Year 8 Summer Exams

Monday 3rd June to Friday 14th June

Revision Guide

KNUTSFORD ACADEMY

Year 8 Revision Guide

Maths

Number and length of exams

Two 1 hour exams (1 non calculator and 1 calculator)

Content that will be on the exam

Pi scheme of work:
- Negative numbers
- Ratios
- Properties of 3d shapes
- Volume and surface area
- Drawing and interpreting graphs
- Simplifying algebraic expressions
- Solving equations
- Expanding brackets
- Fractions, decimals and percentages
- Rounding
- Measuring and drawing angles
- Angles in a triangle
- Powers and roots
- Factors and multiples
- Prime factors
- Sequences
- Probability

Theta scheme of work:
- Factors and Prims
- Negatives
- Powers and roots
- Area of quadrilaterals
- Properties of 3d shapes
- Surfaces area
- Measures
- Expanding and factorising
- Solving equations
- Fractions, decimals and percentages
- Ratio and proportion
- Interior and exterior angles
- Conversion graphs
- Distance time graphs
- Finding the gradient
- Equation of straight line

Delta scheme of work:
- Prime Factors
- Rules of indices
- Averages from a table
- Comparing data
- Finding quartiles and IQR
- Simplifying expressions
- Expanding and factorising
- Substituting into formula
- Scale drawings and maps
- Bearings
- Construction
- Loci
- Real life graphs
- Distance time graphs
- Finding the gradient
- Equation of a line
- Parallel and perpendicular lines
- Probability
- Recurring decimals
- Percentage change
- Compound interest and depreciation

Revision Materials

The best way to revise Maths is to do Maths!

Sparx Maths:
Click on independent learning to search for specific topics you're struggling with.

Maths Watch:
https://vle.mathswatch.co.uk/vle/
Username: FirstnameSurname@knutsford
Password: DD/MM/YYYY (date of birth)

Corbett Maths (practice questions and videos):
www.corbettmaths.com

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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

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Science

Number and length of exams 3 x 30 minutes (1 each in Biology, Chemistry and Physics)

Content that will be on the exam

Biology

Organisims:

- The structure and functions of the human skeleton (support, protection, movement and making blood cells)
- Biomechanics – the interaction between skeleton and muscles, including the measurement of force exerted by different muscles
- The function of muscles and examples of antagonistic muscles
- Content of a healthy human diet: carbohydrates, lipids (fats and oils), proteins, vitamins, minerals, dietary fibre, and water, and why each is needed
- Calculations of energy requirements in a healthy daily diet
- The consequences of imbalances in the diet, including obesity, starvation, and deficiency diseases
- The tissues and organs of the human digestive system, including adaptations and how the digestive system digests food (enzymes simply as biological catalysts)
- The structure and functions of the gas exchange system in humans, including adaptations
- The mechanism of breathing to move air in and out of the lungs, using a pressure model to explain the movement of gases, including simple measurements of lung volume
- The impact of exercise, asthma and smoking on the human gas exchange system
- The effects of recreational drugs (including substance misuse) on behaviour, health, and life processes
- Aerobic respiration in living organisms, including the breakdown of organic molecules to enable all the other chemical processes necessary for life
- Use word equations

Chemistry

Solubility:

- Dissolving, using ideas about particles
- The effect of different solvents on solubility
- Why solutions become saturated and how to make a saturated solution
- The effect of temperature on the solubility of a solid solute
- Pure substances have fixed melting and boiling points and these are affected by the addition of impurities
- Write a concise method for a planned investigation
- Tabulate results from an investigation
- Analyse and interpret solubility curves

Metal properties:

- Location of metals on the Periodic Table
- Typical physical properties of metals
- Metals can be mixed to form alloys with desired properties.
- Alloys are harder than pure metals in terms of distortion of the layers of atoms in the structure of a pure metal
- Products of chemical reactions of metals with water, oxygen, and acids
- Comparing the reactivity of metals
- Reactivity of metals is given as their place in the electrochemical series
- More reactive metals can displace less reactive metals from compounds
- Write a plan for an investigation from a given hypothesis

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Physics

Energy:

- The difference between thermal energy and temperature
- What happens when you heat up solids, liquids, and gases
- When there is a temperature difference, energy transfers from the hotter to the cooler object
- Two objects are in thermal equilibrium with each other if they are at the same temperature
- Thermal energy is transferred through different pathways:
    - By particles in conduction (through contact)
    - By particles in convection (through fluid motion)
    - By waves in radiation
- Know what a thermal conductor and thermal insulator are and give examples of each
- How to explain thermal energy transfer by convection
- We experience infrared radiation as heat
- Such transfers (conduction, convection, and radiation) tend to reduce the temperature difference
- Use of insulators
- How to explain how methods of thermal insulation work in terms of conduction, convection, and radiation
- The rate of cooling decreases as the temperature decreases (and the objects reach thermal equilibrium)
- Work is done and energy transferred when a force moves an object
- The bigger the force or distance, the greater the work
- $work\ done = force \times distance$
- Units of work done (J), force (N) and distance (m)
- Machines make work easier by reducing the force needed
- Simple machines give bigger force but at the expense of smaller movement (and vice versa): product of force and displacement unchanged
- Levers and pulleys do this by increasing the distance moved, and wheels reduce friction

Forces

- Moment is the turning effect of a force
- A moment can be calculated by: $moment = force \times distance\ from\ the\ pivot$
- Moments are measured in newton metres (Nm)
- In equilibrium, the sum of the clockwise moments is equal to the sum of the anticlockwise moments
- One effect of a force is to change an object's form, causing it to be stretched or compressed
- Forces are measured in newtons
- How to take measurements of stretching as force is changed
- Hooke's Law: $force = spring\ constant \times extension$
- Pressure is measured by ratio of force over area
- Pressure acts normal to any surface
- $pressure = \frac{force}{area}$
- Units of pressure (Pa), force (N) and area (m^2)
- Pressure acts in a fluid in all directions
- Pressure increases with depth due to the increased weight of the fluid
- Pressure in liquids increases with depth, resulting in an upthrust
- Objects sink or float depending on whether the weight of the object is bigger or smaller than the upthrust
- Atmospheric pressure is caused by the weight of the air above a surface
- Atmospheric pressure decreases with increase of height

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Revision Materials

Tassomai

(42) Freesciencelessons - YouTube

https://www.bbc.co.uk/bitesize/subjects/zng4d2p

Check on SatchelOne for a task from DBN which contains more details for each topic, links to useful websites and questions for you to attempt (if you cannot see the document using the SatchelOne app, you may need to go onto the actual website instead).

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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. You will have one hour to answer 8 questions, for a total of 40 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:

- Judaism
  - Nature of God
  - Abraham
  - Moses
  - The Messiah
  - Jewish Law
  - Synagogue
  - Shabbat
  - Rites of Passage (Weddings, funerals, Bar/Bat Mitzvahs)
- Christianity
  - God as creator
  - The Trinity
  - Rites of Passage
  - Festivals (Easter and Christmas)
  - Pilgrimage
  - Incarnation
  - Miracles
  - Parables
  - Crucifixion

Revision Materials

BBC Bitesize

https://request.org.uk

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History

Number and length of exams

One 60 minute examination.

Content that will be on the exam

Tudor times and the English Reformation

- The Reformation in Europe

- Henry VIII's divorce and the break with Rome

- The dissolution of the monasteries

- Edward VI, the Protestant King

- "Bloody" Mary Tudor

- Elizabeth I and the catholic threat

→ Mary, Queen of Scots

→ Armada

Stuart times and the English Civil War

- The Gunpowder Plot

- Causes and events of the Civil War (King vs Parliament)

- The execution of Charles I

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

Section A

– A series of questions requiring short responses.

Section B

- Questions are based on the study of historical sources.

Section C

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

Revision Materials

GCSE Bitesize and www.historylearningsite.co.uk

Geography

Number and length of exams

One 45 minute examination

Content that will be on the exam

Population

- Measuring population
- Demographic Transition Model
- China's One Child Policy
- Migration (types, push/pull factors, impacts of migration, Poland to the UK)

Development

- Ways of measuring development and quality of life
- The development gap (reasons)
- Ways of tackling the development gap
- Ghana case study (location, development issues, tackling development)

Globalisation

- Fairtrade
- Tourism in Blackpool (rise and fall of tourism and the Butler Model)
- Tourism in Kenya (advantages and disadvantages)

Revision Materials

KS3 Bitesize

GCSE Bitesize

www.s-cool.co.uk

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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

Sentence builder 1- Food, likes and dislikes and why?

Sentence builder 2-Talking about mealtimes.

Reading paper

Sentence builder 13-talking about a past holiday.

Sentence builder 15-talking about a day trip past and future.

Short translation into English-

Sentence builder 8-saying where I live and where I am from

Sentence builder 10-my house

Sentence builder 11-my ideal house

Speaking paper

Sentence Builder-describing a photo

Revision Materials

Scan the QR codes on your Sentence Builders to learn your chunks.

Quizlet and Blooket are great for testing yourself and learning the sentence builder chunks!

Language Gym - Home (language-gym.com)

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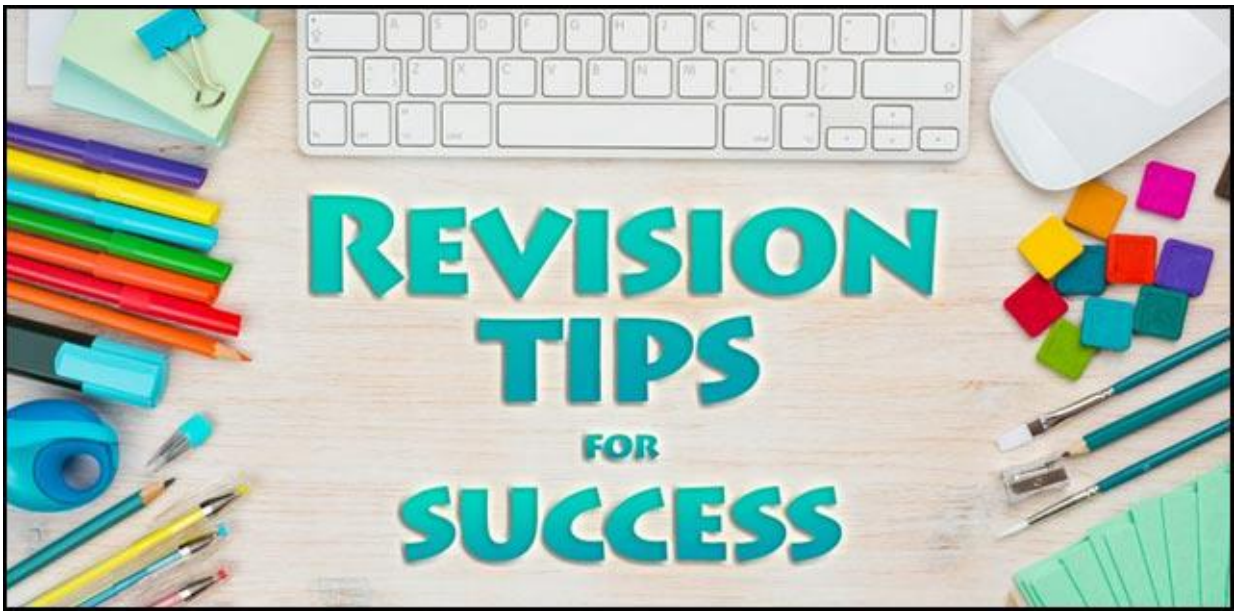
Revision Tips



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. Don 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

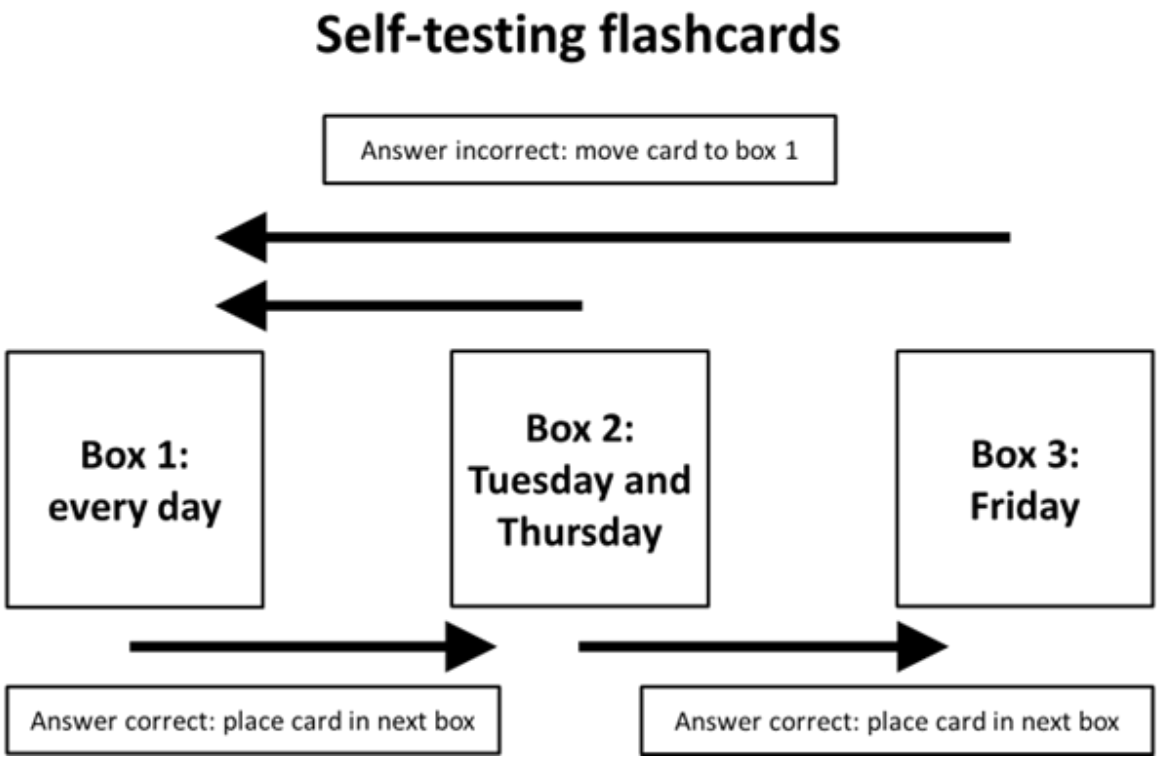
Summarise what you've learnt by creating a mind map. Start by putting the name of the topic in the centre of a piece of paper. Add branches (like a tree) and add additional key words to each branch which are associated with the main topic. Keep adding more detail as the branches become smaller and use 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:

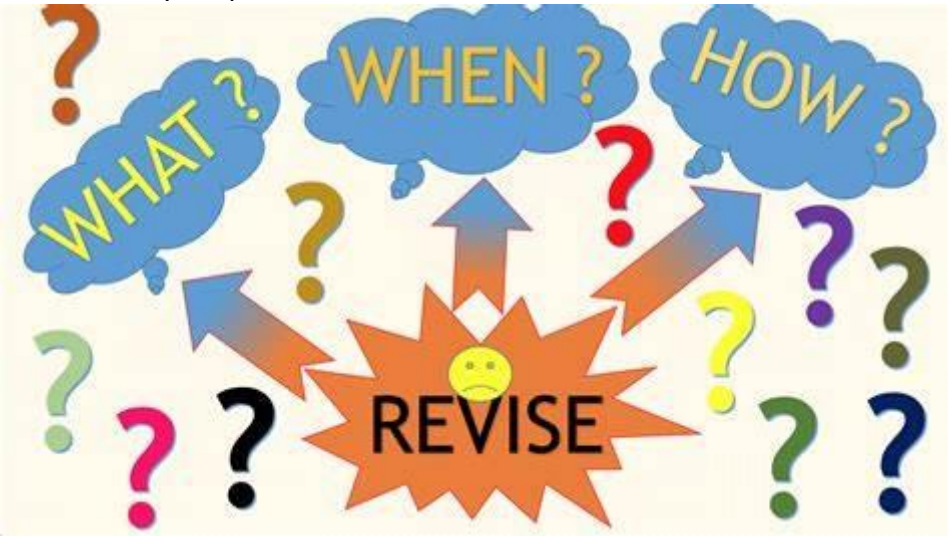
- Define this keyword
- State the date something happened
- State the equation linking these three things
- Draw a diagram and name it or a labelled part (e.g. circuit components, parts of a cell)
- Describe the function of something (e.g. the mitochondria)
- List the causes of a particular event (e.g.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



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.

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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		