

A GUIDE FOR HELPING STUDENTS



REVISION TECHNIQUES



Moorside
High School

Enriching Lives, Inspiring Ambitions

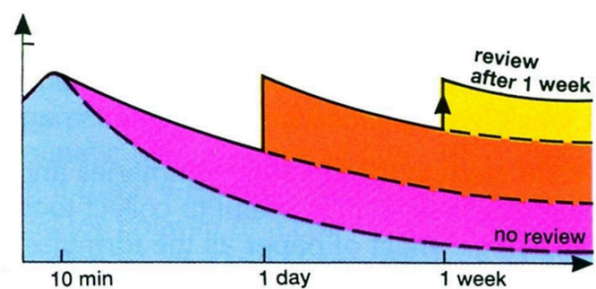
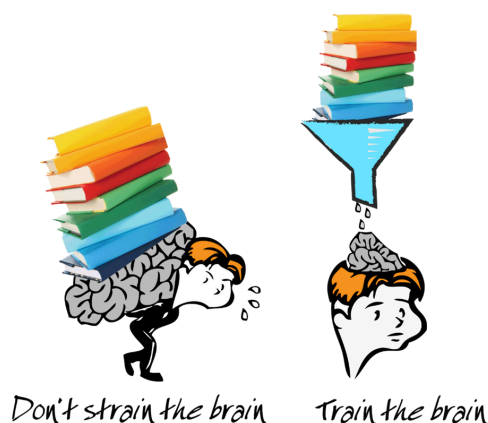
REVISION

KEY PRINCIPLES

There are many myths surrounding effective revision techniques such as highlighting, re-reading, and re-writing notes. Despite these feeling productive, they are largely ineffective and also time consuming.

Research has proven that the four main effective strategies are:

- **Retrieval Practice:** this is retrieving knowledge from memory, without any cues. When we are asked a question, our brain makes connections to other things we know. By repeating the question regularly, those connections are strengthened, and eventually the information transfers to our long-term memory.
- **Spacing:** Splitting your revision into smaller chunks and spacing them out over a period of time is much more beneficial than cramming an entire subject in a day. An hour of Physics each day for 5 days is much more effective than 5 hours in one day.
- **Interleaving:** To improve your results further, also consider interleaving. This is where you mix up the subjects and topics you revise: 30 minutes of Shakespeare, 30 minutes of algebra, 30 minutes of Poetry, 30 minutes of Ratio - rather than an hour of English and an hour of Maths. This is especially helpful when you have not visited topics for a period of time.
- **Elaboration:** After core knowledge is secure, elaboration helps to put this into action. Using 'how' and 'why' questions to explain our learning, as well as consolidating knowledge into sentences which ask you to say more about a concept.



REVISION ROUTINE

1. Getting in the Right Frame of Mind

The prospect of GCSE exams is very stressful for students. This tends to spark a natural 'fight, flight or freeze' response. When presented with the prospect of revision for exams, students may respond with...

- Fight: Students may become argumentative or aggressive
- Flight: Students may look to put off revision or run away from the problem
- Freeze: Students may panic and be unable to think straight or concentrate

If any of these instincts are triggered it becomes very difficult for the students to revise.

To counteract this try the following:

- Be unerringly positive: repeatedly focussing on the positive, emphasising belief that the student will be successful.
- Do not join in the anxiety - even if you feel it! Try to remain calm and positive.

2. Planning Revision

It is crucial that students start early and draw up a revision plan and timetable to make sure they cover all topics in plenty of time, avoiding any last minute panic.

3. How to revise

Many students fall into the trap of 'revising' by reading through notes while watching TV. To revise effectively students need a calm, peaceful environment. A little light background music can be conducive to concentration; however, mobile phones, TV and loud music have been shown to have a negative impact.

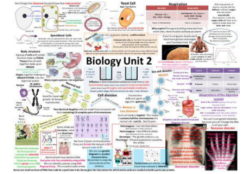
All students are individuals, and many often find their own preferred style of revision. However, just reading through notes has been shown to be highly ineffective. Students need to process and interact with the information in order to maximise retention. A quick internet search reveals that there are many methods.

On the following pages are details of just a few.

REVISION

Stage 1 – Review a topic

For the first 20 minutes students should utilise any technique they are comfortable with to review the topic. This could be using a revision guide, class notes, or knowledge organisers.



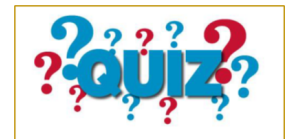
Stage 2 – Transformation task

Here the students need to transform the notes or highlighting the information they have from Stage 1 into something different. This could be a mind map, image or flashcards.



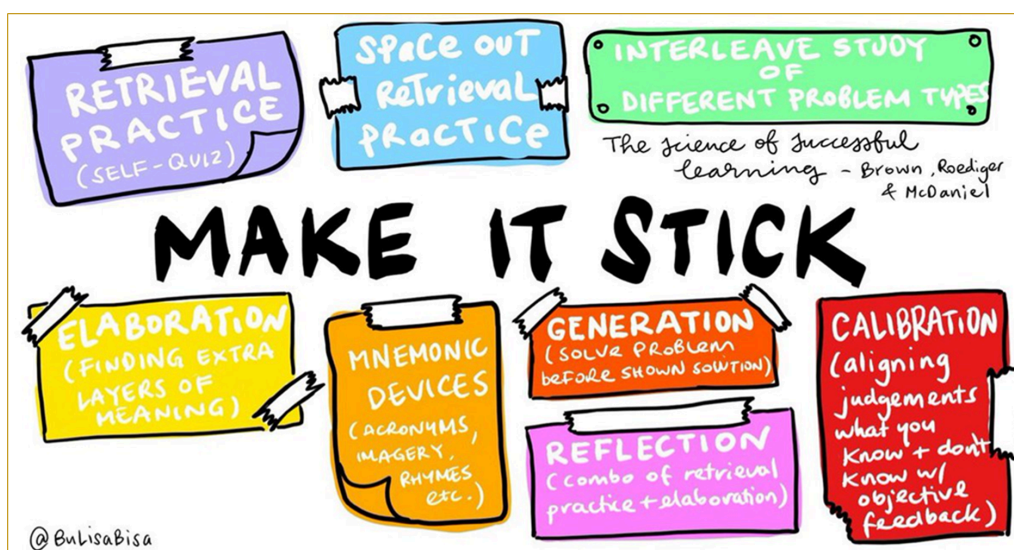
Stage 3 – Practice Testing

With a friend, family member or one of the many websites online that have relevant quizzes –students should test themselves on the area that they have reviewed.



Stage 4 – Exam Questions

Finally, students complete an exam question or questions on the area they have reviewed and mark this themselves using a mark scheme or ask their teacher to mark it. They could also make use of online platforms such as Seneca, Sparx, Carousel or GCSEPod which are self-marking for accurate, instant feedback.



REVISION

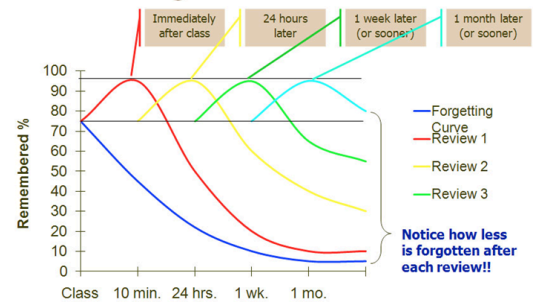
LEARNING BY ROTE

Most subjects will have certain facts that students simply must know. Rather than just re-reading and attempting to memorise, actively processing the information is more effective.

Try the say / cover / write method:

- Read the information, say it out loud
- Cover it with your hand
- Write it out from memory

Overcoming the Curve



Repeat until you are able to reproduce the information perfectly.

Mnemonics can really help. We probably all recall learning the rainbow colours as Richard Of York Gave Battle In Vain. Many subjects will have similar mnemonics, or a student can easily make up their own personal mnemonic.



SUMMARISING INFORMATION

Try summarising a passage of text 500 words long in around 200 words. Then try summarising it down to 50 words. Can you fit the key information on a flash card? Can you then take the flash card and re-expand the information?

Try turning a passage of text into a diagram. e.g.

The atmosphere

The Earth's atmosphere is just a thin layer around the planet, fading gradually into empty space above. At a height of 50 kilometres the pressure it can exert is only about one-thousandth of that at sea level.

Each layer of the atmosphere surrounds the globe, so we call them all 'spheres' - starting from the bottom they are the troposphere, stratosphere, mesosphere and thermosphere. There is also an important ionosphere.

The troposphere is the lowest level, where the air is warmed by the ground, which in turn is warmed by the Sun. Further from the ground there is less heating effect, so temperature falls in the troposphere as height above ground increases. It is in the troposphere that clouds form, and there are upwards and downwards movements of air relating to complex weather patterns.

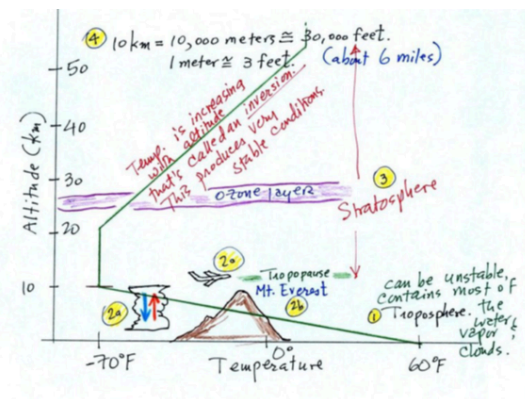
Aeroplanes that fly high can get as far as the stratosphere, which starts where the troposphere ends, about 12 kilometres above sea level. The ozone layer that absorbs UV radiation from the Sun, and protects us from harm, is part of the stratosphere.

The mesosphere starts is the next layer up, starting at about 50 km above the Earth's surface. When you see a shooting star flash across the sky and then fade away then you are watching a meteor. That's a grain of dust, or occasionally something bigger, getting very, very hot as it collides with molecules of air in the mesosphere.

At the highest levels of the atmosphere, above 80 kilometres, and up to about 120 kilometres, in the thermosphere, incoming radiation and energetic particles from the Sun heat the air directly. They can make the thermosphere very hot - as much as 1500 °C.

One effect of the radiation and streams of particles is to **ionise** the thin air of the upper atmosphere. This creates layers, mostly within the thermosphere, that can reflect radio waves from the Earth's surface. These layers, together, are sometimes called the ionosphere. We can take advantage of them to bounce radio signals all around the Earth, which is very helpful for our radio communication.

David Brink



At the end of the day, try re-capping and summarising 5 things you have learned that day.

REVISION

RETRIEVAL

In order to overcome the forgetting curve, students need to be engaging in retrieval strategies in each 'review' period to make the knowledge stick.

- In pairs with a 'study buddy' quiz each other on key concepts.
- Parents can ask the student the questions and students can explain the answer back to them – utilising elaboration.
- Use the 'Aim High' resources on the school website per subject. Heads of department have selected a pre-made self marking quiz for students to use.
- Flashcards, using the Leitner Method (explained later).
- Brain dump (explained later).
- Keystone vocabulary quiz (found on each subject's knowledge organiser)
- Key concept quiz using the knowledge organisers
- Create knowledge retrieval quiz grids such as:

	Today	Yesterday	Last week	Last month	Last term	Last year
	Suffragettes	Suffragists	Edwardian era	Gothic tradition	Victorian era	Romantics
Write one fact						
Write a second fact						
Write a third fact						

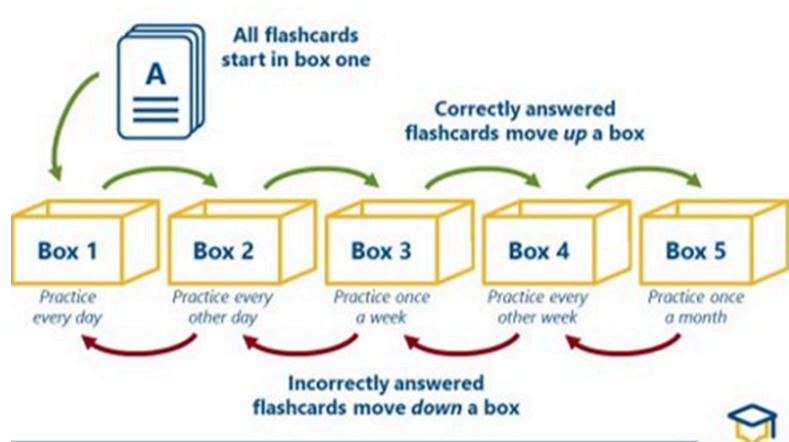
Beat the forgetting curve and utilise spacing and interleaving as well as self-quizzing retrieval!



REVISION

THE LEITNER METHOD

The Leitner Method is a way of quizzing with flashcards where students move the cards to different compartments depending on whether or not they recalled the information correctly. This strategy makes use of retrieval and spacing.



Each flashcard must contain one concept 'question' and one 'answer'. It is important not to overload them with excess information. A flashcard should be succinct and only contain the core knowledge which can then be elaborated on later. Ensure you chunk the information on your flashcard. You don't want it to contain everything about one chapter of a novel, for instance.

You can use this method with key vocabulary, key characters, key themes, key quotes or any factual knowledge such as diagrams for science, or keystone vocabulary from the knowledge organiser.

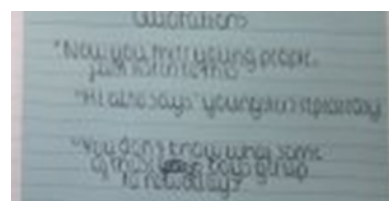
Remember:

- Retrieve (re-call the knowledge from memory)
- Reorder (mix around the order of flashcards so you know you truly can remember the concept, and not just the order)
- Revisit (regularly test yourself according to the box – every day for cards you cannot recall, once a week for those you still are not 100% secure on and then, once a month for those you feel secure with).

Concept/prompt on one side



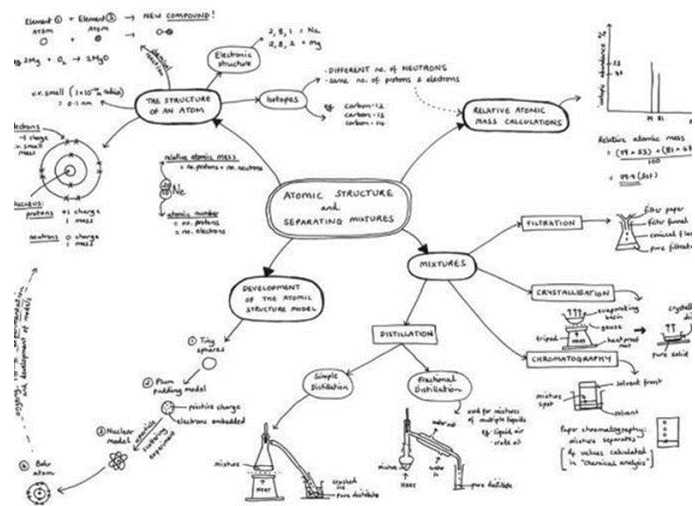
Answer/knowledge on the other



REVISION

BRAIN DUMP

A brain dump or knowledge splat is a very simple revision strategy involving 'dumping' or 'splating' everything you know about a topic onto a blank piece of paper. This strategy makes use of retrieval and works as shown below



Step one: Students choose what they want to revise (e.g. the theme of the Age Divide in An Inspector Calls).

Step two: From memory, students 'dump' their knowledge onto the page.

Step three: Using a different coloured pens, students revisit notes and resources to add in extra information missed. The different colours will show areas to work on for the next session.

MIND MAPPING

Try breaking down a topic into a web of linked ideas.

The process of producing a mind map is effective at linking concepts and embedding ideas into memory. Once the mind map is produced, it becomes a good resource to refer to in further revision.

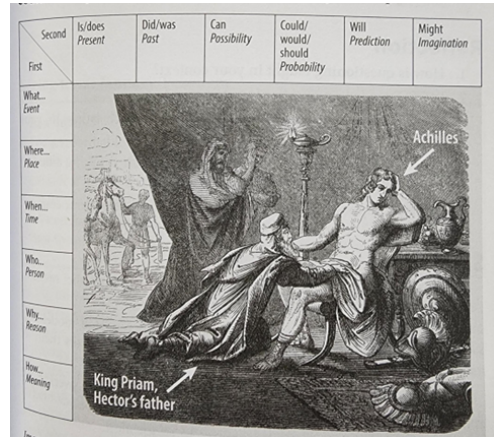
REVISION

ELABORATION

Elaboration is showing understanding of a topic by answering 'how' and 'why' questions.

Below are some sentence stems students could use to practise this:

- How does X work?
- Why does X happen?
- Why does it make sense that _____?
- Why is this true?
- Why is X true and not Y?
- When did X happen?
- What caused X?
- What is the result of X?



The resource above provides simple question stems to encourage deeper thinking. Students could ask these of a text, diagram or an image of a source.

At home, parents can support with simple, but effective questions include:

- 'What did you learn today in History? Could you explain why that event was important to me, please?'
- 'What can you tell me about this?'
- 'Describe the theme of childhood in A Christmas Carol. Which ideas, or quotations are the most important?'
- 'What is the significance of the date 1834?'
- 'Explain and justify the most significant cause for global warming'.

With elaboration, students could push their answers further using stems such as:

- Because/but/so
- This happens because...
- As a result of...
- This is significant as...

The resource on the right shows how students could begin to elaborate on their knowledge. They could expand on the facts given after they have filled in the facts. Once they have four 'facts' they would be able to use elaboration techniques to turn this into a paragraph.

	Today	Yesterday	Last week	Last month	Last term	Last year
	Suffragettes	Suffragists	Edwardian era	Gothic tradition	Victorian era	Romantics
Write one fact	The suffragettes used violence.					
Write a second fact	They gained global media attention.					
Write a third fact	Emmeline Pankhurst made a famous speech called 'Freedom or death'.					
Develop your facts into one beautiful sentence. Include a noun appositive, relative clause or present participle	Emmeline Pankhurst, a suffragette who believed their violent methods justified the cause, wrote a powerful speech called 'Freedom or death'.					

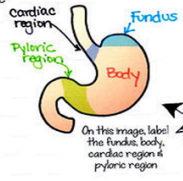
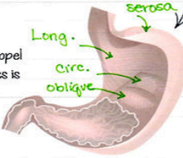
REVISION

CORNELL NOTES

Cornell Notes is a way to take notes during a watching/listening/reading session. After the session, students complete the cues section listing the 'branch' questions which grow from the main 'big question' the session focuses on. Then, they reflect on the core ideas and note these down in the summary section. By writing 'how' and 'why' questions, this strategy makes use of elaboration.

<ul style="list-style-type: none"> Core question: Main Focus of the Session 	
<p>Cues When? After the session during the review period</p> <ul style="list-style-type: none"> Main ideas Questions that connect points Diagrams Prompts to help you revise 	<p>Notes When? During the listening/watching/reading activity</p> <ul style="list-style-type: none"> Concise sentences Abbreviations Lists Any information which answers the core question
<p>Summary When? After the revision session during the review period.</p>	

Stomach

<p>What is the anatomy of the stomach?</p>	<p>Stomach= <u>muscular sac with thick walls</u> The stomach continues the processes of <u>mechanical</u> and <u>chemical</u> digestion.</p> <p>What are sphincters and what is their function in the digestive system? <u>Thick rings of muscle that act as gatekeepers to regulate food movement</u></p> <p>What two sphincters are located in the stomach? <ul style="list-style-type: none"> <u>Cardiac sphincter = separates esophagus from stomach</u> <u>Pyloric sphincter = separates stomach from small intestine</u> </p>	
<p>How does mechanical digestion occur in the stomach?</p>	<p>The stomach has a slippery outer layer of <u>serosa</u>, followed by 3 layers of muscle: <ul style="list-style-type: none"> <u>Longitudinal muscularis</u> <u>Circular muscularis</u> <u>oblique muscularis</u> </p> <p>These muscles help to <u>churn</u> food and propel it towards the small intestine. The churning process is known as <u>maceration</u>.</p> <p>What are rugae? <u>"wrinkles" in the mucosa that can stretch when full</u></p>	
<p>How does chemical digestion occur in the stomach?</p>	<p>The mucosa layer of the stomach contains several specialized gastric gland cells: <ul style="list-style-type: none"> Mucous cells- <u>secrete mucus to protect stomach lining</u> Chief cells- <u>secrete pepsinogen (inactive enzyme)</u> Parietal cells- <u>secrete HCl to kill microbes in food & convert pepsinogen into pepsin, which breaks down food proteins.</u> </p> <p>The soupy mixture formed from the squeezing of the stomach and the addition of these gastric juices is known as <u>chyme</u>.</p>	

Summary The stomach is made of 3 muscular layers and an outer layer of serosa. During maceration, the stomach churns the food and gastric gland cells add chemicals and enzymes leading to the formation of chyme.

It is then good to, transform your notes into a paragraph, a diagram, flashcards, a mind-map from memory etc.

REVISION

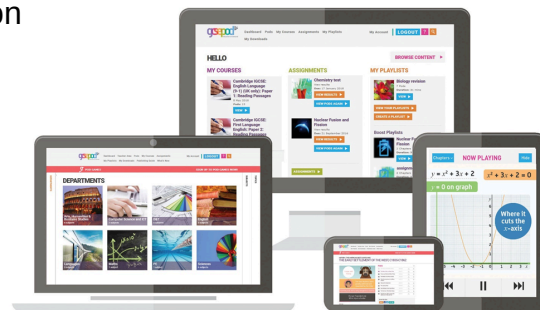
USING REVISION RESOURCES

Many departments will recommend a particular revision guide and/or workbook. If purchasing other revision guides please be careful to make sure that they match the exam board and specification you are studying.

There are many online revision resources available. Including Seneca and GCSEPod learning, Online revision websites with various interactive activities plus practice exam questions are a really useful revision tool.

Other recommended sites:

- Get Revising - free app and website which enables students to create an on-line revision timetables
- BBC Bitesize – Excellent all round revision, including quizzes and videos
- Memrise – good for memorising key facts through repetitive questioning
- Sparx maths – the number one site for maths revision



PAST PAPERS

Research has shown this to be the most effective form of revision in terms of boosting grades. Past papers will be available through school departments and are free to download online from exam board websites. Mark schemes and examiners comments are also available which can show where students have made common mistakes.

A quick internet search for the exam board and past papers will normally lead to past papers.



REVISION

Common student statements – True or False

- 'I have no work to do' – **False** – There is plenty of revision to be getting on with for each subjects. Revisit the work you did in Year 10. If you are not sure what to do, then ask your teacher to help you make a list of what you need to learn.
- 'I need regular breaks' – **True** – Revision is much more effective when done in intense bursts with short breaks in between.
- 'No-one else has started revising yet' – **False** – Some students started their exam preparation before October half term.
- 'I need time away from studies to relax' – **True** – Students need to stay relaxed in order to be receptive to revision. Some time spent doing sports and hobbies can be helpful. You need a good work/life balance.
- 'I can revise and watch TV' – **False** – Studies have shown that trying to revise while following a TV programme is very unsuccessful. Quiet background music can be helpful, but loud music and screens make revision ineffective.
- 'Revision is just reading over your notes' – **False** – Just reading notes is an ineffective way to revise. To make the information stick the mind needs to process the information and make links.
- 'It's too early to start revising' – **False** – It's never too early. Starting early will allow you to get through all the material in plenty of time avoiding last minute panic!

What can students do to help themselves?

- Maximise your attendance - If in doubt over illness – come into school
- Be punctual - Late arrivals miss key lesson starters
- Attend as many revision sessions as possible - Exam tips from teachers can make all the difference
- Revise at home - Make a reasonable revision programme and stick to it
- Take responsibility for your own success

REVISION

PUTTING EVERYTHING

INTO PRACTICE

Most of this booklet has been about revising and remembering key knowledge but, at some stage students will of course need to answer exam questions. A revision session, therefore, should start with some note-taking and/or self-quizzing but then use this knowledge recap to write sentences, paragraphs or full essays.

This is where students need to think carefully about crafting, incorporating key vocabulary and knowledge into their writing. We know that if students remember more, they can write more and get the higher mark questions.


Exam question: How is power explored in Macbeth?

Macbeth, the usurping tragic hero, defies the Divine Rights of Kings when he obtains power through regicide, questioning 'will all great Neptune's ocean wash this blood clean from my hands?'

The classical allusion to the Greek God of the sea creates a hyperbolic phrase, symbolising the great extent of Macbeth's guilt which even a divine ocean of water cannot remove. Hands is a recurring motif signifying guilt associated with power obtained through corrupt means and its ramifications. This is also seen later in the play when...

Before writing this paragraph, students might:

- Use The Leitner Method to quiz on the meaning of 'usurp', 'regicide', 'hyperbole', 'ramification' and different types of allusions.
- Complete a Brain Dump on context in Macbeth (Divine Rights of Kings).
- Used Cornell Notes to self-quizz on the motif of hands on Macbeth.

Recipe for effective revision & successful results ... 

Spaced Practice	Retrieval Practice	Mindset	Support	Attendance	=	Success
Spaced Practice	Retrieval Practice	Mindset	Support	Missing	=	Lower results
Spaced Practice	Retrieval Practice	Mindset	Missing	Attendance	=	Anxiety
Spaced Practice	Retrieval Practice	Missing	Support	Attendance	=	Under performance
Spaced Practice	Missing	Mindset	Support	Attendance	=	Ineffective strategies
Missing	Retrieval Practice	Mindset	Support	Attendance	=	Cramming

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MAKE IT STICK

WEEK A

Time	Monday	Tuesday	Wednesday	Thursday	Friday	Time	Saturday	Sunday
Breakfast Intervention						8.00-8.30am		
Lunchtime Session						8.30-9.00am		
Afterschool Session						9.00-9.30am		
4.00-4.30pm						9.30-10.00am		
4.30-5.00pm						10.00-11.00am		
5.00-5.30pm						11.00-12.00		
5.30-6.00pm						12.00-1.00pm		
6.00-6.30pm						1.00-2.00pm		
6.30-7.00pm						2.00-3.00pm		
7.00-7.30pm						3.00-4.00pm		
7.30-8.00pm						4.00-5.00pm		
8.00-8.30pm						5.00-6.00pm		
8.30-9.00pm						6.00-7.00pm		
						7.00-8.00pm		



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MAKE IT STICK

WEEK B

Time	Monday	Tuesday	Wednesday	Thursday	Friday	Time	Saturday	Sunday
Breakfast Intervention						8.00-8.30am		
Lunchtime Session						8.30-9.00am		
Afterschool Session						9.00-9.30am		
4.00-4.30pm						9.30-10.00am		
4.30-5.00pm						10.00-11.00am		
5.00-5.30pm						11.00-12.00		
5.30-6.00pm						12.00-1.00pm		
6.00-6.30pm						1.00-2.00pm		
6.30-7.00pm						2.00-3.00pm		
7.00-7.30pm						3.00-4.00pm		
7.30-8.00pm						4.00-5.00pm		
8.00-8.30pm						5.00-6.00pm		
8.30-9.00pm						6.00-7.00pm		
						7.00-8.00pm		

MAKE IT STICK