

# Revision Techniques



A hands on session for pupils and their parents/carers to explore numerous ways to revise

# Revision Tips

- Start revising early
- Plan your revision using a revision timetable
- Don't spend ages making your notes look pretty
- Have a dedicated study space
- Use a variety of different revision methods
- Use past papers
- Revise in short bursts with a break in between
- Sleep and eat properly



# Revision Tips



## 1 START AS EARLY AS YOU CAN

Cramming at the last minute is stressful and has limited success.



## 2 MAKE A PLAN

Work out how much time you have and how long you can spend on each subject.



## 3 CREATE A STUDY SPACE

Find a quiet spot away from distractions and keep your things all in one place.



## 4 MIX IT UP

Use a mixture of revision for best results. See our metacognition pods for more info.



## 5 TAKE REGULAR BREAKS

It is possible to work too hard, make sure to take regular breaks.



## 6 REVISE WITH A FRIEND

Talking through what you've learned can help information stick.



## 7 USE PAST PAPERS

These are a great way to get used to exam format and testing what you have learnt.



## 8 EAT HEALTHY

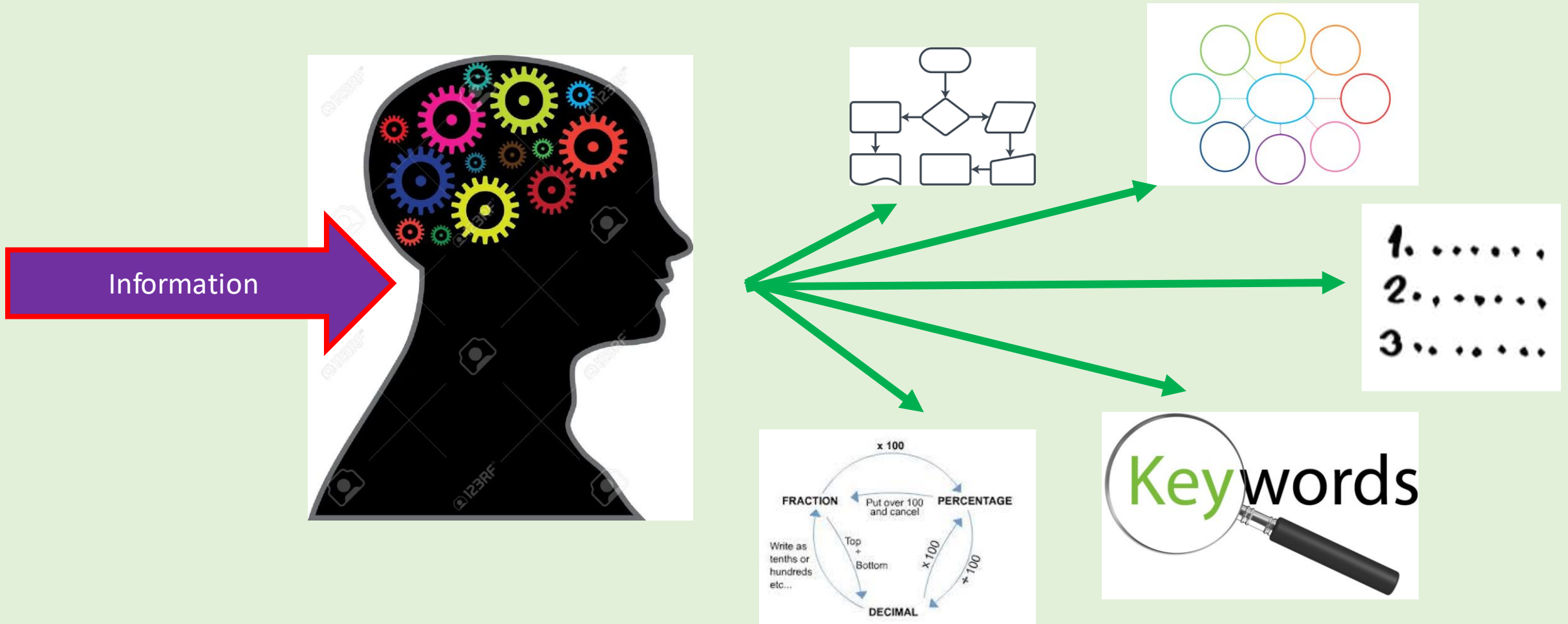
Certain foods boost your brainpower and will help you remember more.

|                  | <b>Lesson 6</b> | <b>4-5pm</b> | <b>5-6pm</b> | <b>6-7pm</b> | <b>7-8pm</b> | <b>8-9pm</b> | <b>Notes</b> |
|------------------|-----------------|--------------|--------------|--------------|--------------|--------------|--------------|
| <b>MONDAY</b>    | Maths           |              |              |              |              |              |              |
| <b>TUESDAY</b>   | English         |              |              |              |              |              |              |
| <b>WEDNESDAY</b> | Science         |              |              |              |              |              |              |
| <b>THURSDAY</b>  | RE/Spanish      |              |              |              |              |              |              |
| <b>FRIDAY</b>    |                 |              |              |              |              |              |              |

|                 |  |  |  |  |  |  | <b>Notes</b> |
|-----------------|--|--|--|--|--|--|--------------|
| <b>SATURDAY</b> |  |  |  |  |  |  |              |
| <b>SUNDAY</b>   |  |  |  |  |  |  |              |

# How to Revise

Reading notes is the most basic form of revision, but to really know your stuff your brain has to **PROCESS** the information you are reading and spit it out in a different format.

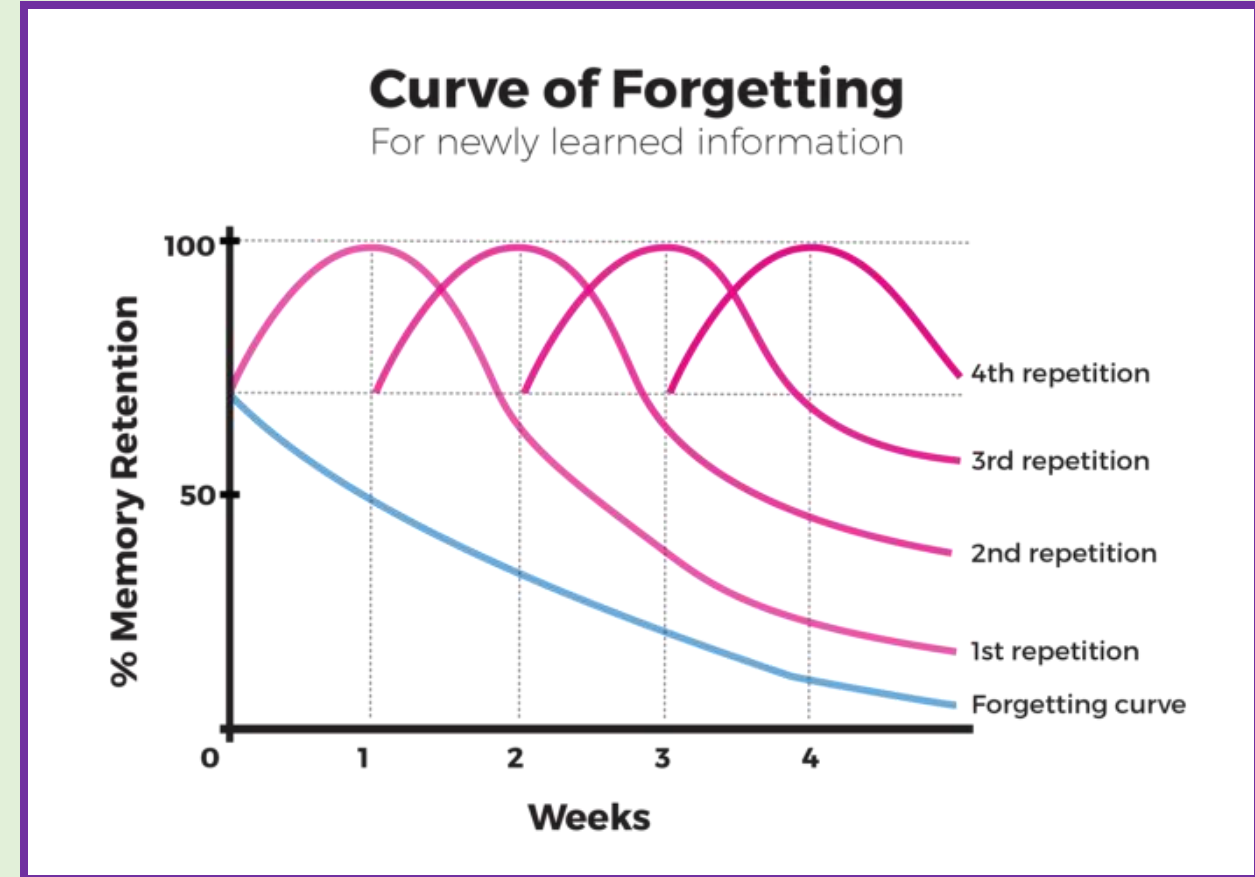




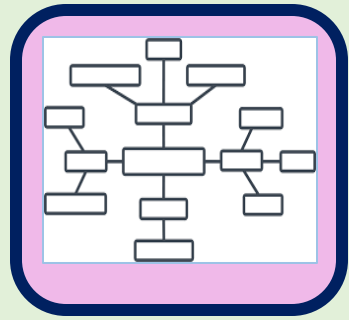


# After each revision session

- 10 minutes later revise the topic for **10 minutes**
- 1 day later revise the topic for **5 minutes**
- 1 week later revise the topic for **2-5 minutes**
- 1 month later revise the topic for **2-5 minutes**
- Before exams revise the topic as required.
- **Each time knowledge is reinforced; it enters deeper into the long-term memory and becomes more stable.**



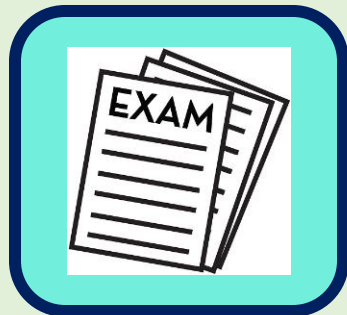
# Revision Activities



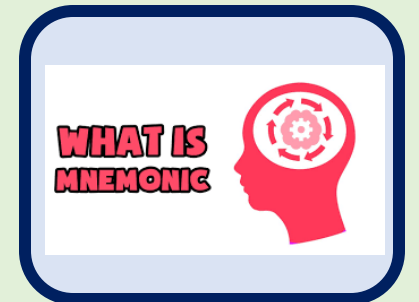
- Mind-maps
- Key words – post-its
- Flash Cards



- Videos/Podcasts
- Family and Friends Test
- Past Papers and Mark Scheme



- Highlight
- Song/Chant
- Online resources
- Mnemonics
- Write your own Qs
- Minimize



# In summary

- ✓ There are many ways to revise – some better than others!
- ✓ Revision isn't a 1 off event – it takes months to learn the content of your courses.
- ✓ A timetable will help you do this.
- ✓ You need to try many different ways until you find the one's that work for you and your subjects
- ✓ Doing nothing will result in poor results





# GCSE Science



## Minimizing

- Pick out the key information
  - Remember to use key words
- Condense as much as possible
  - Can you save space by replacing words with symbols or using a diagram?
  - What about arranging information into bullet points or into a table?

## Malaria

**Malaria** is spread by mosquitos which carry the Plasmodium protist. These are often found in areas with higher temperatures like Africa, Asia, and South and Central America, but not the UK. Mosquitos suck blood containing the protists from an infected person. They pass the protist, to other people they suck blood from. The mosquitos do not become ill and are called '**vectors**' because they transmit the disease.

The symptoms of malaria include a fever, sweats and chills, headaches, vomiting and **diarrhoea**. Of the 200 million people infected each year, up to half die from this disease. There is no **vaccination** for malaria.

Infection can only be prevented by stopping individuals from being bitten. People sleep under mosquito nets and wear insect repellent to avoid bites. **Antimalarial drugs** are also taken, which treat the symptoms and can prevent infection.



## Measles

**Measles** is a very infectious viral disease that is often caught by young children. It is transmitted through the air in tiny droplets after an infected person sneezes. It causes a fever and skin rash. Many children in developed countries are given **vaccines** against measles, but sadly this is not the case throughout the world. Infection can cause more serious effects like infertility in adults who did not catch the disease as children.

### Measles

Pathogen – virus

Transmission – droplets

Symptoms – fever/rash

Prevention - vaccination

## Malaria

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'**vectors**' because the

The symptoms of malaria are fever, chills, headaches, vomiting, and sweating. Over 2 million people are infected with this disease. There is

Infection can only be spread from being bitten. People sleep under mosquito nets and wear insect repellent to avoid bites. **Antimalarial drugs** are also taken, which treat the symptoms and can prevent infection.



## Measles

**Measles** is a very infectious viral disease that is often caught by young children. It is transmitted through the air in tiny droplets after an infected person sneezes. It causes a fever and skin rash.

countries are, but sadly this is not. Infection can cause blindness in adults who did not have the disease as a child.

| Name    | Pathogen | Transmission          | Symptoms                        | Prevention                            |
|---------|----------|-----------------------|---------------------------------|---------------------------------------|
| Measles | Virus    | Droplets              | Fever<br>Rash                   | Vaccination                           |
| Malaria | Protist  | Vector -<br>mosquitos | Fever<br>Vomiting/<br>diarrhoea | Mosquito nets /<br>Anti-malaria drugs |



Minimizing

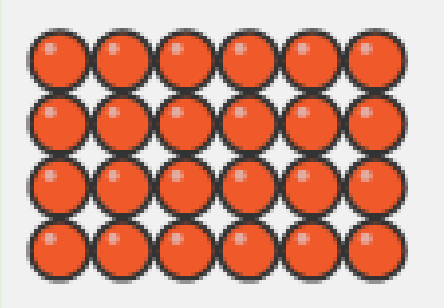
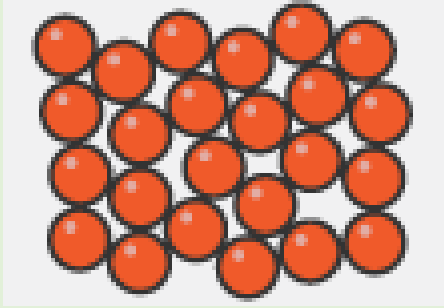
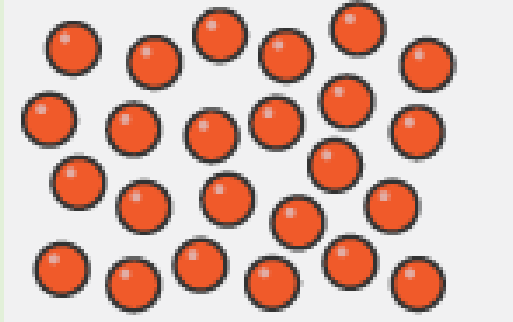



# The Particle Model



- The particle model is a scientific theory which explains the properties of solids, liquids and gases by looking at how the particles behave in each state.
- The particles in a solid are close together in a regular pattern with a high density. The particles vibrate around a fixed position and cannot move around because there are strong attractive forces holding them together. This is the reason they have a fixed shape and a fixed volume. The particles have a low kinetic energy.
- In a liquid, the particles are close together in a random arrangement and are able to move around freely. The density of a liquid is a little less than a solid but the particles have more kinetic energy. Liquids have a fixed volume but do not have a fixed shape, which is why they can be poured.
- In a gas, the particles move randomly. They are far apart because there are no attractive forces holding them together, this is the reason they have no fixed volume and will fill their container. The particles in a gas have a high kinetic energy and a low density.
- Solids can melt into liquids when they are heated and their particles gain energy. The attractive forces become weaker allowing the particles to move around freely. If the liquid continues to be heated then it can evaporate into a gas by removing all of the attractive forces and giving the particles lots more kinetic energy.



|                      | Solid  | Liquid   | Gas   |
|----------------------|--|--|---|
| Particle arrangement |   |   |    |
|                      | <ul style="list-style-type: none"> <li>• Closely packed, high density</li> <li>• Regular pattern</li> </ul>  | <ul style="list-style-type: none"> <li>• Random</li> <li>• Closely packed, high density (slightly less than solid)</li> </ul>                          | <ul style="list-style-type: none"> <li>• Random</li> <li>• Far apart, low density</li> </ul>  |
| Movement/<br>Forces  | <ul style="list-style-type: none"> <li>• Strong attractive forces</li> <li>• Vibrate about a fixed position so</li> <li>• Fixed shape and volume</li> </ul>  | <ul style="list-style-type: none"> <li>• Strong attractive forces but</li> <li>• Can move freely</li> <li>• No fixed shape but fixed volume</li> </ul> | <ul style="list-style-type: none"> <li>• Weak attractive forces</li> <li>• Can move freely</li> <li>• No fixed shape or volume</li> </ul> |
| Energy               | <p style="text-align: center;"> <br/>           Low Kinetic Energy <span style="float: right;">High Kinetic Energy</span> </p> |  |   |

# GCSE Maths



## Highlighting

- Pick out the key information
  - Highlight the key words or key themes
- Follow up
  - Highlight any words/themes you do not understand
  - Find a teacher/ friend to go over anything you don't understand
- Repeat these steps

Had a look

Nearly there

Nailed it!

NUMBER

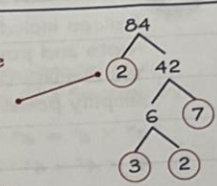
# Factors and primes

The **factors** of a number are any numbers that divide into it exactly. A **prime number** has exactly two factors. The prime numbers are 2, 3, 5, 7, 11, 13, 17, 19 and so on.

## Prime factors

If a number is a factor of another number **and** it is a prime number then it is called a **prime factor**. You use a factor tree to find prime factors.

Remember to circle the prime factors as you go along. The order doesn't matter.



$$84 = 2 \times 2 \times 3 \times 7$$

$$= 2^2 \times 3 \times 7$$

Remember to put in the multiplication signs. This is called a **product of prime factors**.

The highest common factor (HCF) of two numbers is the **highest number** that is a **factor** of both numbers.

The lowest common multiple (LCM) of two numbers is the **lowest number** that is a **multiple** of both numbers.

## Worked example

Target grade 4

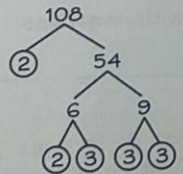
## Examiners' report

If you have to write a number as a **product** of prime factors, make sure you use  $\times$  signs in your final answer. Don't use  $+$ , and don't just write a list of prime factors.

Real students have struggled with questions like this in recent exams - **be prepared!**



(a) Express 108 as a product of powers of its prime factors. (3 marks)



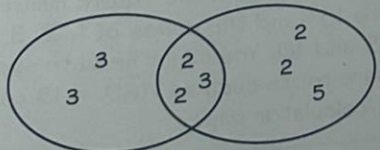
$$108 = 2 \times 2 \times 3 \times 3 \times 3 = 2^2 \times 3^3$$

(b)  $240 = 2^4 \times 3 \times 5$

Find, as a product of powers of its prime factors,

(i) the highest common factor (HCF) of 108 and 240 (1 mark)

Factors of 108      Factors of 240



$$\text{HCF} = 2 \times 2 \times 3 = 2^2 \times 3$$

(ii) the lowest common multiple (LCM) of 108 and 240 (1 mark)

## Now try this

Target grade 4

- (a) Express 980 as a product of its prime factors. (3 marks)
- (b) Find the highest common factor (HCF) of 980 and 56. (2 marks)



# Effective use of your revision guides

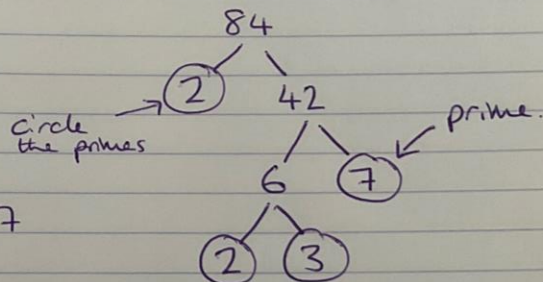
- Page 1 of the Higher revision guide has the same content as page 12 in the foundation book
- At the top of the page is the “had a look” boxes
- I have made notes on the page and then I will tick the first box.
- After a little break I will then go back to my notes and use them to try and answer the questions using the worked example to help me start.

## Factors and Primes.

The factors of a number are any numbers that divide into it exactly.

A prime number has exactly 2 factors.  
The prime numbers are 2, 3, 5, 7, 11, 13, 17, 19... and so on.

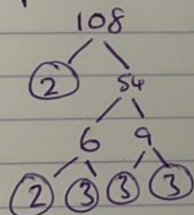
Prime factors use a factor tree



$$\begin{aligned} \text{So } 84 &= 2 \times 2 \times 3 \times 7 \\ &= 2^2 \times 3 \times 7 \end{aligned}$$

\* Remember to put in multiplication signs.  
This is the product of prime factors

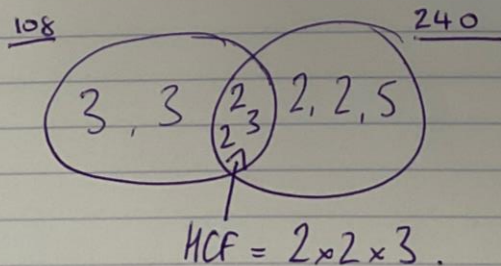
a) Express 108 as a product of powers of its prime factors.



$$\begin{aligned} 108 &= 2 \times 2 \times 3 \times 3 \times 3 \\ &= 2^2 \times 3^3 \end{aligned}$$

b)  $240 = 2^4 \times 3 \times 5$ , find as a product of its prime factors.

i) the HCF of 108 & 240



use prime factor form  
put in the middle  
(the intersection/overlap)  
first.

The notes at the top of the page contain key information



- I have underlined the keywords that are in bold in the book.
- As I read through my notes for the second time, I may then get a highlighter and highlight any words I am unsure of.
- I will then bring this to school and ask my Maths teacher.





Highlighting





# Indices 1

The index laws tell you how to work with powers of numbers.

## 1 Index laws

Indices include square roots, cube roots and powers. You can use the index laws to simplify powers and roots.

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

$$4^3 \times 4^7 = 4^{3+7} = 4^{10}$$

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

$$12^8 \div 12^3 = 12^{8-3} = 12^5$$

$$(a^m)^n = a^{mn}$$

$$(7^3)^5 = 7^3 \times 5 = 7^{15}$$

## 2 Cube root

The cube root of a positive number is positive.

$$4 \times 4 \times 4 = 64$$

$$4^3 = 64$$

$$\sqrt[3]{64} = 4$$

The cube root of a negative number is negative.

$$-4 \times -4 \times -4 = -64$$

$$(-4)^3 = -64$$

$$\sqrt[3]{-64} = -4$$

## 3 Powers of 0 and 1

Anything raised to the power 0 is equal to 1.

$$6^0 = 1 \quad 1^0 = 1 \quad 7223^0 = 1 \quad (-5)^0 = 1$$

Anything raised to the power 1 is equal to itself.

$$8^1 = 8 \quad 499^1 = 499 \quad (-3)^1 = -3$$

### Indices checklist

The base numbers have to be the same.

If there's no index, the number has the power 1.

Be careful with negatives:  $(-3)^2 = 9$ .



### Worked example

Target grade 5

(a) Write  $6 \times 6 \times 6 \times 6 \times 6$  as a single power of 6. (1 mark)

$$6 \times 6 \times 6 \times 6 \times 6 = 6^5$$

(b) Simplify  $\frac{3^8 \times 3}{3^4}$  fully, leaving your answer in index form. (2 marks)

$$\frac{3^8 \times 3}{3^4} = \frac{3^9}{3^4} = 3^5$$

For 1(b), start by working out  $\frac{9625}{7 \times 11}$

3 is the same as  $3^1$ . For part (b), use the rule  $a^m \times a^n = a^{m+n}$  to simplify the numerator; then use  $\frac{a^m}{a^n} = a^{m-n}$  to simplify the fraction. Remember to write down both steps of your working and give your answer as a power.

### Learn it!

You need to learn the square numbers up to  $15^2$  and the cubes of 1, 2, 3, 4, 5 and 10. You might need to spot square roots such as  $\sqrt{169} = 13$  on your non-calculator paper.

### Now try this

1 (a) Write  $7^3 \times 7^5$  as a single power of 7. (1 mark)

(b)  $9625 = 5^n \times 7 \times 11$   
Find the value of  $n$ . (2 marks)

2  $(\sqrt[3]{-27})^k = 9$   
Write down the value of  $k$ . (2 marks)

3 (a) Simplify, leaving your answers in index form  
(i)  $\frac{2^9}{2^5}$  (ii)  $(7^2)^6$  (iii)  $5^2 \times 5^0$  (3 marks)

(b)  $\frac{3^n}{3^2 \times 3^5} = 3^4$   
Find the value of  $n$ . (2 marks)

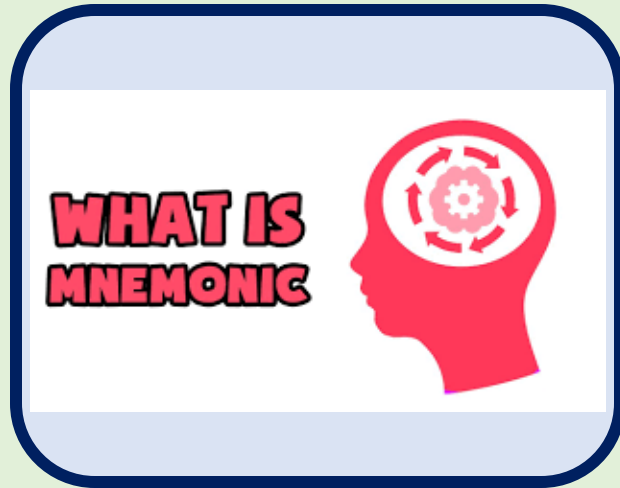
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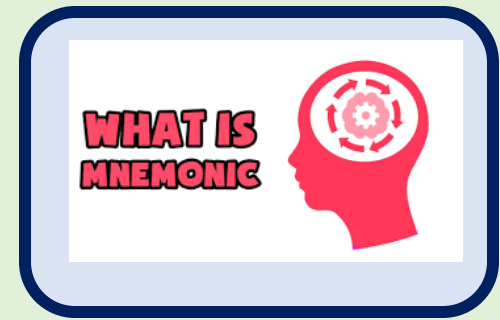
# GCSE English

## Mnemonics

Take the first letter of a list or sequence.

Use each letter to create a word or phrase that will help you to remember them.





- Remember what features to use in descriptive writing
  - Metaphor, simile, alliteration, personification, triple adjective, personification
- Take the first letter of each feature. Use each letter to create a word or phrase that will help you to remember these features.

A



A – Alliteration  
S – Simile  
T – Triple  
O – Onomatopoeia  
M – Metaphor  
P – Personification



## Mnemonic





- Remember what features to use in writing to explain and argue

Flattery, personal pronouns, imperative sentences, rhetorical questions, emotive language, statistics, repetition...

What other feature of language are used?

- Take the first letter of each feature. Use each letter to create a word or phrase that will help you to remember the features.





# GCSE RE

## Using recommended revision videos



- Revision videos can contain lots of key information.
- It is not enough to simply watch the video.
- You need to make notes of key terms, SOWA's, religious teachings.
- Minimize the information – you can expand it afterwards when you attempt a GCSE style question.



**“WE MUST  
NEVER FORGET  
THAT THE PLANET  
BELONGS TO ALL  
MANKIND”**



# Key themes for CST

## \* Justice

↳ Do what is right + fair

## \* Peace

↳ Encourage harmony

↳ 'Blessed are the peacemakers'

## \* Reconciliation

↳ Show forgiveness to all.

# Catholic Social Teaching

All life is important

- ↳ sanctity of life
- ↳ Protected
- ↳ Dignity
- ↳ Respect

All life is made in the image of God  
↳ 'Imago dei'

The highest priority must be the poor and vulnerable

↳ 'planet belongs to all of mankind.'

= SHARE YOUR WEALTH!



Good Samaritan

Sheep + the Goats

Love God and love your neighbor







You could then use this information to help you to create and answer an exam style question.

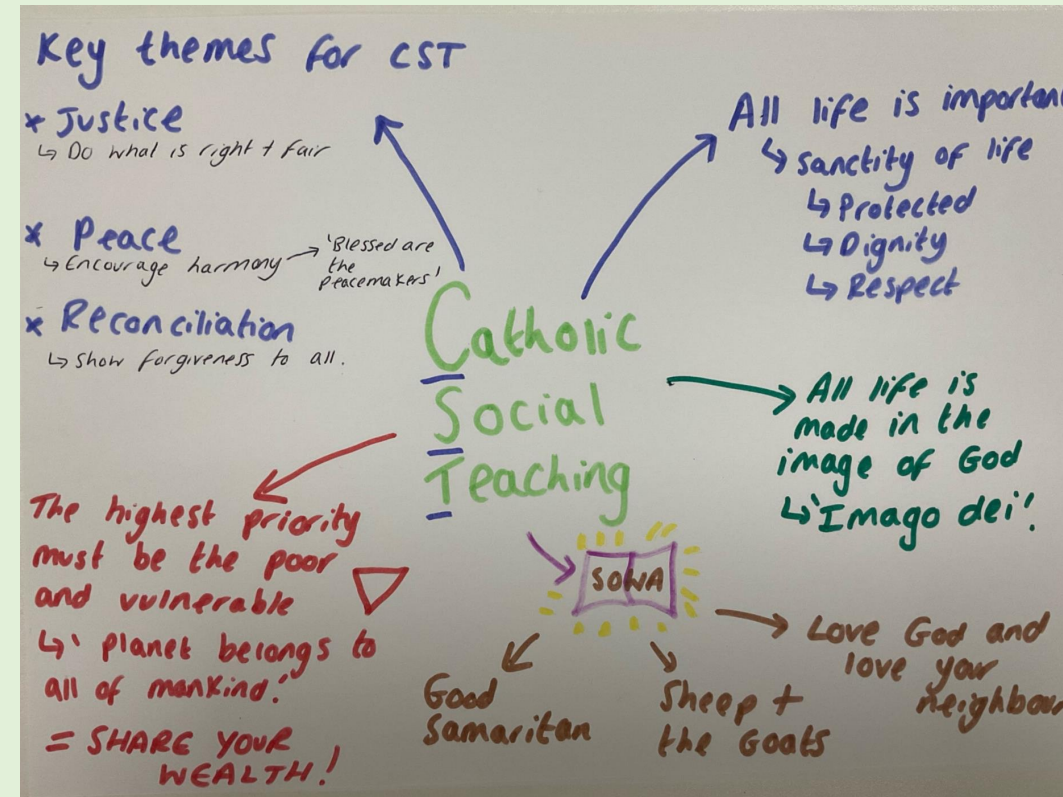
A) Outline three.....

B) Explain two.....

C) Explain two....

In your answer you should refer to a source of wisdom and authority.

D) Evaluate.





Videos

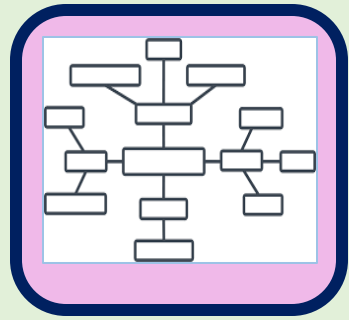






**“FOR IN ONE  
BODY WE HAVE  
MANY MEMBERS”  
ROMANS**

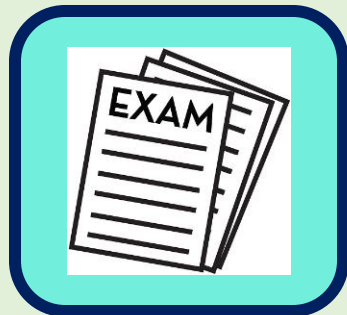
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