



Portland  
Place  
School

STRIVING FOR  
EXCELLENCE  
AT GCSE

CORE

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# Welcome to Portland Place

This booklet is designed to help you to bridge the gap between KS3 and the GCSE Course.

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## How to prepare for your GCSEs

The summer holiday is a perfect time to begin the preparation for your GCSEs. GCSEs require you to be an independent learner. There is much less coursework in the new GCSEs with a greater emphasis on the final exams so it is important that you use all the time available between now and the end of year 11 immersing yourself in your subjects. Some of your GCSE choices will be new to you, such as Economics, Business or Film. The exercises in this booklet will ensure that you are ready for the exciting challenges of becoming a GCSE student in September.

There are no written tasks in this booklet, instead you are being asked to Read, Watch, See, Hear and Do. Although the work will not be formally assessed, you will find that you access the subject more easily if you have completed the tasks in the booklet.



# Striving for Excellence at GCSE

## English Language

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## English Language GCSE course outline:

'Reading is the sole means by which we slip, involuntarily, often helplessly, into another's skin, another's voice, another's soul.' Joyce Carol Oates

The English Department at Portland Place School is a vibrant and successful team, offering pupils a broad and enriching experience, and a chance to nurture creativity and confidence. Not only does English allow us to explore complex issues and engage in topical debates, it also equips us with essential tools which enable us to understand and interact with the world around us, linking to other disciplines, such as History, Politics and Philosophy.

At Portland Place School, we want all students to share our view that success in English is fundamental to success in adult life. Our Department endeavours to instil a passion for the subject which extends beyond the remit of the classroom, as well as develop communication and literacy skills which are fundamental in all aspects of life.

### **Paper 1: Explorations in Creative Reading and Writing**

#### Section A: Reading

- one literature fiction text extract

#### Section B: Writing

- descriptive or narrative writing

#### Assessed

- written exam: 1 hour 45 minutes
- 80 marks
- 50% of GCSE

## English Literature GCSE course outline:

Paper 1: Shakespeare and the 19th-century novel

What's assessed

- Shakespeare play ( *Macbeth* )
- The 19th-century novel ( *A Christmas Carol* )

### **Paper 2: Modern texts and poetry**

- Modern prose or drama text ( *An Inspector Calls* )
- The poetry anthology ( *Power and Conflict* )
- Unseen poetry

## Read

-Two other Dickens' novels ( *Great Expectations*, *Oliver Twist* etc )

-Read Dickens' non-fiction texts: <http://www.dickens-online.info/nonfiction-and-essays.htm>

-Read another Shakespeare Tragedy ( not *Macbeth* ). Choose out of: *Hamlet* or *King Lear*.

## Watch

- A play at *The National Theatre/Globe*
- At least one adaptation of *Macbeth*
- At least one adaptation of *A Christmas Carol*
- A Documentary about WW1 on YouTube
- Simon Armitage's documentary- The Not Dead: <https://www.youtube.com/watch?v=MvA3K-tC6t8>

## Listen

- Any podcasts relating to war or conflict poetry, for example: <https://podcasts.ox.ac.uk/series/british-world-war-one-poetry-introduction>

## Do

- Visit Dickens' House
- Visit British Museum- King Rameses statue
- Visit British Library- WW1 Exhibition

# Striving for Excellence at GCSE

## Mathematics



## Mathematics GCSE course outline

Here is a rough outline of the Higher vs Foundation course outline

<b>Year 9</b>	
<b>GCSE (9-1) Foundation</b>	<b>GCSE (9-1) Higher</b>
Unit 1 Number	Unit 1 Number
Unit 2 Algebra	Unit 2 Algebra
Unit 3 Graphs, tables and charts	Unit 3 Interpreting and representing
Unit 4 Fractions and percentages	Unit 4 Fractions, ratio and proportion
Unit 5 Equations, inequalities and sequences	Unit 5 Angles and trigonometry
Unit 6 Angles	Unit 6 Graphs
<b>Year 10</b>	
<b>GCSE (9-1) Foundation</b>	<b>GCSE (9-1) Higher</b>
Unit 7 Averages and range	Unit 7 Area and volume
Unit 8 Perimeter, area and volume 1	Unit 8 Transformation and construction
Unit 9 Graphs	Unit 9 Equations and inequalities
Unit 10 Transformations	Unit 10 Probability
Unit 11 Ratio and proportion	Unit 11 Multiplicative reasoning
Unit 12 Right-angled triangles	Unit 12 Similarly and congruence
Unit 13 Probability	Unit 13 More trigonometry
Unit 14 Multiplicative reasoning	Unit 14 Further statistics
<b>Year 11</b>	
<b>GCSE (9-1) Foundation</b>	<b>Year 4 GCSE (9-1) Higher</b>
Unit 15 Constructions, loci and bearings	Unit 15 Equations and graphs
Unit 16 Quadratic equations and graphs	Unit 16 Circle theorems
Unit 17 Perimeter, area and volume 2	Unit 17 More algebra
Unit 18 Fractions, indices and standard form	Unit 18 Vectors and geometric proof
Unit 19 Congruence, similarity and vectors	Unit 19 Proportion and graphs
Unit 20 More algebra	

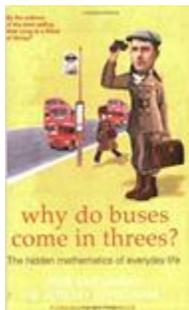
Below are a list of activities that you can do during the holidays so that you can prepare yourself for September. Don't worry if you don't manage to complete them all, the most important thing is to keep up the practice and enjoy finding out more about the subject.

## Read

Here is a good collection of revision notes you might want to read to help you:

<http://www.durringtonhigh.w-sussex.sch.uk/wordpress/downloads/The%20Maths%20E-Book%20of%20Notes%20and%20Examples.pdf#page195>

Or if you prefer reading about something not directly linked to the syllabus - this is a good book!



Why do buses come in threes? The Hidden Maths of Everyday life

By Rob Eastaway

## Watch

Take a look at these videos on Khan Academy or Corbett Maths?

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

<https://corbettmaths.com/contents/>

## See

Go and look at:

<https://www.sciencemuseum.org.uk/see-and-do/mathematics-winton-gallery>

*Mathematics: The Winton Gallery* tells powerful stories about the work of mathematicians in the broadest sense, from salespeople to sailors, aircraft engineers to bankers, and gamblers to garden designers.

## Hear

Here are some songs to help you learn some Maths facts!

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

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

Or if you want to listen to a podcast - this one is good:

A Brief History of Mathematics

<http://www.bbc.co.uk/programmes/b00srz5b/episodes/downloads>

Professor of Mathematics Marcus du Sautoy reveals the personalities behind the calculations and argues that mathematics is the driving force behind modern science.

## Do

Five-a-day questions from CorbettMaths - to help you keep going?

Choose an appropriate level and bear in mind you have not completed the full syllabus yet!

<https://corbettmaths.com/5-a-day/gcse/>

Quizzes?

<https://www.tutor2u.net/maths/collections/gcse-maths-revision-quizzes>

Work through topics? MathsGenie is a good resource - with tutorials, exam questions a solutions.

<https://www.mathsgenie.co.uk/gcse.html>

# Striving for Excellence at GCSE

## Biology

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## Biology GCSE course outline:

Over the course of the GCSE programme, you will cover the following topics:

1. Cell biology
2. Organisation
3. Infection and response
4. Bioenergetics
5. Homeostasis and response
6. Inheritance, variation and evolution
7. Ecology

Below are a list of activities that you can do during the holidays so that you can prepare yourself for September. Don't worry if you don't manage to complete them all, the most important thing is to enjoy finding out more about the subject.

### Read

Find out about the progress being made towards understanding immunity against the Ebola virus:

<https://www.ucl.ac.uk/news/news-articles/0118/120118-diagnosing-immunity-Ebola>

<https://pubs.acs.org/doi/full/10.1021/acsnano.7b07021>

### Watch

Take a look at these:

Learn more about the spread of disease through the films 'Outbreak' (1995), 'Contagion' (2011) or 'I am Legend' (2007).

## See

Go and look at:

**In London:** Experience the spectacle and terror of surgery in a bygone era at ‘Europe’s oldest surviving operating theatre’: <http://oldoperatingtheatre.com/>

**Beyond London:** Pay tribute to the plants of our world on your way down to the south coast with a visit to the Eden Project:

<http://www.edenproject.com/visit>

## Hear

Listen to the following podcasts:

Can plants really talk? What is our relationship to plants? Choose a podcast or clip from the list below to gain a deeper understanding of our green leafy friends:

<https://www.bbc.co.uk/programmes/b048s3my/episodes/downloads>

<https://youtu.be/CrrSAc-vjG4>

## Do

Attend a lecture at the Francis Crick Institute. Lectures run most Thursdays at 4pm and are given by a host of inspiring scientists:

<https://www.crick.ac.uk/research/seminars,-lectures-and-symposia/crick-lectures/>



# Striving for Excellence at GCSE

## Chemistry

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## Chemistry GCSE course outline:

Everything is Chemistry and Chemistry is everywhere! It is an exciting subject that is involved in everything around us from the smallest scale biological systems to the material in the giant structures we use every day; from the water we drink to the environment in which we live. A sound knowledge of Chemistry is also highly regarded in most industries, even ones that you would not necessarily equate with Science such as Finance and Law. Oh, by the way, experiments in Chemistry are pretty fun too!

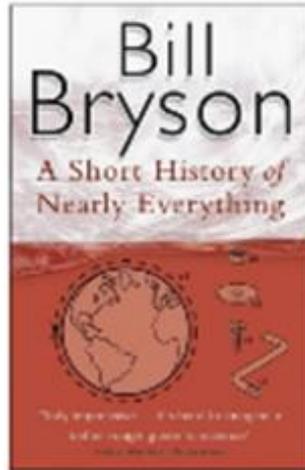
Chemistry Paper 1
<b>What's assessed</b> Chemistry topics 8–12: Atomic structure and the periodic table; Bonding, structure, and the properties of matter; Quantitative chemistry; Chemical changes; and Energy changes.
<b>How it's assessed</b> <ul style="list-style-type: none"><li>• Written exam: 1 hour 15 minutes</li><li>• Foundation and Higher Tier</li><li>• 70 marks</li><li>• 16.7% of GCSE</li></ul>
<b>Questions</b> Multiple choice, structured, closed short answer, and open response.

Chemistry Paper 2
<b>What's assessed</b> Chemistry topics 13–17: The rate and extent of chemical change; Organic chemistry; Chemical analysis; Chemistry of the atmosphere; and Using resources.
<b>How it's assessed</b> <ul style="list-style-type: none"><li>• Written exam: 1 hour 15 minutes</li><li>• Foundation and Higher Tier</li><li>• 70 marks</li><li>• 16.7% of GCSE</li></ul>
<b>Questions</b> Multiple choice, structured, closed short answer, and open response.

Below are a list of activities that you can do during the holidays so that you can prepare yourself for September. Don't worry if you don't manage to complete them all, the most important thing is to enjoy finding out more about the subject.

## Read

Chapter 7: Elemental Matters and Chapter 9: The Mighty Atom but beware, once you have completed these you will want to read the whole book!



## Watch

Professor Ian Stewart's programme on crude oil to find out why this resource is so important:



## See

Explore the history of the climate and find out about today's issues:



<https://www.sciencemuseum.org.uk/see-and-do/atmosphere>

## Hear

Listen to the following podcast on elements of the periodic table:

<http://www.rsc.org/periodic-table/podcast>

## Do

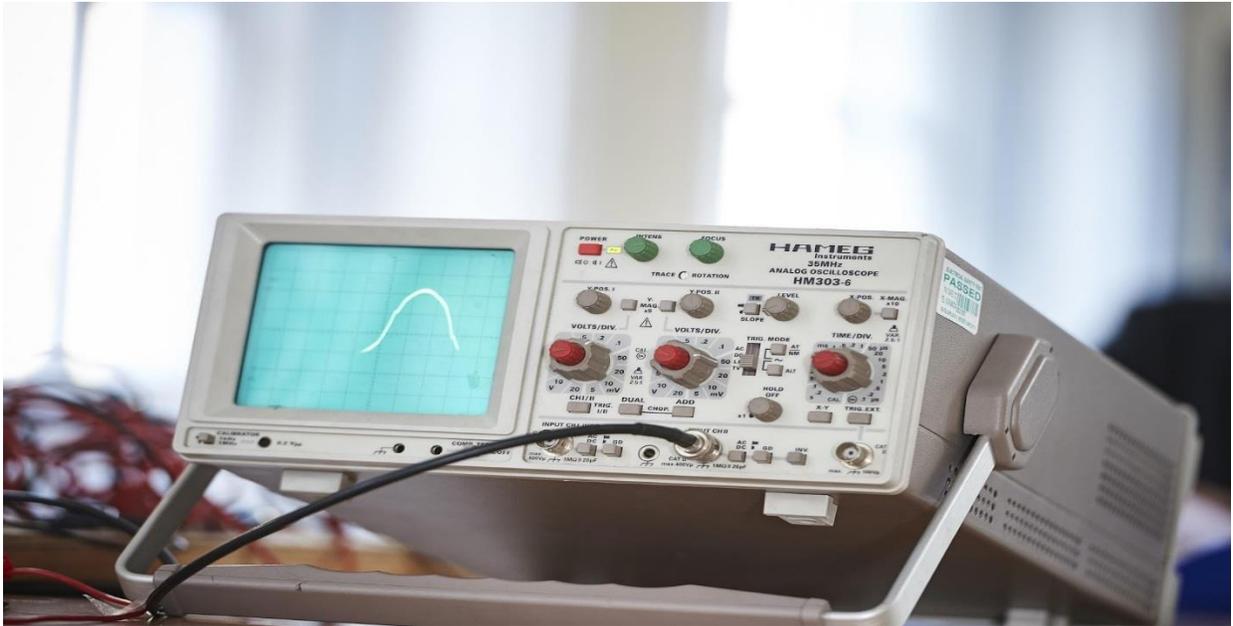
Take a quiz on Gojimo



Focus on the topics that were covered in year 9 or be brave and try a year 10 topic! Remember to choose AQA 9-1

# Striving for Excellence at GCSE

## Physics



## Physics GCSE course outline:

We study AQA's 8463 course which has 8 topics

1. Energy
2. Electricity
3. Particles in matter
4. Atomic Structure and Radioactivity
5. Forces
6. Waves
7. Electromagnetism
8. Space

In year 9 we study topics 6, 4 and 3.

In year 10 we study topics 2, 7 and 5.

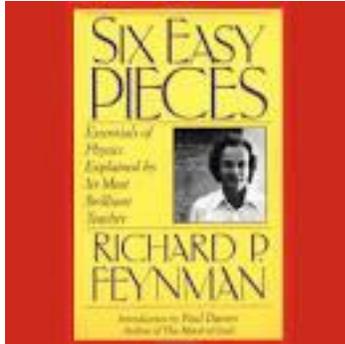
In year 11 we study topics 1 and 8 then revise and prepare for the exams.

There are two exam papers, the first has questions on topics 1 to 4, the second has questions on topics 5 to 8.

Below are a list of activities that you can do during the holidays so that you can prepare yourself for September. Don't worry if you don't manage to complete them all, the most important thing is to enjoy finding out more about the subject.

## Read

A book that is very easy to read is Richard Feynman's book called 'Six Easy Pieces'. The book takes you through the fundamentals of physics



## Watch

One or two films that are well worth a WATCH are '2001 – A space odyssey' and 'The theory of everything'



The first film is visually stunning with an amazing soundtrack and incredibly thought provoking. The second film is beautifully acted and emotional.

## Do

Physics things to DO in London and, in some cases free, are a visit to the Francis Crick Institute near King's Cross, a ride on the Zip Line at Waterloo, observe space from the Royal Observatory at Greenwich or visit the Faraday museum at the Royal Institution, Albemarle Street.