An Introduction, WileyBlackwell), ISBN:9781444335149
- McGrath, Alister (2006) - The New Lion Handbook of Christian Belief, Lion ISBN:0745951554
- McGrath, Alister (2006) - Christianity an introduction, Wiley-Blackwell, ISBN:1405108991
- Thiselton, Anthony (2015) - The Thiselton Companion to Christian Theology, Eerdmans, ISBN:0802872328.
- Woodhead, Linda (2014) - Christianity: A Very Short Introduction, Oxford University Press, ISBN:0192803220

### Islam

- The Holy Qur'an – there are a number of translations (or 'interpretations') of the Qur'an.
- Generally, however, Yusuf Ali's translation is the one most approved by Muslims:
- Ali, Yusuf (2000) - The Holy Qur'an: Arabic Text with English Translation, Kitab Bhavan, ISBN:8171512186
- Armstrong, Karen (2001) - Muhammad: Biography of the Prophet: A Biography of the Prophet, Phoenix, ISBN:1842126083
- Aslan, Reza (2011) - No God But God: The Origins, Evolution and Future of Islam, Arrow, ISBN:0099564327
- Hewer, Chris (2006) - Understanding Islam: The First Ten Steps, SCM Press, ISBN:0334040329
- Gray, R. (2016) - WJEC/Eduqas RS for Yr1/AS – Islam, Illuminate, ISBN:9781908682987
- Maqsood, Ruqaiyyah Waris (2010) - Islam - An Introduction: Teach Yourself, ISBN:1444103474
- Ramadan, Tariq (2008) - The Messenger: The Meanings of the Life of Muhammad, Penguin, ISBN:0141028556
- Ruthven, Malise (2012) - Islam: A Very Short Introduction, Oxford University Press, ISBN:0199642877
- Sarwar, Ghulam (2006) - Islam: Beliefs and Teachings, Muslim Educational Trust, ISBN:0907261450
- Turner, Colin (2011) - Islam: The Basics, Routledge, ISBN:0415584922
- Watton, Victor (1993) - Islam: A Student's Approach to World Religion, Hodder Education, ISBN:0340587954



### Judaism

- The Hebrew Scriptures: Torah and Talmud
- The Tenakh – there are a number of translations of the Tenakh. You will find it useful to compare English editions. Generally, however, the Jewish Study Bible is one of the most recent compilations that has been well received:
- Berlin, Adele (2014) - The Jewish Study Bible, Oxford University Press, ISBN:0199978468  
ISBN-13: 978-0199978465
- Cohn-Sherbok, Dan (2010) - Judaism Today (Religion Today), Bloomsbury Academic, ISBN:0826422314
- Epstein, Lawrence J. (2013) - The Basic Beliefs of Judaism: A Twenty-first-Century Guide To a Timeless Tradition, Jason Aronson, Inc., ISBN:0765709694
- Gwynne-Kinsey, H. (2016) - WJEC/Eduqas RS for Yr1/AS – Judaism, Illuminate, ISBN:9781911208013
- Hoffman, C.M. (2010) Judaism - An Introduction: Teach Yourself, ISBN:1444103482
- Neusner, Jacob (2006) - Judaism: The Basics, Routledge, ISBN:0415401763
- Solomon, Norman (2014) - Judaism: A Very Short Introduction (Very Short Introductions), Oxford University Press, ISBN:0199687358
- Wylen, Stephen M. (2000) - Settings of Silver: An Introduction to Judaism, Paulist Press, ISBN:080913960X

### Hinduism

- Dylan-Jones, Huw (2016) – WJEC/Eduqas Religious Studies for A Level Year 1 and AS, Hinduism, Illuminate, ISBN:9781911208006
- Flood, G. (2004) – An Introduction to Hinduism, Foundation Books, ISBN:8175960280, · O’Flaherty, W.D. (1988) – Textual Sources for the Study of Hinduism, University Of Chicago Press, ISBN:9780226618470
- Fowler, Jeaneane (1996) – Hinduism – Beliefs and Practices, Sussex Academic Press, ISBN:1898723605 · Herman, A. L. (1991) – A Brief Introduction to Hinduism: Religion, Philosophy and Ways of Liberation, Westview Press, ISBN:081338110X
- Jamison, Ian (2006) – Hinduism, Philip Allan Updates, ISBN:1844894207
- Sharma, A. (2012) – Classical Hindu Thought, D.K. Printworld Ltd, ISBN:8124606439
- Sharma, A. (2007) – The Philosophy of Religion and Advaita Vedanta, Motilal Banarsidass Publishers Pvt. Ltd., ISBN:8120820274





### Buddhism

- Clarke, S., & Thompson, M. (2005) - A New Approach: Buddhism (2nd Edition), Hodder Education. ISBN:0340815051
- Cush, D. (1994) – Buddhism, Hodder & Stoughton, ISBN:0340546913
- Dossett, W. (2003) - Buddhism for AS students, UWIC Press, ISBN:1902724585
- Erricker, C. (2015) - Buddhism: A Complete Introduction: Teach Yourself, Hodder and Stoughton, ISBN:1473609445
- Gethin, R. (1998) - The Foundations of Buddhism, Oxford University Press. ISBN:0192892231
- Gray, R. (2016) - WJEC/Eduqas RS for Yr1/AS – Buddhism, Illuminate, ISBN:9781908682970
- Harvey, P. (2012) - An Introduction to Buddhism - Teachings, History and Practices (2nd edition), Cambridge University Press, ISBN:0521676746.
- Keown, D. (2013) - Buddhism: A Very Short Introduction (2<sup>nd</sup> edition), Oxford University Press, ISBN:0199663831
- Lopez, D. (2009) - The Story of Buddhism: A Concise Guide to Its History & Teachings, Harper One, ISBN:0060099275.
- Lopez, D. S. (Ed.), (2005) - Critical Terms for the Study of Buddhism, University of Chicago Press, ISBN:0226493156.
- Mitchell, D. W., & Jacoby, S. H. (2014) - Buddhism: Introducing the Buddhist Experience, Oxford University Press, ISBN:0199861870.
- Prebish, C. S., & Keown, D. (2010) - Introducing Buddhism, Routledge, ISBN:0415550017.
- Side, D. (2005) - Buddhism, Philip Allan. ISBN:1844892190

### Sikhism

- Cole, W. Owen (2010) – Teach Yourself Sikhism, Teach Yourself, ISBN:1444105108
- Cole, W. Owen and Sambhi, Piara Singh (1998) – The Sikhs – Their Religious Beliefs and Practices, Sussex Academic Press, ISBN:1898723133
- McLeod, W.H. (1984) – Textual Sources for the Study of Sikhism, Manchester University Press, ISBN:0719010764
- Singh, Kushwant (2004 & 2005) - History of the Sikhs - Volume 1 and 2, Oxford University Press, ISBN:0195673085
- Sambhi, Piara Singh (1994) – The Guru Granth Sahib, Heinemann Library, ISBN:0431073708



### Ethics

- Bowie, R.A. (2004) - Ethical Studies, Second Edition, Nelson Thornes, ISBN:9780748780792 (Specifically intended as a student textbook, and including an excellent comprehensive bibliography)
- Cook, D. (1983) - The Moral Maze, SPCK, ISBN:0281040389 · Daniel, David Mills (2013) - Fletcher's Situation Ethics, SCM Briefly series, ISBN:0334041767
- Daniel, David Mills (2006) - Aquinas' Summa Theologica, SCM Briefly series, ISBN:0334040906
- Daniel, David Mills (2013) - Bentham's An Introduction to the Principles of Morals and Legislation, SCM Briefly series, ISBN:0334041740.
- Davies, N. (2004) - Religion and Ethics for AS Students, UWIC, ISBN:9781902724683
- Dewar, G. (2009) - AS & A Level Philosophy and Ethics Through Diagrams, Oxford University Press, ISBN:9780199180905
- Gaarder, J. (2007) - Sophie's World (Farrar Straus Giroux), ISBN:9780374530716
- Gray, R. & Lawson, K. (2016) - WJEC/EDUQAS RS for Yr1/AS - Philosophy & Ethics Of Religion, Illuminate, ISBN:9781908682994
- J Jenkins, J. (2003) - Ethics and Religion – 2 nd Edition, Heinemann, ISBN:9780435303679
- Jones, G. (2006) - Moral Philosophy, Hodder, ISBN:9780340888056

### Philosophy

- Cole, P. (2008) - Access to religion and philosophy: Philosophy of Religion, Hodder, ISBN:9780340957783
- Davies, B. (2004) - An Introduction to the Philosophy of Religion, Oxford University Press, ISBN:0199263477
- Gray, R. & Lawson, K. (2016) - WJEC/EDUQAS RS for Yr1/AS - Philosophy & Ethics Of Religion, Illuminate, ISBN:9781908682994
- Hick, J. (1989) - The Philosophy of Religion, Pearson, ISBN:0136626289
- Jordan, A. Lockyer, N. and Tate, E. (1999) - Philosophy of Religion for A Level, Cheltenham: Stanley Thornes, ISBN:0748743391
- Lawson, K. & Pearce, A. (2012) - WJEC AS Religious Studies: An Introduction to Philosophy of Religion and an Introduction to Religion and Ethics Study and Revision Guide, Illuminate, ISBN:1908682078
- Wilkinson, M. B. (2010) - An Introduction to Philosophy of Religion: Continuum, ISBN:1441167730



## Movie Recommendations



Religion in film – a list of films for the religious studies classroom

*Presented by the Seattle school of theology & psychology*

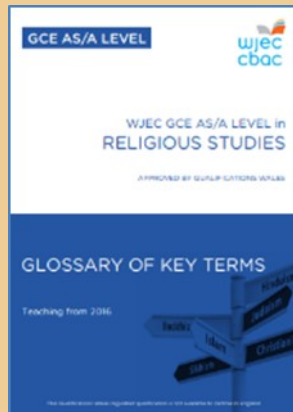
## TED Talks

<p><b>Why would God create a tsunami?</b></p>	<p>In the days following the tragic South Asian tsunami of 2004, the Rev. Tom Honey pondered the question, "How could a loving God have done this?" Here is his answer.</p>	
<p><b>On reading the Quran</b></p>	<p>Lesley Hazleton sat down one day to read the Qur'an. And what she found -- as a non-Muslim, a self-identified "tourist" in the Islamic holy book -- wasn't what she expected. With serious scholarship and warm humor, Hazleton shares the grace, flexibility and mystery she found, in this myth-debunking talk.</p>	
<p><b>Atheism 2.0</b></p>	<p>What aspects of religion should atheists (respectfully) adopt? Alain de Botton suggests a "religion for atheists" -- call it Atheism 2.0 -- that incorporates religious forms and traditions to satisfy our human need for connection, ritual and transcendence.</p>	
<p><b>Why does the world exist? An epic poem by Jim Holt</b></p>	<p>Philosopher and writer Jim Holt skips right past the dumb quibbling questions and right to the heart of the great existential mystery: Why something, instead of nothing? Why does the universe exist? And why are we in it? The super-ultimate why question.</p>	
<p><b>Science can answer moral questions</b></p>	<p>Questions of good and evil, right and wrong are commonly thought unanswerable by science. But Sam Harris argues that science can -- and should -- be an authority on moral issues, shaping human values and setting out what constitutes a good life.</p>	



## Getting ready to study.....

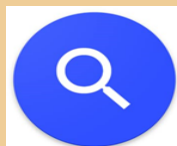
Use the glossary of



Key Terms.







Smart

The Internet allows us to find huge quantities of information on just about anything. Whilst it means that we can research any topic with relative ease, it does create a few problems. How can we trust that the information is reliable? Anybody can write anything they want and post it on the Internet, so we can't always be sure that what we're reading is the truth, and not what 'someone' wants us to think. We can check information on Internet sites that we know are reliable, such as the BBC website. How do we narrow an Internet search to find what we're looking for? The Internet has so much content that it often takes time to find the information we are looking for, and even then it might not be true. The following commands in Google allow us to narrow our searches.

com- mand	example	explanation
" "	"exact phrase search"	placing speech marks on either end of the search term will limit the search to just those words
-	Religion-Christian	will search for sites that contain both 'religion' and 'Christian'
~	Religious~rituals	will search for words related to rituals
...	1914...1918	will show all the results for 1914, 1915, 1916, 1917 and 1918
define:	define:word	will show the definition of the word 'word'
site:	site:bbc.co.uk religion  site:co.uk _____  site:ac _____ site:edu _____ site:ac.uk	this will only search for the term 'religion' on internet sites ending in bbc.co.uk  will search from sites ending in .co.uk  To search on sites in other countries for example 'hajj' on Saudi Arabian websites type site:sa hajj  A list of 'domains', the letters to focus searches to a particular country, can be found at <a href="http://en.wikipedia.org/wiki/List_of_Google_domains">http://en.wikipedia.org/wiki/List_of_Google_domains</a>  will search from particular universities from around the world  will search from universities generally in the USA  will search university sites from the UK
filetype:	filetype:ppt religion filetype:pdf filetype:doc	will only search for PowerPoints entitled religion  will only search for Adobe Acrobat files  will only search for Word documents  Combining the two will focus searches for particular filetypes on specific websites  Filetype:ppt site:ac.uk euthanasia will search for PowerPoints on eu-

By pressing 'ctrl' and 'f' at the same time you can search for any word on the web page you are looking at. This is useful for websites that have a large amount of text.



## Social Media



Suggestions of people to follow on Twitter:

Interfaith Week – supporting interfaith understanding and dialogue.

@IFWeek

Umbrella organisation representing Islamic institutions, schools, and mosques. Promoting Interfaith and

Community Cohesion in Wales. @MuslimWales

News, teaching resources and advice for WJEC Religious Studies qualifications.

@WJEC\_RS

Ancient philosophy quotes @AncntPhilosophy

For all those who love the world of ideas. @philosophynws

Ethical and philosophical thought summed up in Lego @EthicsInBricks

The Online Centre for Religious Education (OCRS) @\_ocrs\_

ABC Religion and Ethics @ABCReligion

Oxford Philosophy @OUPPhilosophy

Bible Project @bibleproject

ZigZagRS @ZigZagRS

AlevelRE @AlevelRE

Candle Conferences @puzzlevardy

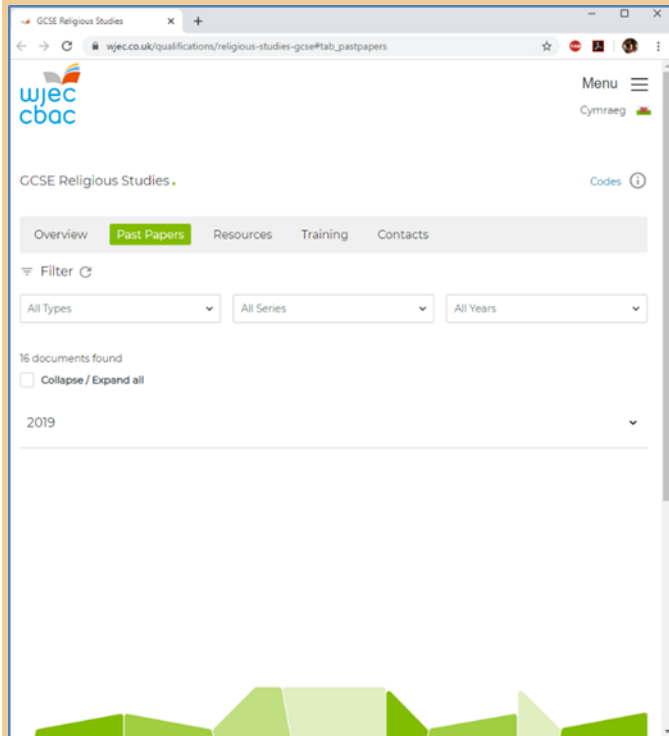
Pencoed RE @pencoedRE

Miss Hill – St Teilos @stteilos\_LH





## Keeping it Fresh.....



It is important to keep the knowledge you have gained at GCSE fresh in your mind ready to start your A levels in September.

Why not spend some time looking over some past papers and using the mark schemes to assess how well you've done.

Religious Studies GCSE – Past Papers and Marking Schemes:



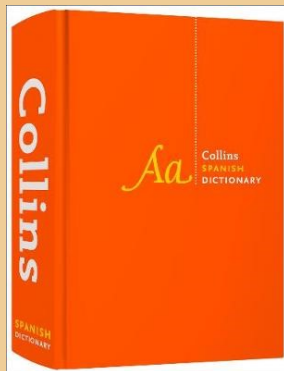
This is a guide for pupils to practice their language skills through the medium of Spanish for the purpose of transitioning to specific AS content with their teachers.



## Reference Recommendations

You have to ♥ a dictionary!

A good dictionary is essential whether you are keeping your language skills ticking over or learning new vocabulary, in a book format or on-line. These are just some of the ones that most teachers recommend, are user-friendly and will help you when you come to start your A-Level course properly. Get to know the way they work and how best to use them to help you!



### The Collins Spanish Dictionary

The world's leading Spanish to English and English to Spanish bilingual dictionary. This tenth edition has been revised to include wide-ranging coverage of contemporary Spanish and English, a wealth of examples and idioms and a clear layout. It contains extensive notes on language, grammar and culture to help users with typical translation issues, and covers both European and Latin American Spanish. The "Language in Use" supplement helps you communicate in natural, idiomatic Spanish.

### On-line dictionary

English Dictionary and Translation Search with 1,000,000,000 example sentences from human translators. Languages: English, German, French, Spanish.



Dictionary for German, French, Spanish...



Free online dictionaries - Spanish, French, Italian, German and more. Conjugations, audio pronunciations and forums for your questions.



## Movie Recommendations for Pleasure

Watching films in the Spanish language will really help with your listening skills and keep your knowledge of vocabulary and syntax on the boil. Don't worry if you don't know what is being said, that it goes really fast or that you may only know a few words of vocabulary. (That is what subtitles are for)! What you will be doing however, is training your ear to get used to the flow and rhythm of the language and getting used to different voices and Spanish accents! By the time you get to the AS course film selected by your teacher, you will be used to the medium and good to go!



### Ocho Apellidos Vascos (The Spanish Affair)

Year released: 2014  
 Rating: 15  
 Duration: 1h38m  
 Genre: Comedy  
 Synopsis:

An Andalusian man who has never left his native Seville falls in love with a Basque girl. Against his friends' advice, he follows her back to the Basque Country, where he is forced to impersonate a full-blooded Basque with eight truly Basque surnames.

You catch watch this film on:



### Ocho Apellidos Vascos (The Spanish Affair 2)

Year released: 2015  
 Rating: 15  
 Duration: 1h39m  
 Genre: Comedy  
 Synopsis:

After the events of *Ocho apellidos vascos*, Rafa learns that Amaia is dating a Catalan man. Her father, opposed to the idea, leaves the Basque Country for the first time in search of Rafa and to convince him to try and win back Amaia's heart.

You can watch this film on **NETFLIX**





## El Laberinto del Fauno ( Pan's Labyrinth)

Year released: 2006

Rating: 15

Duration: 1h59m

Genre: Fantasy/Horror

### Synopsis:

Set in 1944, in a remote forest in Spain, the film follows Ophelia, the bookish stepdaughter of a sadistic army captain who has brought his troop of soldiers to flush out Maqui rebels. As Captain Vidal's brutality plays out in the real world, Ophelia is drawn more and more towards a magical world of fairies, fauns and fantasies.

You can watch this film on



## Nailed It! Spain and Mexico

Year released: 2020

Rating: PG

Duration: 1 season, 6 episodes, 34m

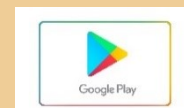
Genre: Food & Travel TV

### Synopsis:

Home cooks try – and inevitably fail – to re-create spectacular confections on this comical competition show, all for a sweet 5,000 euros in Spain and 200,000 pesos in Mexico.

*iNiquelao!*

You can watch both series on :



**NETFLIX**





## El Ministerio del Tiempo (Ministry of Time)

Year released: 2015-2020  
Rating: PG  
Duration: 3 season, 34 episodes, 1h  
Genre: Fantasy TV  
Synopsis:

The Ministry of Time is the Spanish state's best kept secret. Its purpose is to protect the doors of time so that no one person from any era can change history for their own benefit. The series follows the newest members of the Ministry as they protect the Spain of today from threats in the past.

You can watch this series on :



**NETFLIX**



## Elite

Year released: 2018-2020  
Rating: 15  
Duration: 3 season, 24 episodes, 50m  
Genre: Teen Drama TV  
Synopsis:

Three working class teenagers are offered scholarships to the most exclusive private school in Spain, but the clash of lifestyles leads to murder. The series investigates the mystery through a series of flashbacks and flash-forwards which leave the audience guessing at every turn, and it has been praised for the way it tackles many issues surrounding being a young person today.

You can watch this series on:

**NETFLIX**



## Developing Listening Skills

As with watching movies, listening to the radio or podcasts in Spanish will also help develop your listening skills and keep your knowledge of vocabulary and syntax sharp. Again, please don't worry if you don't know what is being said, that it goes really fast or that you may only know a few words of vocabulary. You are still training your ear to get used to the flow and rhythm of the language and getting used to different voices and Spanish accents! Do this daily and the AS course listening exercises will seem slower in comparison!!

	<p>Sign up to <a href="http://www.lyricstraining.com">www.lyricstraining.com</a> and listen to Spanish music and complete the online gap fill activities.</p>
	<p>Try out a podcast! The <i>HoyHablamos</i> podcast will take you through news, language and more, with daily episodes tackling almost anything you can think of. Plus, with over 800 episodes available, you're bound to find something that interests you. <a href="https://www.hoyhablamos.com">https://www.hoyhablamos.com</a></p>
	<p>LISTEN TO THE RADIO! <a href="https://play.cadenaser.com/">https://play.cadenaser.com/</a></p> <p>The great thing about listening to the radio is that you can listen and do something else at the same time. While there are other options available, Cadena SER has live radio and past programmes in its A La Carta section. Talk Radio, music, sport, comedy shows; there's something there to entertain you. Remember, this is real Spanish radio for the Spanish people so they will speak quickly – just try to pick out some words for fun - even if it is just the weather!</p>
	<p><b>Four reasons to learn a new language</b></p> <p>English is fast becoming the world's universal language, and instant translation technology is improving every year. So why bother learning a foreign language? Linguist and Columbia professor John McWhorter shares four alluring benefits of learning an unfamiliar tongue.</p>





Breaking the language barrier | Tim Doner | TEDxTeen

Watch the video in which Tim Doner shared his experience of learning many languages to illuminate the objectives of learning languages and how to reach the goals.

## Developing Reading Skills

	<p>BBC Bitesize have grammar sections under each examination board. These have clear explanations and some exercises to remind you of key grammatical points. Further practice can then be had on the websites below.  <a href="https://www.bbc.co.uk/bitesize/subjects/zchv87h">https://www.bbc.co.uk/bitesize/subjects/zchv87h</a></p>
	<p>This a very helpful online grammar practice website. You are able to choose the tense you want to revise, read the explanations and complete the exercises. You can do these as often as you like, and it gives you a percentage.  <a href="http://www.languagesonline.org.uk">www.languagesonline.org.uk</a></p>
	<p>This website is free after 4pm. It has a really helpful A level section where you are able to watch news video clips, find theme related vocabulary and do listening and reading comprehensions as well as grammar exercises.  <a href="http://oye.languageskills.co.uk/advanced/year12.html">http://oye.languageskills.co.uk/advanced/year12.html</a></p>
	<p>This website offers free practice of almost any grammar concept you can think of from GCSE into A-Level in the form of verb drills and games. Set up an account to save your progress and see your improvements as you practice, or dip in and out of the site as a guest.  <a href="https://conjuguemos.com">https://conjuguemos.com</a></p>



	<p>Habla is an online magazine offering a wide range of articles on a range of topics and themes across the Spanish-speaking world. Articles can be read by theme or even by level, with A2/B1 being around a GCSE level of understanding.</p> <p><a href="https://www.revistahabla.com/">https://www.revistahabla.com/</a></p>
	<p>Mary Glasgow publications publish 4 magazines for Spanish learners ranging from beginners (¿Qué tal) to GCSE (El Sol) Check with your language teachers if you have a code to access to the magazine online.</p> <p><a href="https://maryglasgowplus.com/">https://maryglasgowplus.com/</a></p>
	<p>While there are some limitations to ReadLang's free version, the option to be able to read an array of authentic texts in Spanish is hard to pass up. Curate your own library of texts at a difficulty comfortable for you, on topics which interest you most. With an inbuilt dictionary linked to WordReference, it almost feels like ReadLang is doing all the hard work for you.</p> <p><a href="https://readlang.com/">https://readlang.com/</a></p>
	<p>Why not have a go at reading a foreign language newspaper – El País is available in larger paper shops.</p> <p>El País also has its own website so you can read the paper online, and many articles come with an English version so you can do some side-by-side reading. You don't need to read it cover to cover, just scan the headlines and pick out ONE article that grabs your attention on a topic that interests YOU.</p> <p><a href="https://elpais.com/">https://elpais.com/</a></p>



## Developing your Grammar



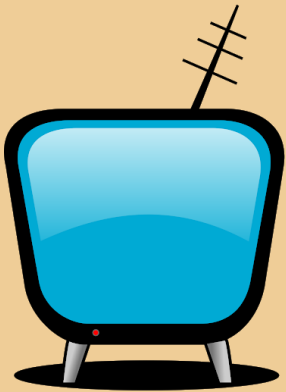
Part of your skill set is of course developing your knowledge of the Spanish language. There are some fun on-line grammar sites that can help you keep your grammar going during your transition time.

	<p>BBC Bitesize have grammar sections under each examination board. These have clear explanations and some exercises to remind you of key grammatical points. Further practice can then be had on the websites below.  <a href="https://www.bbc.co.uk/bitesize/subjects/zchv87h">https://www.bbc.co.uk/bitesize/subjects/zchv87h</a></p>
	<p>This a very helpful online grammar practice website. You are able to choose the tense you want to revise, read the explanations and complete the exercises. You can do these as often as you like, and it gives you a percentage.  <a href="http://www.languagesonline.org.uk">www.languagesonline.org.uk</a></p>
	<p>This website is free after 4pm. It has a really helpful A level section where you are able to watch news video clips, find theme related vocabulary and do listening and reading comprehensions as well as grammar exercises.  <a href="http://oye.languageskills.co.uk/advanced/year12.html">http://oye.languageskills.co.uk/advanced/year12.html</a></p>
	<p>This website offers free practice of almost any grammar concept you can think of from GCSE into A-Level in the form of verb drills and games. Set up an account to save your progress and see your improvements as you practice, or dip in and out of the site as a guest.  <a href="https://conjuguemos.com">https://conjuguemos.com</a></p>



## Developing knowledge through your research skills

Your research skills will come into the fore as this is an ideal opportunity to get to know about Spanish and Spanish-speaking countries, for example, the regional culture and heritage in Spanish-speaking countries and communities. Choose a region of Spain, or one of the other twenty countries in the Hispanic world and compile a fact-file or start a presentation for your fellow students. You can do this research both in English or Spanish. As this is part of the course of study, the more customs and traditions that you are able to refer to and the richer your knowledge, the better! Your teachers will probably refer you to information and websites, as it is easy to get overwhelmed, however, below are some ideas to get you started.

	<p>BBC has a wealth of information. This link will take you through to a profile on Spanish. <a href="https://www.bbc.co.uk/news/world-europe-17941641">https://www.bbc.co.uk/news/world-europe-17941641</a></p>
	<p>Through this link and the associated dropdown menus, students can explore the history, geography and culture of Spain in one place as provided by <i>La Moncloa</i>, the Spanish government.</p> <p><a href="https://www.lamoncloa.gob.es/lang/en/espana/historyandculture/Paginas/index.aspx">https://www.lamoncloa.gob.es/lang/en/espana/historyandculture/Paginas/index.aspx</a></p>
 <p><b>Documentaries</b></p>	<p>There are tens of useful documentaries about Spain, in English and in Spanish, to be found around the internet. You can usually find a topic that interests you, whether it's politics, history of art or gastronomy.</p> <p>Some documentaries are particularly useful to students understanding of A-Level topics:</p> <p><b>The Invention of Spain:</b> <a href="https://www.bbc.co.uk/sounds/play/b01nk276">https://www.bbc.co.uk/sounds/play/b01nk276</a></p> <p><b>Facing Franco's Crime, The Silence of Others:</b> <a href="https://www.bbc.co.uk/programmes/m000bynq">https://www.bbc.co.uk/programmes/m000bynq</a></p> <p><b>Two Catalonias</b>, available on Netflix.</p>





The Welsh Bacallaureate is based on a Skills Challenge Certificate alongside Supporting Qualifications. The requirements of both the Skills Challenge Certificate and Supporting Qualifications must be met in order to achieve the overarching Welsh Bacallaureate.

The Skills Challenge Certificate consists of four components which are followed by all learners:

- Individual Project
- Enterprise and Employability Challenge
- Global Citizenship Challenge
- Community Challenge

The Supporting Qualifications include two mandatory GCSEs of English Language or Welsh Language together with Mathematics-Numeracy at grades A\*-C. Learners require two A levels grade A\*- E, or equivalent level 3 qualifications totaling at least 600 GLH.

The focus of the Skills Challenge Certificate will be on the essential and employability skills young people need in their future lives and these skills will be developed and assessed through an Individual Project and three Challenges. The Skills Challenge Certificate has been designed to include learning and assessment which will enthuse, engage and motivate learners in the classroom, the workplace and the wider community. Learners will be required to consider how the application of their learning may impact on individuals, employers, society and the environment. The qualification has been devised around the concept of a 'plan, do, and review' approach to learning where learners are introduced to a context for learning, planning activities, carrying out activities, reviewing outcomes and learning.

The aims of the Welsh Bacallaureate are to:

- develop and assess a wide range of essential and employability skills;
- promote the value and development of skills for education, life and work;
- provide opportunities to develop and assess skills through purposeful, meaningful and engaging learning experiences;
- make learning relevant and set in real-life contexts for real-life purposes;
- build on and align with the wider curriculum and associated learning frameworks.

The objectives of the Welsh Bacallaureate are for learners to be able to:

- develop an appreciation of the importance of skills development as a key aspect of life-long learning;



- engage in active, creative, open-ended and learner-led opportunities;
- enquire and think for themselves, plan, make choices and decisions, solve problems and reflect on and evaluate these;
- broaden their experience through engagement with external organisations;
- develop as effective, responsible and active citizens ready to take their place in a global society and in the workplace;
- develop initiative, independence and resilience;
- increase their confidence and their motivation for learning and skills development;
- work independently, take on responsibilities and work effectively with others.

The Welsh Bacallaureate aims to enable learners to develop and demonstrate an understanding of and proficiency in essential and employability skills. These are the skills that employers and next-stage educators value and which learners need for learning, work and life.

The seven essential and employability skills are:

- Literacy
- Numeracy
- Digital Literacy
- Critical Thinking and Problem Solving
- Planning and Organisation
- Creativity and Innovation
- Personal Effectiveness

The Welsh Bacallaureate will:

- enable learners to consolidate and formalise learning of skills;
- provide a theoretical underpinning of knowledge and techniques related to skills;
- encourage reflection, analysis and articulation of the learner's own proficiency in the skills;
- engage learners in exploring, developing, practicing and applying the skills;
- increase confidence and effectiveness in the use and application of the skills in a range of meaningful and 'real-life' contexts and purposes.





## Advanced Skills Challenge Certificate



Having a large number of qualifications such as GCSEs, A levels and a degree is not enough for employers. Employers want the academic ability but also a whole set of skills.

### What is the Skills Challenge Certificate?

The Advanced Skills Challenge Certificate (ACC) is to help you develop more complex skills, attributes and behaviors. It will provide experiences which support your other subjects and which will enable you to be better prepared for your future destination.

#### Components



**Individual Project**



**Enterprise and Employability**



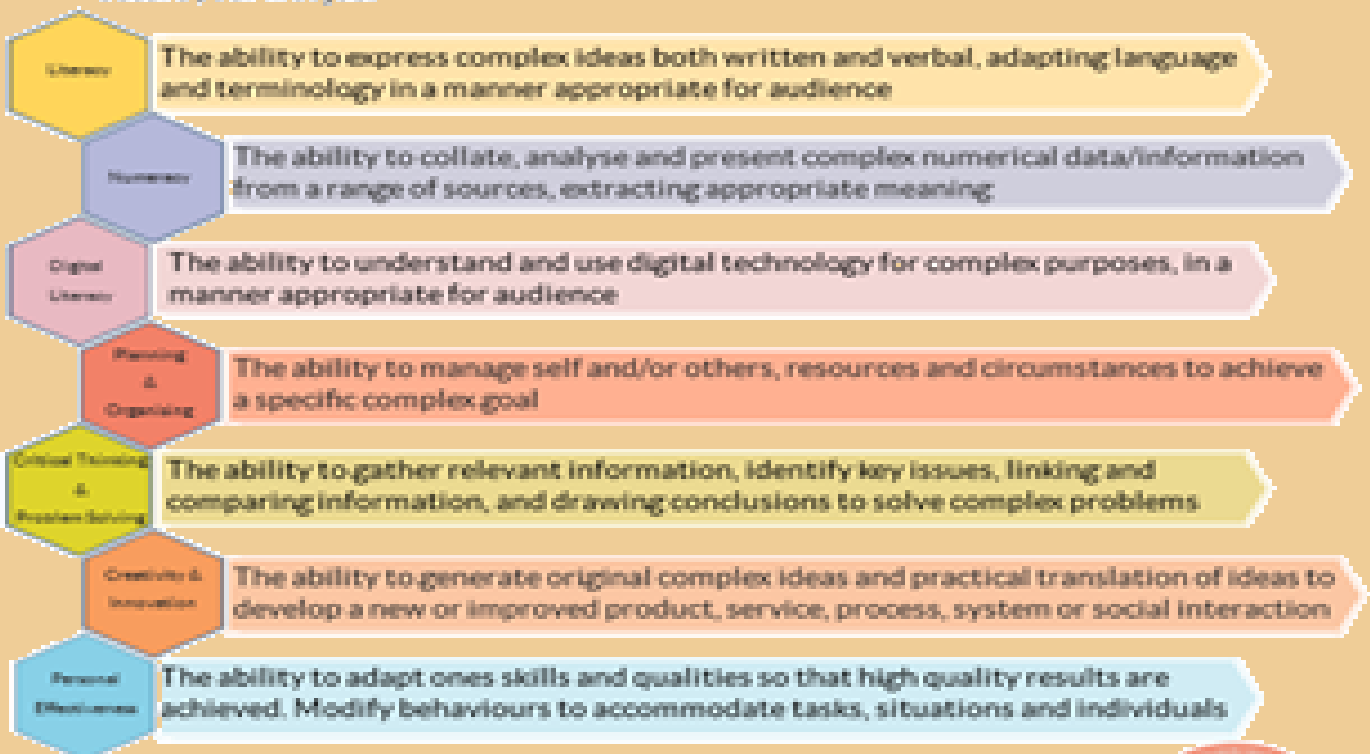
**Global Citizenship**



**Community**

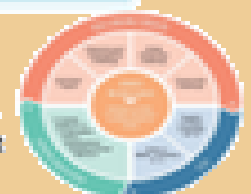


The advanced skills within the ACC will help you succeed in your chosen area and help secure your first job.



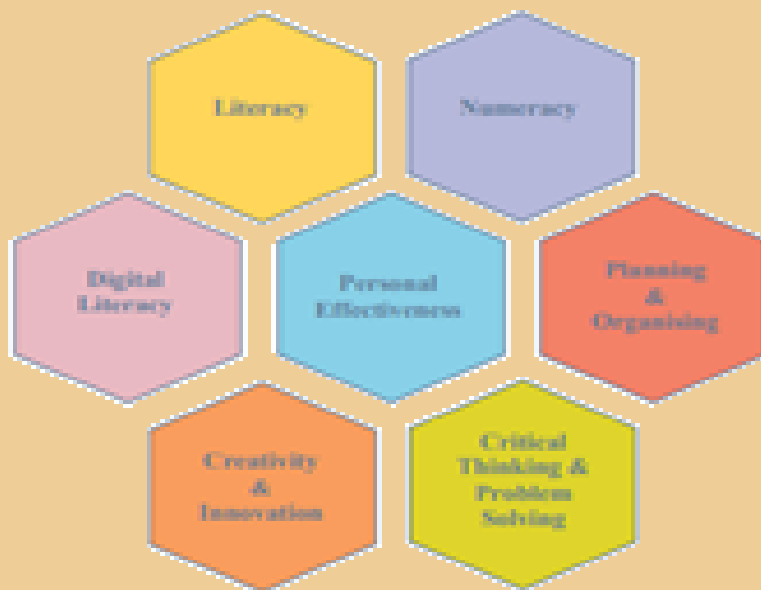
### What is the Welsh Bacallaureate?

The Advanced Welsh Bacallaureate is awarded when you have passed the ACC and the supporting qualification shown in the wheel below. It is worth noting that the grade you gain for the ACC is the one in your UCAS offer not the Welsh Bacallaureate.





## Advanced Skills Challenge Certificate



### STUDENT HANDBOOK

September 2018



## 1. WHAT IS THE SKILLS CHALLENGE CERTIFICATE?

### 1.1 Introduction

The Advanced Skills Challenge Certificate (ACC) is to help you develop more complex skills, attributes and behaviors. It will provide experiences which support your other subjects and which will enable you to be better prepared for your future destination, whether university, further training or employment.

The emphasis in the ACC is on applied learning around the concept of 'plan, do, and review'. You will acquire and apply a range of transferable skills in different settings and context which will include planning activities, carrying out activities, reviewing outcomes and your own development.

The ACC is the same size as an A level and with the same grades: A\*, A, B, C, D, E, U.

### 1.2 What are the Components?

The ACC comprises of four components.

Components	Weighting
1. Individual Project	50%
2. Enterprise And Employability Challenge	30%
3. Global Citizenship Challenge	15%
4. Community Challenge	15%

### 1.3 What are the Advanced Skills?

The advanced skills within the ACC will help you succeed in your chosen area and help secure your first job. Advanced skills involve complexity (not straightforward) which includes many different but connected parts.

<b>Literacy</b>	The ability to express complex ideas both written and verbal, adapting language and terminology in a manner appropriate for audience
<b>Numeracy</b>	The ability to collate, analyse and present complex numerical data/information from a range of sources, extracting appropriate meaning
<b>Digital Literacy</b>	The ability to understand and use digital technology for complex purposes, in a manner appropriate for audience
<b>Planning &amp; Organising</b>	The ability to manage self and/or others, resources and circumstances to achieve a specific complex goal
<b>Critical Thinking &amp; Problem Solving</b>	The ability to gather relevant information, identify key issues, linking and comparing information, and drawing conclusions to solve complex problems
<b>Creativity &amp; Innovation</b>	The ability to generate original complex ideas and practical translation of ideas to develop a new or improved product, service, process, system or social interaction
<b>Personal Effectiveness</b>	The ability to adapt ones skills and qualities so that high quality results are achieved. Modify behaviours to accommodate tasks, situations and individuals.



## 1.4 What is the Welsh Bacallaureate?

The Advanced Welsh Bacallaureate is awarded when you have passed the SCC and the supporting qualification shown in the wheel below. It is worth noting that the grade you gain for the SCC is the one in your UCAS offer not the Welsh Bacallaureate.



Employers value the Welsh Bacallaureate as it demonstrates your academic ability and skills levels all in one place.



## 2. WHY ARE SKILLS IMPORTANT FOR YOUR FUTURE?

### 2.1 Why employers value skills

Having a large number of qualifications such as GCSEs, A levels and a degree is not enough for employers. There are many other young people who will have the same qualifications as you and therefore when applying for a job it is extremely competitive. Employers want the academic ability but also a whole set of skills alongside and to know how you have applied them in different situations. Many of the very large employers have assessment centres where they invite suitable applicants to test their application of skills before making the final decisions on an appointment.

### 2.2 How Skills Challenge Certificate is include in UCAS offers

The Advanced Skills Challenge Certificate has been given the same UCAS tariff points as an A level.

Advanced SCC Grade	UCAS Tariff points
A*	56
A	48
B	40
C	32
D	24
E	16

All Welsh Universities will include the Advanced SCC in their offers.

Most other universities and most courses within universities also accept the SCC. Even the most competitive courses such as Medicine, Dentistry and Veterinary Science will accept it as an alternative to an A level grade.

e.g. Medicine – Cardiff, Exeter, Leicester, Manchester, Plymouth, Southampton

Veterinary Science/Medicine – Bristol, Liverpool, Nottingham

Dentistry – Bristol, Cardiff

Offers for other courses can take on the following formats:

- Accepted in a 3 grade offer as an alternative to an A level or vocational qualification.  
e.g. including Birmingham, Bristol, Edinburgh, Exeter, Lancaster, Leeds, Leicester, Liverpool, LMI, Loughborough, Manchester, Newcastle, Nottingham, Sheffield, Southampton, UCL, York.
- Accepted as fourth grade (usually B or C) alongside a reduced 3 grade offer.  
e.g. Bath, Warwick
- Accepted in tariff points offer.  
e.g. Brighton, Chester, Edge Hill, Harper Adams, Hull, Liverpool John Moores, Manchester Met, Oxford Brookes, Plymouth, UWE

Oxford and Cambridge Universities may take a different approach in their consideration of assessment for admission. They assess applicants holistically. Students are encouraged to draw upon relevant SCC experiences when writing their personal statement and should refer to them at interview, even taking a copy of their individual project with them. Generally the SCC is not included in their 3-A level grade offers, however, it may be used as part of an offer.



## 3. ENTERPRISE AND EMPLOYABILITY CHALLENGE

### 3.1 Introduction to Challenge

This Challenge allows you to explore opportunities, create original ideas and achieve realistic outcomes to enhance your enterprising skills whilst having a taste of the world of work. You will devise your pathway to employment and independent living by becoming more self-aware through realistically and clearly identifying – where I am now, where I want to be, and how do I get there.

### 3.2 How to choose an Innovation Venture

In this Challenge you will take part in an Innovation Venture to develop a new or improved product, service, process, system or social interaction. Usually this will be carried out as a team exercise. Your Innovation Venture should be suitable for you as an individual to broaden your horizons, enhance your study or career aspirations.

The Challenge Bank has a range of Challenge Briefs written by organisations:

<https://www.wjec.co.uk/qualifications/qualification-resources.html?subject=awelw&accreditation=level3-advanced>

### 3.3 What do I need to do?

Produce an electronic <b>Destination Passport</b> to include the following evidence in a professional manner	
<b>Pen Portrait</b> Controlled assessment of 2 hours	<ul style="list-style-type: none"> <li>A self-promotion by producing a creative holistic A4 representation of your current skills, competencies, attributes and experiences</li> </ul>
<b>Innovation Proposal</b>	<ul style="list-style-type: none"> <li>Produce and present to an external professional your report which must include:                         <ol style="list-style-type: none"> <li>Executive summary – a concise overview of innovation concept/idea, completed at end of the process</li> <li>Why – statement of purpose of innovation</li> <li>Who – allocation of roles and responsibilities to team members</li> <li>What – Generate and analyse ideas. A feasibility study to include market research, marketing, resource requirements and financial forecasts</li> <li>When – Project management including planning and controlling a range of tasks, priorities and goals required to deliver the report.</li> <li>How – illustration of design process and prototype. Evaluation and justification of fitness for purpose</li> </ol> </li> </ul>
<b>Destination Plan</b>	<ul style="list-style-type: none"> <li>Research and analyse the steps to a realistic potential career destination</li> <li>Written self-promotion in the form of a CV and letter of application or personal statement</li> <li>A cost analysis of personal financial demands of independent living and life style expectations.</li> </ul>
<b>Personal Reflection Presentation</b> Controlled assessment of 25 minutes	<ul style="list-style-type: none"> <li>Articulate a positive promotion of yourself to a responsible person</li> <li>Respond to competency-based questions giving clear examples of your skills, qualities and attributes</li> </ul>



## 4. GLOBAL CITIZENSHIP CHALLENGE

### 4.1 Introduction to Challenge

This Challenge allows you to understand complex issues the world faces, applying and deepening your knowledge by considering facts, ideas and opinions. Express your ideas by designing and delivering your solution to an audience.

### 4.2 How to choose a Global Issue

In this Challenge you will need to select a global issue that falls under one of the six themes available: **Health, Food and Shelter, Population, Transportation, Economy and Natural Environment.** Choose an issue that inspires you so that you will be able to express your passion through your arguments and justification of your solution.

The Challenge Bank has a range of Challenge Briefs written by organisations  
<https://www.wjec.co.uk/qualifications/qualification-resources.html?subject=welshbaccaulaureate&level=advanced>

### 4.3 What do I need to do?

Communicate in a balanced, coherent and well-structured way using both written and verbal forms.	
<b>Personal Standpoint</b> Controlled assessment of 5 hours	<ul style="list-style-type: none"> <li>Identify and consider facts, factors, differing arguments, opinions and/or points of view from a range of source material</li> <li>Identify, synthesise and consider the credibility of sources</li> <li>Consider relevant political, economic, social, technological, legal and environmental (PESTLE) factors</li> <li>Produce a written document of up to 1,000 words, combining your own with others' viewpoints</li> </ul>
<b>Global Choices</b> Conference Contribution	<ul style="list-style-type: none"> <li>Generate creative complex ideas to determine an innovative solution to tackle the global issue</li> <li>Develop and present convincing and well-supported reasoning based on supporting evidence</li> <li>Communicate creatively to an audience</li> </ul>
<b>Personal Review</b> Controlled assessment of 1 hour	<ul style="list-style-type: none"> <li>Review how you have developed and applied skills in completing the Challenge</li> </ul>





## 5. COMMUNITY CHALLENGE

### 5.1 Introduction to Challenge

This Challenge provides you with the opportunity to develop an increased sense of social responsibility and to demonstrate commitment by engaging in positive participation within a chosen community.

### 5.2 How to choose a Community Activity

In this Challenge you will need to select a local/national/international community who you wish to support for 30 hours over at least a 4 week period. Your community activity must benefit the community and could be through any of the options below.



### 5.3 What do I need to do?

Research a chosen community to identify their needs. Develop and participate in a community activity to provide a benefit.	
<b>Community Activity Proposal</b> Controlled assessment of 4-6 hours	<ul style="list-style-type: none"> <li>Produce a written document providing a plausible plan for your community activity which must include:               <ol style="list-style-type: none"> <li>Community activity summary – a concise overview of the activity and how it would benefit the community and self</li> <li>Why – A statement of purpose of why the activity is required in your chosen community and success criteria</li> <li>What, How, and When – Plan how you will manage the tasks, resources, time and risks required for your proposed community activity</li> </ol> </li> </ul>
<b>Community Activity Participation</b> of 30 hours over at least 4 weeks	<ul style="list-style-type: none"> <li>Implement and monitor plan</li> <li>Keep a diary or log of your participation</li> <li>Gather relevant evidence of participation both visual and other</li> <li>Confirmation statement</li> </ul>
<b>Personal Reflective Presentation</b> of 10 minute	<ul style="list-style-type: none"> <li>Produce a creative digital presentation which should involve the following:               <ol style="list-style-type: none"> <li>the process and skills involved in planning, organising and carrying out the activity</li> <li>annotated photos own performance in carrying out the activity</li> <li>the impact and benefit of the outcome on the community</li> </ol> </li> <li>Produce detailed speech notes</li> </ul>



## 6. INDIVIDUAL PROJECT

### 6.1 Introduction to the Project

By showcasing the skills you have developed through the Challenges you should apply them to carry out a research project on a topic of your choice that should support your university application and/or career pathway. Collect, collate, analyse and interpret data and information to produce either a written dissertation or create an artefact.

### 6.2 How to choose a topic

This is your opportunity to select a topic area that is complex in nature, intrigues you and can benefit future applications and interviews. Explore an issue in more depth than is provided in other areas of study. Carrying out multi-faceted research will develop further your understanding of the topic and allow you to come to an evidence-based conclusion.

You must determine the most appropriate format for you to present your project, either as a written dissertation or producing an artefact. An artefact is something you create and this option allows you to demonstrate practical skills and can be used to support your portfolio e.g. Art, D&T, Media.

A variety of Project Proposals which have been produced by Higher Education departments and organisations are available on WJEC website which may stimulate your interest.

<http://www.wjec.co.uk/qualifications/welsh-bacallaureate/welsh-bacc-from-2015/Advanced/>



## 6.3 What do I need to do?

### Written Dissertation option

Produce a written dissertation of 3,000 – 5,000 words in length. Also complete a self-evaluation.	
Written Dissertation	<ul style="list-style-type: none"> <li>• <b>Title</b> – Set as a question to be answered from the research</li> <li>• <b>Abstract</b> – A concise overview of the project, completed at end of project</li> <li>• <b>Introduction</b> – A statement of purpose of the project, describing its focus and scope</li> <li>• <b>Aims and Objectives</b> – Aims are the strategy, what needs to be accomplished to answer the title question. Objectives are the tactics, what information and numerical data is required.</li> <li>• <b>Rationale</b> – Describe what research methods will be used to collect all the information and data from the objectives. Justify the choices by considering the credibility of the sources.</li> <li>• <b>Main Body</b> <ul style="list-style-type: none"> <li>a) Select and collate a variety of sources including both secondary and primary information and numerical data</li> <li>b) Analyse, present and interpret complex numerical data</li> <li>c) Reference sources of information as they are used</li> <li>d) Synthesise and analyse complex information and viewpoints</li> <li>e) Demonstrate an understanding of the topic by expressing own opinions and make judgements</li> </ul> </li> <li>• <b>Conclusion</b> – Draw together an evidence based conclusion linked to aims in order to address the title question</li> <li>• <b>Bibliography</b> of all sources used, not those that were rejected</li> <li>• <b>Appendix</b> – Any or all of the following may be included:           <ul style="list-style-type: none"> <li>a) Clean copy of questionnaire</li> <li>b) Table(s) of collated primary data from questionnaire, fieldwork, experiment, etc.</li> <li>c) Table(s) of secondary data</li> <li>d) Analysis of data</li> <li>e) Transcript of interview/ letter/ email</li> </ul> </li> </ul>
Self-Evaluation	<ul style="list-style-type: none"> <li>• Evaluate how you applied the 7 skills in managing the project</li> </ul>



## Artefact option

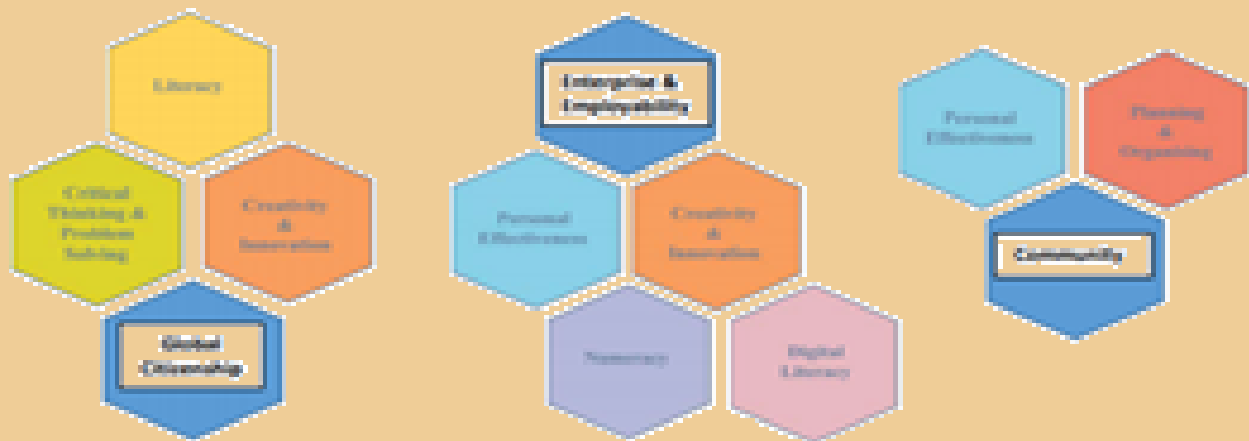
<p>Produce a written report and a design and production record of 1,500 – 3,000 words in length. Also complete a self-evaluation.</p>	
<p><b>Written Report</b></p>	<ul style="list-style-type: none"> <li>• <b>Title</b> – a statement of intention, what is to be created</li> <li>• <b>Abstract</b> – a concise overview of the project, completed at end of process.</li> <li>• <b>Introduction</b> – A statement of purpose of the project, describing its focus and scope</li> <li>• <b>Aims and Objectives</b> – Aims are the strategy, what needs to be accomplished to produce the artefact. Objectives are the tactics, what information, numerical data, resources and materials are required.</li> <li>• <b>Rationale</b> – Describe what research methods will be used to collect all the information and data from the objectives. Justify the choices by considering the credibility of the sources and materials.</li> <li>• <b>Conclusion</b> – Explain how the artefact is fit for purpose.</li> <li>• <b>Bibliography</b></li> <li>• <b>Appendix</b> – Any or all of the following may be included:             <ol style="list-style-type: none"> <li>a) Clean copy of questionnaire.</li> <li>b) Table(s) of collated primary data from questionnaire, fieldwork, experiment, etc.</li> <li>c) Table(s) of secondary data</li> <li>d) Analysis of data</li> <li>e) 'Script of interview' letter/ email</li> <li>f) Any other relevant evidence</li> </ol> </li> </ul>
<p><b>Design and Production Record</b></p>	<ul style="list-style-type: none"> <li>• Select and collate both secondary and primary information and numerical data from a variety of sources</li> <li>• Analyse, present and interpret complex numerical data</li> <li>• Synthesise and analyse complex information and viewpoints</li> <li>• Reference sources of information as they are used</li> <li>• Produce initial ideas for artefact</li> <li>• Make judgements to support development of the design of artefact</li> <li>• Justify decisions on materials and resources required to produce the artefact.</li> <li>• Annotate photos/diagrams to show the production stages. Produce high quality visuals of the final artefact</li> </ul>
<p><b>Self-Evaluation</b></p>	<ul style="list-style-type: none"> <li>• Evaluate how you applied the IT skills in managing the project and any practical skills used in producing the artefact.</li> </ul>

## 7. ASSESSMENT



## 7.1 Component Assessment

For each of the three Challenges you are assessed on different combinations of the Advanced Essential and Employability skills. The Individual Project draws all of the 7 skills together.



## 7.2 Grading

For each of the four components you will receive from WJEC a UMS mark (this is different to the mark given by your teacher which is the raw mark) and a grade - Fail (F), Pass (P), Merit (M) or Distinction (D).

	Teacher mark	WJEC UMS mark
Individual Project	Out of 72	Out of 150
Enterprise and Employability Challenge	Out of 45	Out of 60
Global Citizenship Challenge	Out of 36	Out of 45
Community Challenge	Out of 27	Out of 45

When you complete the SCC, having passed all four components, the four UMS marks are added to provide a total out of 300 which determines your SCC grade.

Grade boundaries	A*	A	B	C	D	E	U
Total UMS	270	240	210	180	150	120	0

## Addition Resources

<https://www.futurelearn.com/courses/welshbacc>

<https://qualificationswales.org/english/qualifications/welsh-baccaLaureate/skills-challenge-certificate/>



## Employers and Universities



Having a large number of qualifications such as GCSEs, Alevels and a degree is not enough for employers. Employers want the academic ability but also a whole set of skills alongside and how to apply them in different situations.

There are many other young people who will have the same qualifications as you and therefore when applying for a job it is extremely competitive.

The advanced skills within the SCC will help secure your first job



The Advanced Skills Challenge Certificate (SCC) has been given the same UCAS tariff points as an A level.

SCC Grade	UCAS points
A*	56
A	48
B	40
C	32
D	24
E	16



## UCAS offers

IN WJEC  
**100%**

OF UNIVERSITIES WILL  
INCLUDE THE ADVANCED  
SCC IN THEIR OFFERS

Accepted in tariff points offer -  
Brighton,  
Oxford Brookes,  
Edge Hill,  
Haver Adams,  
Hull

Accepted in tariff points offer -  
Chester,  
Liverpool J Moores  
Manchester Met,  
Plymouth  
UWE

Veterinary Science/Medicine  
Bristol,  
Liverpool  
Nottingham

Medicine -  
Cardiff, Exeter,  
Leicester,  
Manchester,  
Plymouth,  
Southampton

Accepted in a 3 grade offer -  
Lancaster,  
Leeds,  
Leicester,  
Liverpool  
LSE

Accepted as 4 grade alongside a reduced offer -  
Bath,  
Warwick

Accepted in a 3 grade offer -  
Loughborough,  
Manchester,  
Newcastle,  
Nottingham,  
Sheffield  
York

Dentistry -  
Bristol,  
Cardiff

Accepted in a 3 grade offer -  
Birmingham,  
Bristol,  
Edinburgh  
Exeter  
Southampton  
UCL



## Welcome to BTEC Sport

We are delighted that you are considering choosing our subject. The diversity of our subject can offer so many avenues for future exploration. Please feel free to speak to your PE teacher to gather more information.





The BTEC Sport BTEC course is modular and covers a wide variety of subjects, highlighting just how diversified this subject can be. The course is focused upon a vocational pathway into the world of sport, but equally the academic nature of the course can provide an avenue towards University.

Currently we are working on the Edexcel Pearson 2010 specification and this can be accessed in two different ways. Firstly a Subsidiary Diploma which is a one year course. Students will undertake seven modules within the year to access the qualification which is graded as either a pass, merit, distinction or distinction star. The UCAS points for this are as follows;

PASS = 16

MERIT = 32

DISTINCTION = 48

DISTINCTION \* = 56

However if students decide to continue with the course to gain the full Diploma (a further 6 modules in Year 13) then the grading criteria is adopted again and added to the Year 12 points accrued.

### ***Why Choose BTEC Sport?***

Supporting over 600,000 jobs in the UK, sport is a £28bn industry and this fast-growing sector now ranks among the top 15 mainstream activities in the economy. The huge amounts of money in UK sport means that there are more jobs to pursue than ever before.

Students can go on to work at the cutting edge of elite sport, supporting top athletes as sports scientists, sports psychologists, strength and conditioning coaches, sports therapists, coaches and in many other roles. On the other hand, students may opt to pursue a career in teaching, community coaching or working within the health and leisure sectors. Opportunities in sport today are exciting and vast. Your BTEC Sport course will prepare you for whatever your chosen next step is and will provide extensive careers guidance to support you.



## ***What Modules will I study?***

### Year 12

Unit 1 Principles of Anatomy and Physiology in Sport

Unit 2 The physiology of Fitness

Unit 3 Assessing Risk in Sport

Unit 7 Fitness Testing for Sports and Exercise

Unit 11 Sports Nutrition

Unit 12 Current Issues in Sport

Unit 14 Exercise, Health and Lifestyle

### Year 13

Unit 4 Fitness Training and Programming

Unit 5 Sports Coaching

Unit 17 Psychology for Sports Performance

Unit 22 Rules, Regulations and Officiating in Sport \*

Unit 27 Technical and tactical Skills in Sport

Unit 28 The Athlete's Lifestyle

\* For an additional fee students can qualify in their chosen sport and gain an additional qualification to officiate officially. Something to add to the Personal Statement for University or work placements.



## Recommended Resources:



These are the textbooks that we refer to when studying the course, however use of the internet and viewing of sport will be useful for various classroom conversations.

### ***How will the course work?***

All tasks are in a form of assignment, which will be shared with students. There is a variety towards the presentation, from reports, power points, presentations, practical performances and working with pupils from younger age groups within the school. This enables the BTEC Sport student to demonstrate a variety of skills that are useful in any walks of life. Soft skills can be just as important as qualifications.