

By the end of this session you will.....

know a variety of different techniques to help you remember information



have trialled 3 or 4 techniques using information that YOU WILL NEED to memorise for your GCSE exams



How Quickly Do We Forget?

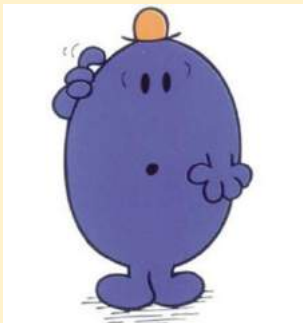
According to Ebbinghaus, the level at which we retain information depends on two things:

1. The strength of your memory
2. The amount of time that has passed since learning

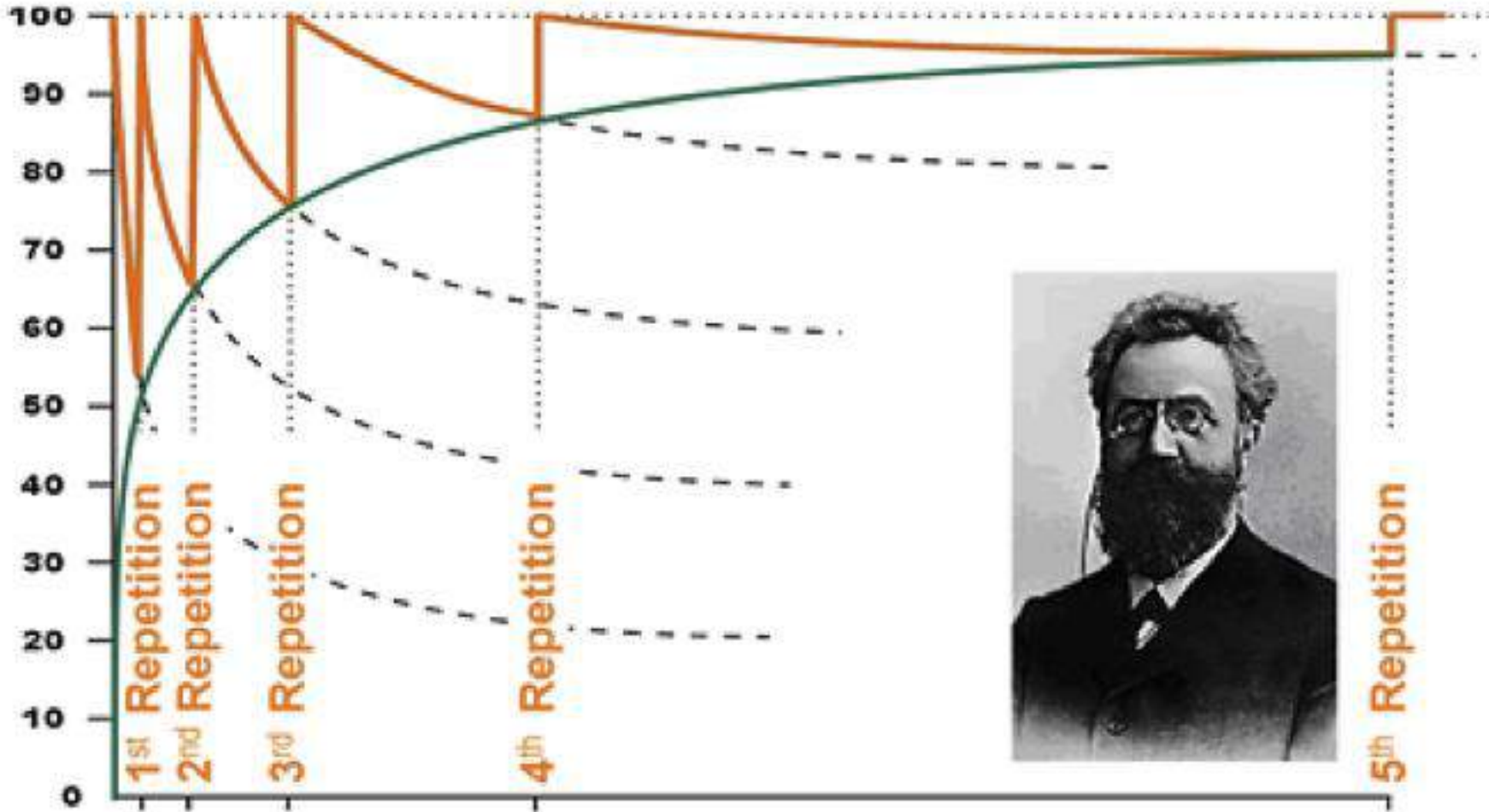
The shape of the curve is defined by the following equation:

$$\text{Retention} = e^{-\text{(Time/Strength of Memory)}}$$

It is easier to see in a graph.



% of Data Remembered



The bad news is, it's steeper than you may think.

The good news is, there are strategies you can use to improve the strength of your memory.

What were the 10 tips on the secret to a perfect memory that were in the Form Period Quiz last week....?

1. The more you involve these , the greater chance of remembering you have.
2. This kind of image is more memorable than still ones
3. We can do this to size and shape to enhance the mental image
4. A feature of the right side of the brain
5. You are more likely to remember it if it is..
6. Make it mean something to you
7. This gets the blood flowing around the brain more
8. Another term for testing yourself
9. During this time it is thought that short term memory transfers to long term memory.
10. What is the official name of the method used by some memory champions

1. Senses

2. Movement

3. Exaggeration

4. Colour

5. Make it silly

6. Symbolise

7. Exercise

8. Retrieval practice

9. Sleep

10. The method of loci

Top Tip - The sillier you can make your learning 'hooks' / techniques, the more likely you are to remember them.



FUN

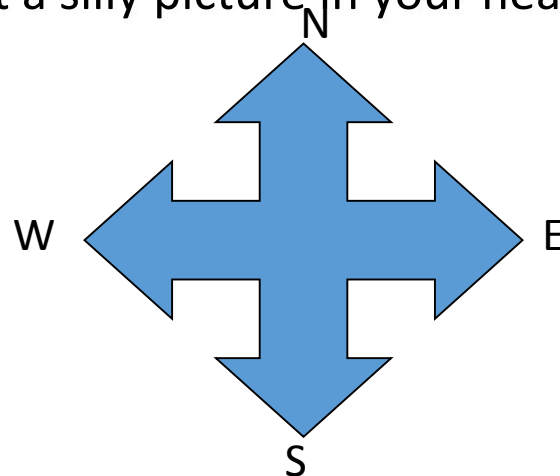
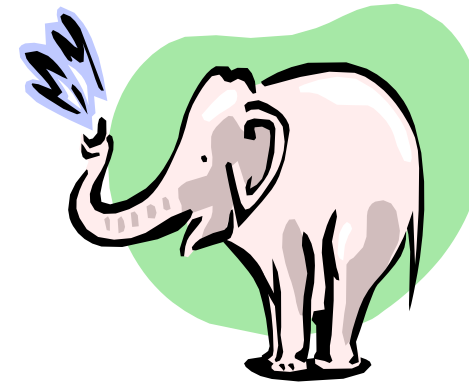
The word "FUN" is displayed in large, bold, 3D-style letters. The letter 'F' is orange, 'U' is purple, and 'N' is red. Each letter has a slight shadow and is set against a faint, light-colored grid background.

Technique 1 - Mnemonics

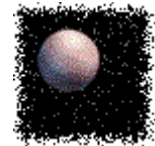
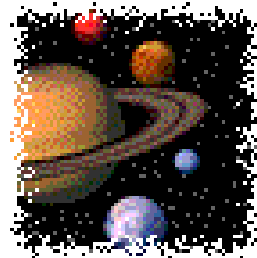
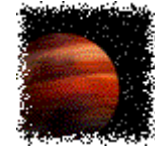
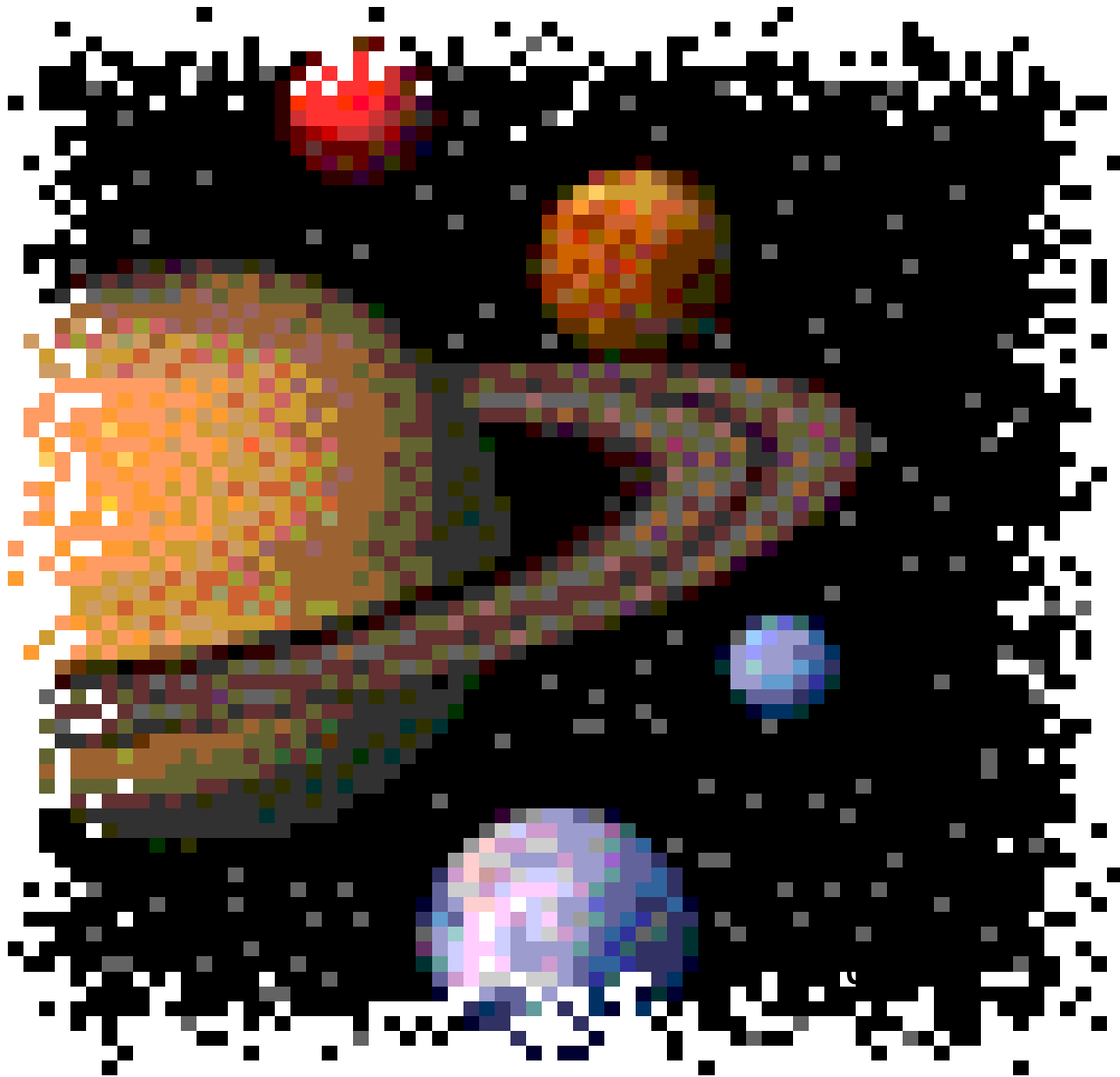
.....Compass points/directions?

Naughty	-	north
elephants	-	east
squirt	-	south
water	-	west

(it helps if you get a silly picture in your head)



.....the order of the planets starting at the sun?

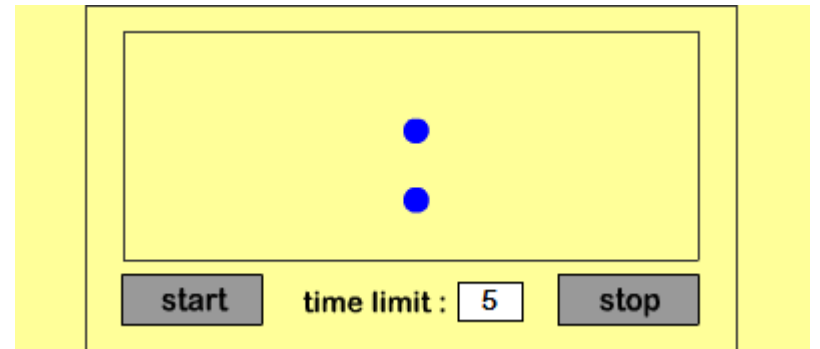


Technique 1 - Mnemonics

Before we look at this technique, in 1 minute, brainstorm as many language features as you can think of.

These are features you need to look for and comment on when reading texts, and use yourself during creative writing.

e.g. alliteration



Here's the list

In the *GCSE ENGLISH* Reading paper

There are Qs on language and Qs on structure. On one particular question, there are marks available: marks for your comments on language and marks for your comments on structure.

alliteration

similes

metaphors

assonance

sibilance

onomatopoeia

personification

emotive language

contrast

short and long sentences

punctuation

repetition

1st or 3rd person

Beginning middle and end?

O nomatopoeia

P ersonification

A lliteration

S imiles

S ibilance

M etaphor

E motive language

A ssonance



C ontrast

R epetition

1 st or 3rd Person

S hort sentences for effect

P unctuation

Can you remember all the techniques to look for, comment on and use in your own English exam using only this image?















Your partner will check to see how many you get using their copy.

The person to start the test is the tallest person of the pair



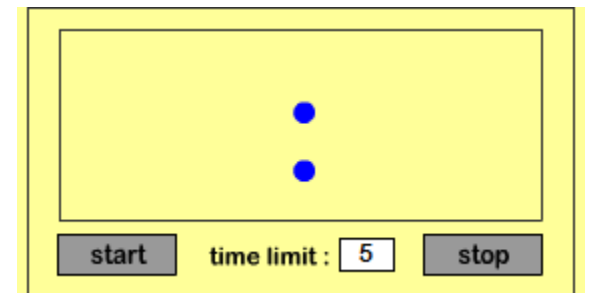
Technique 1 - Mnemonics to remember a sequence

GCSE SCIENCE - Ordering the electromagnetic spectrum in order of wavelength

Spectrum	Type of radiation	Wavelength (m)	Approximate scale of wavelength	Frequency (Hz)
	Radio	10^3	Buildings 	10^4
	Microwave	10^{-2}	Insects 	10^8
	Infrared	10^{-5}	Pinpoint 	10^{12}
	Visible	0.5×10^{-6}	Bacteria 	10^{15}
	Ultraviolet	10^{-8}	Molecules 	10^{16}
	X-ray	10^{-10}	Atoms 	10^{18}
	Gamma ray	10^{-12}	Atomic nuclei 	10^{20}

You have 3 Minutes to make a **sentence** to remember the order of the electromagnetic spectrum.

If you can draw a silly picture to help you remember the sentence - even better



Technique 1 - Mnemonics to remember spellings

French - **beaucoup**

- **B**ig
- **E**lephants
- **A**lways
- **U**se
- **C**hairs

English—

- **P**eople
- **A**nd
- **R**oyalty
- **L**ike
- **I**ce cream
- **A**nd
- **M**ilkshake
- **E**very
- **N**ight
- **T**ogether

Science —

H
Y
D
R
O
C
H
L
O
R
I
c

Science —

m
i
t
o
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h
o
n
d
r
i
a

Technique 2 - Singing or chanting

- Reciting things again and again helps strengthen your memory and even more if it is to a song tune or rhythm.



Ich war in Deutschland ...war wunderbar
Ich war mit meiner ganzen Familie da
für eine Woche ...es war so gut
Ich habe in einem großen Hotel gewohnt

Ich bin ins Kino gegangen
Ich habe Tennis gespielt
ich habe die Stadt gesehen
es war schön



Ich bin an den Strand gegangen
Ich habe Volleyball gespielt
Ich habe Sandburge gebaut.....Jawohl

Das Wetter war so schön
manchmal wolzig aber warm
es war heiß , es hat nicht einmal geregnet
einfach super

Ich habe Pizza gegessen
Es war sehr lecker

Ich habe Milch Shake getrunken
Und es war Erdbeer

Ich habe Fotos gemacht
von meinem Opa

Ich habe Musik gehört
Es war Justin Bieber

Die Sommerferien



GCSE Maths - The Formula to find the root of a quadratic equation. Pre 2017 students were given this formula in the exam. You now have to know it by heart.

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

X equals minus b plus or minus the square root of b.....squared minus 4 a c all over 2a.

Can it be rapped?
Oh, yes it can!

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

GCSE Maths - Could you add colour?

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

X equals minus b
plus or minus the
square root of b.....squared
minus 4 a c
all over 2a.



GCSE Maths - Could you add colour?

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

X e _ m _ b

P _ o _ m _ t _

S _ r _ o _ b s _

M _ 4 a c

a _ o _ 2a.



GCSE Maths - Can you remember it?

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

X equals minus b
plus or minus the
square root of b.....squared
minus 4 a c
all over 2a.

Technique 3 - Multi sensory

Combining Actions with images and the spoken word

The more 'learning hooks' we use, the more likely we are to remember

1. In the **menstrual cycle**, an **egg** cell is produced each month.
2. **Men** produce **sperm cells** in their **testes**.
3. **Fertilisation** occurs in the **oviducts**.
4. The **embryo implants** itself into the **uterus lining**.
5. The **placenta** takes substances from the mother's blood.
6. **Pregnancy** lasts 9 months.
7. The **uterus contracts** during birth.
8. The **baby** can be fed on **milk** produced in the **breasts**.
9. **Big changes** occur in boys and girls at puberty.

1. In the , an  cell is produced each month

2.  produce  cells in their .

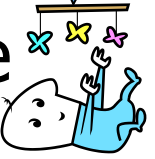
3.  occurs in the 

4. The  implants itself into the  _____

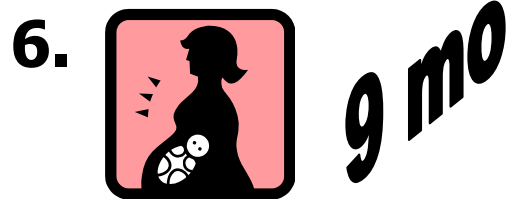
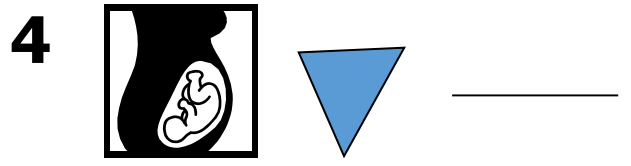
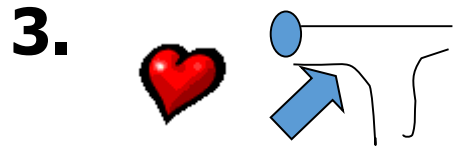
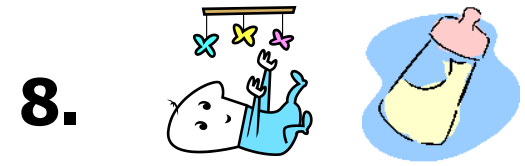
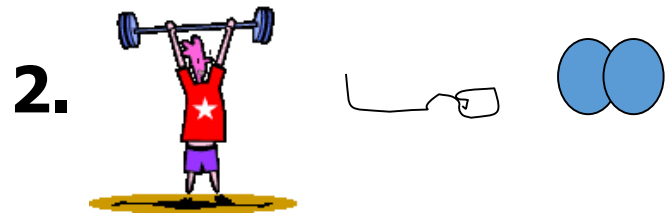
5. The placenta takes  from the mother's 

6.  lasts *9 mo*

7. The  contracts during birth.

8. The  can be fed on  produced in the breasts.

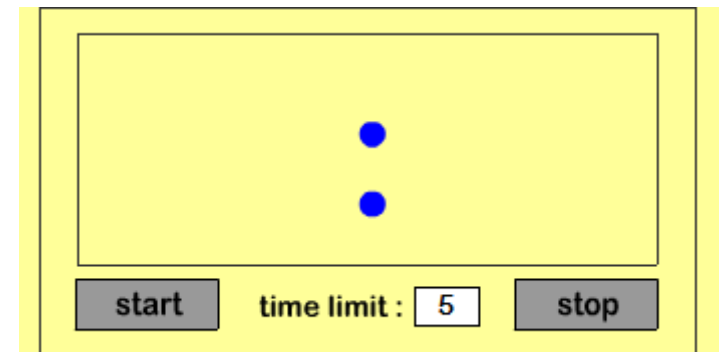
9.  occur in boys and girls at puberty.



Can you retell the whole process using only pictures?

How much of this **GCSE Science/Biology** you can memorise using a multi-sensory technique? Create a picture prompt sheet and use actions while you are repeating it. You must include the key words (underlined) when you are being tested. These are essential in the exam. You have 8 minutes.

1. Digestion starts in the mouth, where food is broken down into smaller pieces
2. to increase the surface area for enzymes to work on.
3. The salivary glands produce amylase which starts to breakdown carbohydrates, such as starch, in your mouth.
4. Food then moves down the oesophagus, squeezed by the muscles in the wall of this tube.
5. Food then enters the stomach where it is mixed with enzymes from the pancreas for chemical breakdown
6. and squeezed by the muscles in the stomach to further physically breakdown the food.
7. Food then moves into the small intestine where further enzymes and bile salts (made in the liver and stored in the gall bladder) are added to
8. neutralise the acidic contents of the stomach.
9. Food molecules absorbed in the small intestine
10. Water absorbed in the large intestine



Technique 3

Combining Actions with images and the spoken word - A multi-sensory approach

The digestion system - GCSE Biology

How much have you remembered?

Try to recount it to your partner (up to the end of Point 6) using only your pictures or actions to remember

You will get a point for every key word you mention (*in the right context*)

Tick off on the sheet every time your partner correctly includes one of the key words

Maximum points 15

A prize for anyone, who gets more than 12

THE PERSON TO START THE TEST IN THE PAIR IS THE PERSON WITH THE SHORTEST HAIR

Technique 4 - Chunking / Grouping

The brain naturally tries to chunk information because it makes it easier to remember. Use **colour, shape or both**

Ionic bonding -

- *held together by **strong forces** of attractions **between positive and negative ions**
- * formed through **transferring of electrons**
- *formed between **metals and non-metals**
 - * **high melting** and **boiling** points,
 - *can **conduct electricity in solution** when molten because ions are free to move

Metallic bonding -

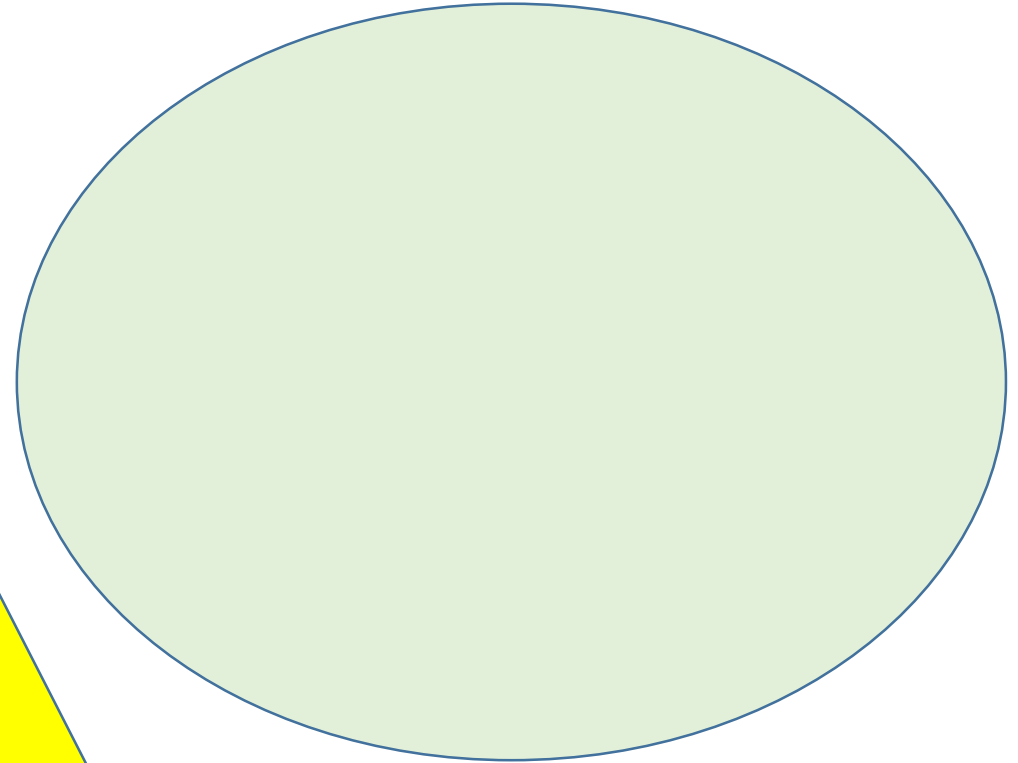
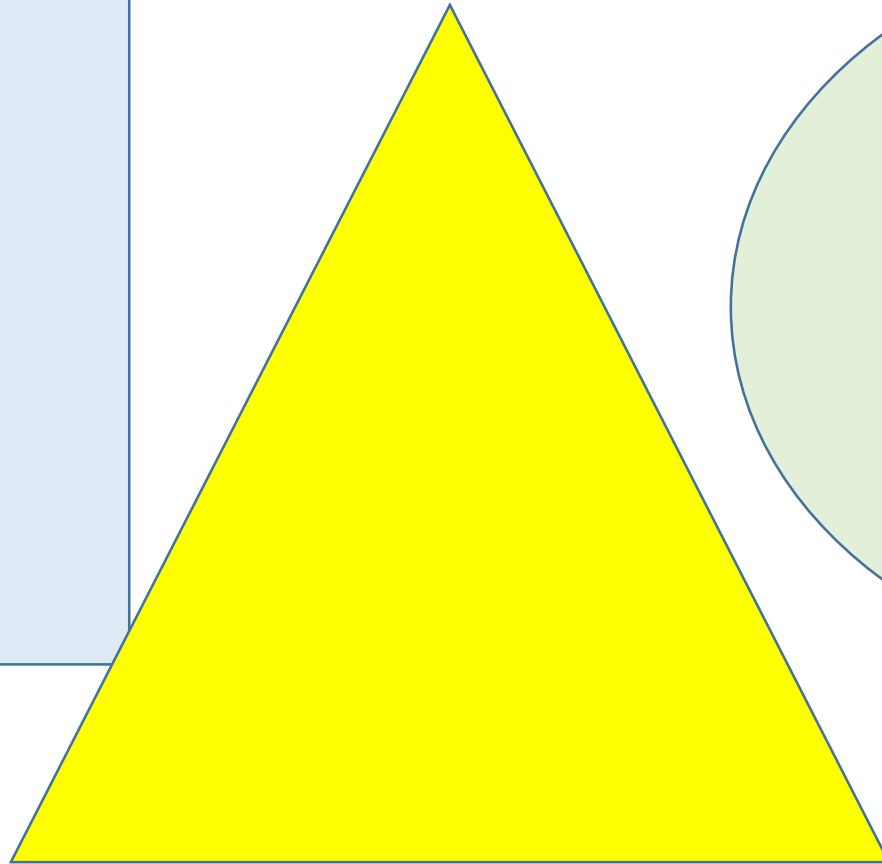
- ***Built in layers**
- have a **regular pattern**
- *have **delocalised electrons** (no longer linked with ion)
- ***held together** between the
- ***attraction between these negative electrons and the positive metal ions.**

Covalent bonding

- *Formed **through sharing electrons,**
- *formed between **non-metals**

Technique 4 - Chunking / Grouping

Chunk **any** words together to help you remember them



Technique 5 - Retrieval Practice (testing yourself)

There is a lot of current scientific research suggesting that this , **with time allowed to lapse in between retrieval** (spaced practice) is **highly effective** in committing information to your long-term memory.

THIS IS QUITE SIMPLY ASKING YOURSELF THE QUESTION + HAVING TO GIVE THE ANSWER FROM MEMORY RATHER THAN READING IT.

Examples

In History - write exam questions with answers and key words on the back

In English – write Question e.g How does Macbeth's character change?

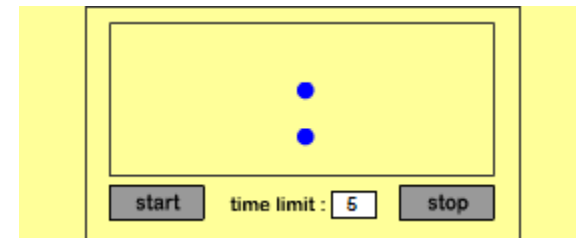
In MFL – Write German on one side and the English on the other. Test yourself both ways.

In Chemistry – What is the chemical Symbol for???

In PE – Describe how.....?

Technique 5 - Retrieval Practice (testing yourself)

1. Write the Question / Thing you need to know on one side of the card
2. Write the answer / Formula on the back.
3. Take some cards (about 5 at a time and no more than 7).
4. Spend a short time looking at the question and trying to remember the answer. If you can't remember, look at the answer (say it out loud to increase number of learning hooks)
5. When you think you can do them test yourself or ask your partner to test you.
6. Make a pile of 'can do' and 'can't do'
7. GO over the 'can't do' pile again to learn them.
8. Repeat the test. When you can do them all, take another few cards.
9. Repeat the process.
10. When you can do both sets, go through them **all** again.



Technique 5 - Retrieval Practice (testing yourself)

Examples

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1. Treat yourself to breaks after 45/50 mins of study–

Ignore any social media and reward yourself with a 10 minute check. block social media / email popups.

2. Speak Out Loud Instead of Simply Reading

Although this may make you look a little crazy, give it a go! You will remember more information when you've said it out loud.

3. Teach What You Have Learned

The best way to test if you really understand something is to try to teach it to someone else.

4. Use scents

Smells can trigger memories. It is the only sense that goes directly to the brain. Try using different scents when learning about topics you find difficult.

6. Watch a Documentary on the Topic

An entertaining way of compacting an entire story into a short timeframe. This will help you remember key details from a story

7. Create Flashcards for Quick Memory Test

Quickly test your knowledge of key concepts, definitions, quotes and formulas with [flashcards. quizlet](#)

8. Discover News Ways to Learn

Trying new methods of studying. Use technology to your advantage by watching educational TED Talks

9. Study in a Group

Studying in a group can help you collect new insights to enhance your learning experience.

- **Visual Learning Hooks – Learning through seeing**
- Posters
- Illustrate idea as a picture before writing them down
- Mind Maps
- Flow charts
- Timelines
- Accentuate spelling for key words– e.g **parl iam ent**
- Colour coding words / sections / important points or info in text
- Post it notes
- You tube clips
- Mini Whiteborads
- Grids/ Tables / Charts
- Pictures to represent facts / information



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• **Auditory Learning Hooks – Learning through Listening**

- You tube clips
- Singing
- Chanting / Repeating
- Read aloud / recite information
- Record themselves for revision
- Make your own song / rap
- Mnemonics
- TV programmes
- Discussions
- Presentations
- Speaking
- Q & A sessions
- Story Sequences

spell key words out loud
use rhythm to retain information



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Kinaesthetic Learning Hooks – Learning through movement

Movie Making

Acting things out

Mimes to represent sentences / information / words /
grammar

Games

Talking Walking

Copying notes / Writing out notes

Trips and visits



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