

Year 9 Summer Exams

Monday 3rd June to Friday 14th June

Revision Guide

Maths (Higher)

Number and length of exams

The year 9 exam will consist of 2x1 hour papers. The first of these papers will be non-calculator, the second will be calculator. Content can be examined on any given paper.

Content that will be on the exam

<p>Number</p> <ul style="list-style-type: none"> Density Mass Volume Estimating Significant Figures Standard Form Simplifying Surds Simplifying Ratio Dividing in to a Ratio Percentage Change Direct Proportion <p>Shape</p> <ul style="list-style-type: none"> Transformations Map Scales Volume of a Cylinder Pythagoras Trigonometry Upper and Lower bounds Bisecting an angle Perpendicular bisectors Area of a sector 	<p>Algebra</p> <ul style="list-style-type: none"> Substitution Solving equations Solving inequalities Inequalities on a number line Simultaneous Equations Changing the subject of a Formula Expanding single and double brackets Factorising single and double brackets Difference of 2 squares Rules of indices Gradient and y-intercept Algebraic Fractions Graphs of Quadratics Algebraic Proof <p>Data</p> <ul style="list-style-type: none"> Two Way Tables Scatter Graphs Mean from grouped data Probability Trees Histograms
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Revision Materials

The best way to revise Maths is to do Maths.

Websites:

www.vlemathswatch.com - for practice questions set by your teacher

www.corbettmaths.com - for topic-by-topic videos and worksheets

And of course there is your class exercise book and homework book.

Maths (Foundation)

Number and length of exams

The year 9 exam will consist of 2x1 hour papers. The first of these papers will be non-calculator, the second will be calculator. Content can be examined on any given paper.

Content that will be on the exam

<p>Number</p> <ul style="list-style-type: none"> 4 operations Converting FDP Prime Factors HCF and LCM 4 operations - Fractions Simplifying ratio Dividing in to a ratio Proportion Estimating Significant Figures BIDMAS Percentage Change Map scales Best Buy <p>Data</p> <ul style="list-style-type: none"> Probability Scatter Diagrams 2 way tables Averages from a table Probability Trees 	<p>Algebra</p> <ul style="list-style-type: none"> Collecting like terms Multiplying/Dividing algebra nth term Factorising Expanding brackets Solving equations Substitution Coordinates Distance Time Graphs Equation of a straight line <p>Shape</p> <ul style="list-style-type: none"> Faces, edges and vertices Area of shapes Transformations Interior/Exterior angles Properties of triangles Bisecting angles and lines Area and circumference of a circle Pythagoras
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English

What to Revise for your English Exam

You have **one** exam which will last 1 hour 45 minutes. The exam will be on **fiction** and you will be tested on your **reading skills** and **writing skills**.


In the reading section you will be asked to:

- Retrieve information** from a fiction (story) text
- Comment on the **language** that the writer has used
- Comment on the way the writer has **structured** their story
- Evaluate** the story by responding to and agree/disagree with a given viewpoint on the story

In the writing section you will be asked to:

- Write a story or description based on an image.
- Use a range of descriptive skills and accurate grammar.
- Organise your writing using paragraphs and a range of sentences/punctuation.

Top Revision Activities:

1. **Read** for at least 20 minutes every day. This could be your reading book or a short story – it's up to you. When you're done, write a summary of what you've read pick out any interesting or effective sentences. Write a few lines to **explain the effect** they have and how they created that effect.
2. Do some of the revision exercises on:
BBC.co.uk/bitesize/subjects/z3kw2hv - they have lots of great practice tasks. You should focus on the fiction texts and **reading/writing skills** sections.
 
3. **Write a review of a story you've read. Explain what you liked/disliked in the story and why you liked/disliked it. What techniques has the writer used to make you feel that way?**
4. **Recap your knowledge of the terminology you have learned this year. Create revision cards for similes, metaphors, simple sentences, foreshadowing etc. and practise spotting them in the texts you read.**
5. Use google images to find pictures to use as the basis for writing a description or a story.

Most of your reading questions will need you to answer using What How Why

Science

Number and length of exams

3 exams (1 each for biology, chemistry and physics), each of 30 minutes duration

Content that will be on the exam

Biology

Cell structure and transport:

- Cells as the basic structural unit of all organisms
- Adaptations of cells related to their functions
- The main sub-cellular structures of eukaryotic and prokaryotic cells
- The need for transport systems in multicellular organisms, including plants
- Use a light microscope to observe, draw and label a selection of plant and animal cells
- Investigate the effect of a range of concentrations of salt or sugar solutions on the mass of plant tissue.
- Recognise and use expressions in decimal form
- Recognise and use expressions in standard form
- Make order of magnitude calculations
- Plot two variables from experimental or other data

Chemistry

Atoms, ions and analysis:

- Separation of mixtures by physical processes
- Chromatography for separating mixtures
- Development of the model of the atom (Dalton-Bohr)
- Atoms as neutral particles (as they have the same number of protons as electrons)
- Ion formation by atoms losing or gaining electrons
- Represent atoms according to the Bohr model
- Testing for positive ions (flame tests and precipitation)
- Use a variety of concepts and models to develop scientific explanations and understanding
- Testing for halides, carbonates, sulphate ions
- Testing for common gases: oxygen, carbon dioxide, hydrogen

Physics

Energy

You need to know:

- A system is an object or a group of objects.
- There are changes in the way energy is stored when a system changes.
- The names of the different energy stores (chemical, thermal, gravitational potential, elastic potential, kinetic, nuclear, magnetic, electrostatic).
- The names of the different pathways for changing how energy is stored in a system (by heating, work done by forces, work done when a current flows, by waves).
- That “work done” is another way of saying “energy transferred”.
- How to describe all the changes involved in the way energy is stored when a system changes, for common situations. (e.g. an object projected upwards, a moving object hitting an obstacle, an object accelerated by a constant force, a vehicle slowing down, bringing water to a boil in an electric kettle).
- There are changes in the way energy is stored when a system changes.
- Energy can be transferred usefully, stored or dissipated, but cannot be created or destroyed.
- Where there are energy transfers in a closed system, that there is no net change to the total energy (and give examples).
- In all system changes energy is dissipated, so that it is stored in less useful ways. This energy is often described as being ‘wasted’.

Atomic model

You need to know:

- Before the discovery of the electron, atoms were thought to be tiny spheres that could not be divided.
- The discovery of the electron led to the plum pudding model of the atom.
- The plum pudding model suggested that the atom is a ball of positive charge with negative electrons embedded in it.
- New experimental evidence may lead to a scientific model being changed or replaced.
- The results from the alpha particle scattering experiment led to the conclusion that the mass of an atom was concentrated at the centre (nucleus) and that the nucleus was charged. This nuclear model replaced the plum pudding model.
- The difference between the plum pudding model of the atom and the nuclear model of the atom.
- Why the new evidence from the scattering experiment led to a change in the atomic model.
- Niels Bohr adapted the nuclear model by suggesting that electrons orbit the nucleus at specific distances. The theoretical calculations of Bohr agreed with experimental observations.
- Later experiments led to the idea that the positive charge of any nucleus could be subdivided into a whole number of smaller particles, each particle having the same amount of positive charge. The name proton was given to these particles.
- The experimental work of James Chadwick provided the evidence to show the existence of neutrons within the nucleus. This was about 20 years after the nucleus became an accepted scientific idea.
- Atoms are very small, having a radius of about 1×10^{-10} m.
- The basic structure of an atom is a positively charged nucleus composed of both protons and neutrons surrounded by negatively charged electrons.
- The radius of a nucleus is less than 1/10 000 of the radius of an atom.
- Most of the mass of an atom is concentrated in the nucleus.
- The electrons are arranged at different distances from the nucleus (different energy levels).
- In an atom the number of electrons is equal to the number of protons in the nucleus so atoms have no overall electrical charge.

Electric circuits

You need to know:

- The standard circuit symbols for a switch (open and closed), cell, battery, diode, resistor, variable resistor, LED, lamp, fuse, voltmeter, ammeter, thermistor and LDR.
- How to draw and interpret circuit diagrams.
- There are two ways of joining electrical components, in series and in parallel. Some circuits include both series and parallel parts.
- Electric current is a flow of electrical charge.
- The size of the electric current is the rate of flow of electrical charge.
- Know and use the equation: charge flow (Q) = current (A) × time (s).
- A current has the same value at any point in a single closed loop.
- Potential difference is the energy per unit charge.
- Know and use the equation: energy transferred (J) = charge flow (C) × potential difference (V).
- For an electrical charge to flow through a closed circuit the circuit must include a source of potential difference.
- The current through a component depends on both the resistance of the component and the potential difference across the component.
- The greater the resistance of the component the smaller the current for a given potential difference across the component.
- Know and use the equation: potential difference (V) = current (A) × resistance (Ω).
- For components connected in series there is the same current through each component.
- For components connected in series the total potential difference of the power supply is shared between the components.
- Why adding resistors in series increases the total resistance.
- For components connected in series the total resistance of two components is the sum of the resistance of each component ($R_{\text{total}} = R_1 + R_2$).
- How to solve problems for circuits which include resistors in series using the concept of equivalent resistance.
- How to calculate the current, potential difference and resistance in DC series circuits.
- For components connected in parallel the potential difference across each component is the same.
- For components connected in parallel the total current through the whole circuit is the sum of the currents through the separate components.
- For components connected in parallel the total resistance of two resistors is less than the resistance of the smallest individual resistor.
- Why adding resistors in parallel decreases the total resistance.
- How to describe the difference between series and parallel circuits .

Revision Materials

[Tassomai](#)

[\(42\) Freesciencelessons - YouTube](#)

Biology Paper 1 – Cell biology <https://www.physicsandmathstutor.com/biology-revision/gcse-aqa/cell-biology/>

Religious Studies

Number and length of exams

One 60 minute exam.

Content that will be on the exam

Your assessment will follow a GCSE style structure- exactly the same structure as our previous assessments. You will have one hour to answer 8 questions, for a total of 38 marks. This means you should aim to spend 1 ½ minutes per mark. You will be expected to write in full sentences and to fully explain your answers.

You will have to answer questions on:

- Definitions of words
- Giving your opinion
- Explaining different beliefs
- Describing key features

Your exam will cover **everything** we have learned in the first two terms.

Therefore, you need to revise:

- Sex before Marriage
- Contraception
- Homosexuality
- Roles of Women
- Abortion
- Euthanasia
- Philosophies (Epicurus, Aristotle, Plato, Cynicism, etc)
- Ethical theories (Situation Ethics, Utilitarianism, Virtue Theory etc)

Revision Materials

BBC Bitesize

<https://www.youtube.com/user/MrMcMillanREvis>

Your exercise book!

History

Number and length of exams

One 60 minute examination.

Content that will be on the exam

First World War

- Causes of the First World War, including the assassinations in Sarajevo
- Recruitment
- Trench Warfare, including the Battle of the Somme
- Weapons of World War One

Inter-War Years

- Votes for women
- Treaty of Versailles
- Hitler's rise to power in Germany
- Road to World War Two

Second World War

- Blitzkrieg & Dunkirk
- The Blitz
- Steps to the Final Solution
- The atomic bombs & the end of World War Two

You need to be aware that **the examination paper is in 3 sections:**

Section A

– A series of questions requiring short responses, but assessing a wide range of knowledge of the Year 9 History course.

Section B

- Questions are based on the study of historical sources.

Section C

- A choice of **ONE** from a choice of questions requiring a more developed/detailed written answer.

Revision Materials

GCSE and KS3 Bitesize

www.historylearningsite.co.uk

Geography

Number and length of exams

One 45 minute examination.

Content that will be on the exam

Earthquakes and Volcanoes

- Structure of a volcano and types of volcano (shield, composite)
- Earthquakes (measuring, planning/predicting, Haiti case study)
- Earthquake proof buildings
- 2004 Asian Tsunami

Weather Hazards

- Types of rainfall (relief, convectional, frontal)
- Flooding
- Extreme UK weather
- Tropical storms (distribution, cause, structure, effect)

Environments under threat

- Tropical rainforests- layers of the rainforest
- Causes and impacts of deforestation
- Rainforest animal adaptations.

Revision Materials

KS3 Bitesize

GCSE Bitesize

www.s-cool.co.uk

French and Spanish

Number and length of exams- 3 exams (Reading and Listening, Speaking-describe a photo and short follow up conversation) which will take place over two-three lessons.

Content that will be on the exam-

Listening paper

- **The topics covered on this assessment are:**
 - Me and my family, relationships
 - Free time activities (technology, sports, music, tv, cinema)
 - Festivals and celebrations

Reading paper

- **The topics covered on this assessment are:**
 - Me and my family, relationships
 - Free time activities (technology, sports, music, tv, cinema)
 - Festivals and celebrations

Speaking paper

You will be given a photocard to prepare on one of the topics from this year. This will be followed by a short conversation related to the topic.

Revision Materials

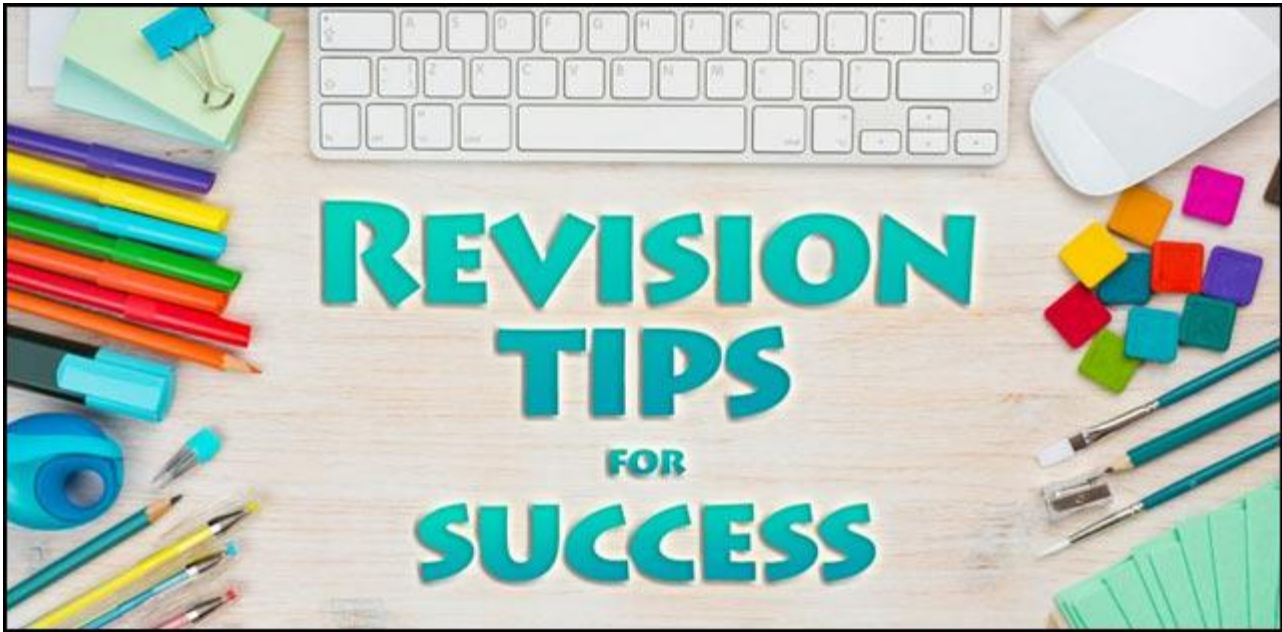
Scan the QR code links on your Sentence Builders. These link to Quizlet and will help you to revise the chunks from the sentence builders above. Go to your language gym account to play revision games based on our Sentence Builders and to practice listening and reading skills.

Or make your own Quizlet and Blooket games- great for testing yourself and learning the sentence builder chunks!

Use your Describing a photo Sentence Builder to help you develop your answers. Scan the QR code on this to practice the chunks.

[Language Gym - Home \(language-gym.com\)](http://language-gym.com)

Revision Tips



1. Set up the perfect study space

Make sure that it is well lit, not too hot or cold and quiet enough for you to work.

2. Start with the biggest or most difficult

It might seem easier to start with the smaller or easiest bits but by tackling the biggest, most challenging topics first you'll feel more confident in the long run!

3. Take regular breaks

It's important to ensure that you take regular breaks, you need to rest your brain to process the information you're learning. Arrange time with friends and family or watch a bit of Netflix (just be sure not to binge watch a whole series!)

4. Use the best methods for you

By now, you'll have an idea which revision techniques work best for you and don't be afraid to use a new one if you're struggling to absorb a topic. Do whatever works best for you.

5. Look ahead and make a plan

Look at your exam timetable and create a revision plan based on it. It'll help to keep your revision organised.

6. Eat healthily

Make sure to eat three healthy meals a day and limit your caffeine and sugar intake. Power foods for your brain include blueberries, salmon and nuts, so be sure to stock up!

7. Move distracting apps out of view

Your phone can be a huge help for revision, but also a huge distraction! Move any apps that are likely to distract you to the last page, so you aren't tempted. Add apps that can help you (like the GCSE Pod app!) to your home screen as a reminder to keep up with revision.

8. Exercise

A healthy body = a healthy mind. Try and do at least 20 minutes of physical activity a day to help improve focus and stay relaxed.

Revision Techniques

There are some English literature specific revision techniques on the next page. These techniques are useful for most subjects!

1. Summary Posters

Use key words, pictures and definitions to design a poster on a topic or a whole subject. Put the summary poster up in your room and regularly look at it.

2. Mind mapping

Summarise what you've learnt by creating a mind map. Start by putting the name of the topic in the centre of a piece of paper. Add branches (like a tree) and add additional key words to each branch which are associated with the main topic. Keep adding more detail as the branches become smaller and use images and colours as well as words to help the information stand out. Use keywords in circles, linking them with branches that contain short sentences linking the keywords.

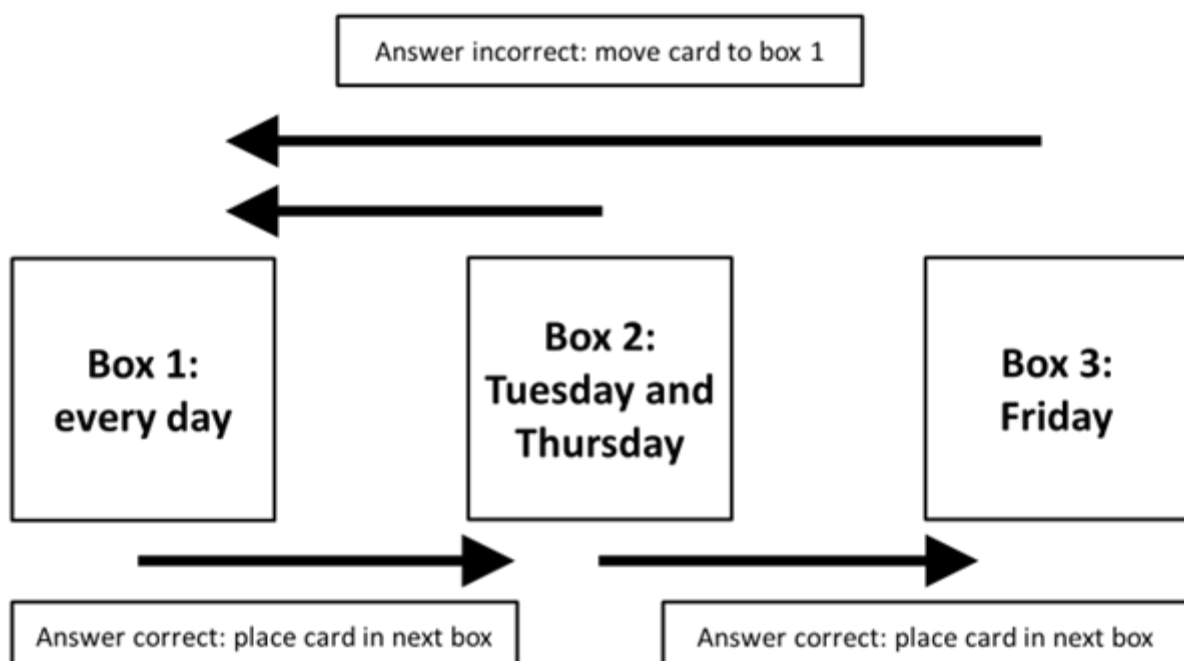
3. Flash Cards

On one side of a flash card or post it note, write a question and the other side, the answer. Only use questions that are things you must memorise, such as:

- Define this keyword
- State the date something happened
- State the equation linking these three things
- Draw a diagram and name it or a labelled part (e.g. circuit components, parts of a cell)
- Describe the function of something (e.g. the mitochondria)
- List the causes of a particular event (e.g. WW1)
- List the outcomes of an event

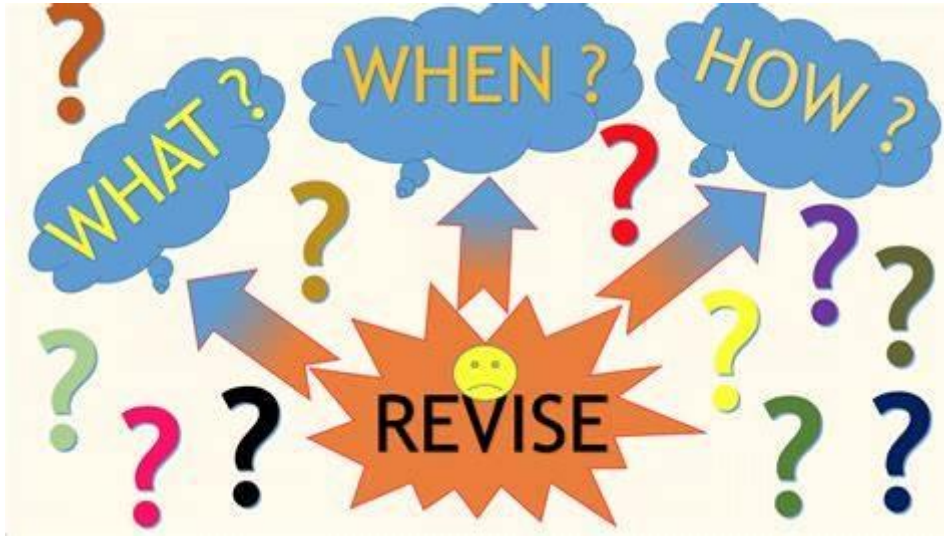
When you test yourself, read the question and think about the answer. When you have a final answer in your mind, turn the card over and check your answer. Have three boxes in your room for your flashcards and use them like this:

Self-testing flashcards



4. Question yourself

Try to improve your knowledge by asking yourself questions such as: Who? When? Where? Why? What? How? This is great to do with your parents or friends!



5. Practice Exam Questions & Past Papers

Practising exam questions and past papers helps to perfect your exam techniques whilst checking your knowledge and highlighting any gaps you may have. Make sure to mark them according to the mark schemes and ask your teacher about anything you do not understand.

6. Mnemonics

A mnemonic is a code that you create using acronyms, phrases or rhymes and it's designed to help you recall knowledge easily. For example, if you have to remember the order of the colours in the visible spectrum (red, orange, yellow, green, blue, indigo, violet) you could use this mnemonic to help you remember: 'Richard of York Gave Battle in Vain'. The first letter of each word in the sentence refers to the first letter of the colour.

7. Note-Taking

Summarise your notes using your own words. Keep your notes brief and use colours and diagrams to help highlight key words, quotes, and dates. This should be very brief – no longer than 1 page for a topic!

8. Timeline

Design a timeline for those subjects where chronology is important, like history, English literature, psychology. They are invaluable for making sense of a series of events or plot. Use key dates and imagery to help you.

9. Ask your teacher!

Find your teacher before school, after school, or at break/lunch to ask questions about things you do not understand. If you cannot find your teacher, send them an email asking for help.

Revision Timetable

Time	Monday	Tuesday	Wednesday	Thursday	Friday	Time	Saturday	Sunday
4pm						9am		
						10am		
5pm						11am		
						12noon		
6pm						1pm		
						2pm		
7pm						3pm		
						4pm		
8pm						5pm		
						6pm		