

# 'Make It Stick'

# Moorside High School

2<sup>nd</sup> November 2023

Enriching Lives, Inspiring Ambitions



# Moorside High School

Enriching Lives, Inspiring Ambitions

# Welcome

Mrs Ryles-Dean

Headteacher



# Miss Smalley

# Moorside High School

Deputy Headteacher

Enriching Lives, Inspiring Ambitions

# Our Purpose...

To ensure every student leaves us ready for their next successful chapter, with students attending university or starting a fulfilling career.

We **enrich lives** and **inspire ambitions** to ensure students thrive in the world around us.



#### TEAM MOORSIDE - THE MOORSIDE WAY





Complete all homework and hand in on time



Play your part in the positive learning environment



Wear correct uniform



Planner, equipment, knowledge organiser out on desks



Be respectful to everyone



Use technology appropriately



Look after school property and keep the school tidy



Move around the corridors sensibly



Listen and follow instructions first time



Arrive on time to school and lessons

### Formal assessments



- English and maths: Monday 13<sup>th</sup> November 2023
- Mock exams: from 10<sup>th</sup> January 2024
- Conditions will mirror the experience of the final exams
- Special arrangements given to eligible students
- Question Level Analysis informs teacher planning and allows us to identify individual revision needs and put targeted interventions into place
- Walking Taking Mocks: in week beginning 18<sup>th</sup> March





## **Progress Reports**



• Expected grades for college applications: 20<sup>th</sup> November 2023

Mock exam results assembly for students: 15<sup>th</sup> February 2024

• Progress report : 26<sup>th</sup> February 2024

• Parents' Evening: 29th February 2024





### **External Examinations**



- First exam Thursday 9<sup>th</sup> May 2024
- Last exam Wednesday 19<sup>th</sup> June 2024

- Contingency afternoon sessions/day in the event of national or significant local disruption to examinations in the United Kingdom
   6<sup>th</sup> June PM, 13<sup>th</sup> June PM and 26<sup>th</sup> June all day
- Results Day: Thursday 22<sup>nd</sup> August 2024







# The Science of Successful Learning

Miss Smalley

# Moorside High School

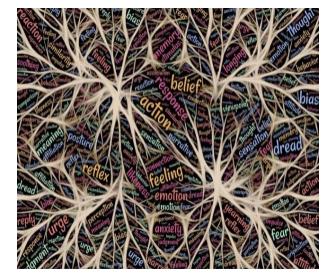
Enriching Lives, Inspiring Ambitions

### What does 'getting better' at something mean?

"Learning is defined as an **alteration in long-term memory**. If nothing has been altered in long-term memory, nothing has been learned"

Sweller, Ayres, Kalyuga (2011), CLT vol 1.

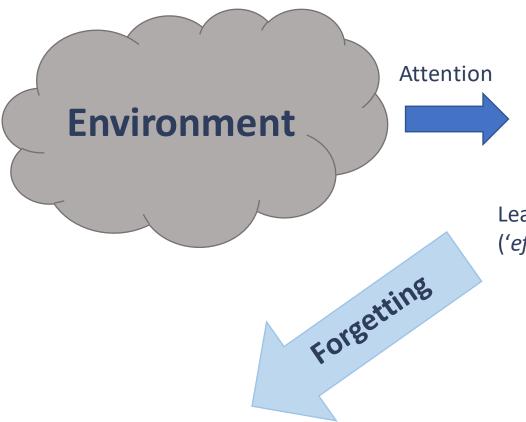
Memories exist in complex schemas. A schema is a structure for organizing information to assist in storage. Memories are structured around schemas to promote efficiency, to simplify, to account for similarities between complexities (make links).







### **Cognitive Load Theory**



WM is easily overloaded > 4 or 5 'chunks'

Working memory

(awareness and thinking)

Learning ('effortful')

Remembering

Long-term memory

(Factual and procedural knowledge - rote/flexible/inflexible)





**Learning** = building/developing/assembling schema in long-term memory **Remembering** = transferring information from schema to working memory



# Retrieval practice makes learning challenging and effortful

• Because retrieving information requires mental effort, we often think we are doing poorly if we can't remember something.



• We may feel like progress is slow, but that's when our best learning takes place.

Moorside

The more difficult the retrieval practice, the better it is for long-term learning.



# Spacing and Interleaving

#### **Spacing**

- Spacing is revisiting a topic sometime after first teaching it.
- Throughout a course you should revisit / review topics which were covered last week, last month and all the way back to the start of the course.
- Research has shown that this is effective because it allows for some forgetting time. Retrieving this information is more difficult and so long-term memory in the learner is improved.



#### **Interleaving**

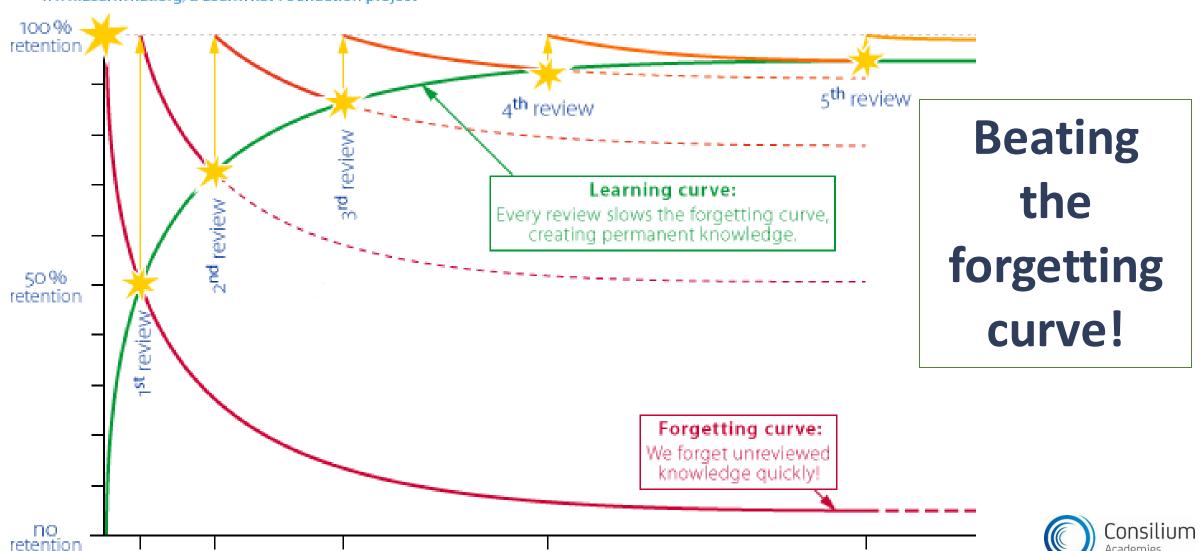
- Interleaving is mixing up lots of different subjects or topics when students undertake independent study.
- Research has shown that students will remember more if they do this rather than studying one topic for a block or time and then another.





#### Why spaced review works

www.LearnThat.org, a LearnThat Foundation project



# 'Hacking' long-term memory

Look at these numbers for 3 seconds, look away and try to write them down:

### 601681129166

This exercise will probably have quickly overloaded the capacity of your working memory.

Some people do better at this by 'chunking'. Instead of trying to remember twelve digits, they remember 601, 681, 129 and 166.

This is still challenging, but 601 takes up less space in working memory than 6, 0 and 1 do individually.





# 'Hacking' long-term memory

Now here's the same exercise, but as an expert:

## 1066 1812 1966

Easy, isn't it? Not only do you have only three chunks to remember, but each is already a richly constructed **schema**.

The difference between the two exercises is **knowledge**. The first set of numbers meant nothing, so you were a novice, and your **working memory** was quickly overloaded. The second set were rich in meaning (in schema) so you became an **expert**.







# Revision Strategies 'Make it Stick'

Miss Powell

Raising Standards Leader KS4

# Moorside High School

Enriching Lives, Inspiring Ambitions

#### What do pupils think effective revision is?

Highlighting

Re-reading notes

Cramming

Making mind-maps/answering past papers NOT from memory





#### What is effective revision?

Retrieval practice

Spaced practice/interleaving

Elaboration

Desirable difficulties





"Using your memory, shapes your memory. Using your memory, changes your memory."

Professor Robert A Bjork



#### Stage 1 – Review a topic

- For the first 20 minutes students should utilise any technique they are comfortable with to review the topic.
- Often, they might stop after this and think 'my revision is done!'. But no, this is just the start of an effective learning technique.







#### **Stage 2 – Transformation task**

This is building on Stage 1.

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







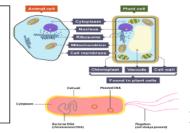
# **Knowledge Organisers**

- Aids in class and home learning.
- Facilitating more independent learners.
- Revision tool for upcoming tests.



#### Cells

- Most animal cells have a nucleus, cytoplasm, membrane, mitochondria and ribosomes.
- Plant and algal cells also have a cell wall and often have chloroplasts and a permanent vacuole.
- Plant and animal cells are eukaryotic cells which have a membrane, cytoplasm and a nucleus.
- 4. Bacterial cells are prokaryotic cells.
- They are smaller than eukaryotic cells and have a cell wall, membrane and cytoplasm, but do not have a nucleus.
- Their genetic material is a single loop of DNA or several small rings of DNA called plasmids in the cytoplasm.



	Specialised cell		Function	Adaptations
7.	Red blood cell		Carries oxygen.	Large surface area. Contains haemoglobin. No nucleus to create more space.
8.	White blood cell		Destroys microorganisms.	Irregular shape to get out of blood vessels
9.	Egg cell (ovum)		Join with sperm cell and provide food for new cell formed.	Large     Contains lots of cytoplasm
10.	Sperm cell	2	Reach and join with egg cell.	<ul> <li>Long flagellum (tail) for swimming</li> <li>Enzymes of head to break into egg.</li> </ul>
11.	Nerve cell	*	Carry nerve impulses to different parts of the body.	Long     Connections at each end.     Carry electrical signals.
12.	Muscle cell	1	Move the body.	Contain protein fibres that contract.     Large numbers of mitochondria.
13.	Ciliated cell	<b>4</b>	Move mucus.	Thin layer of tiny cilia (moving hairs).
14.	Palisade cell		Absorb sunlight for photosynthesis.	Large surface area.     Lots of chloroplasts.
15.	Root hair ce II	G	Absorb water and minerals	Large surface area.
16.	Xylem cell	(0000000000000)	Moves water through the plant.	Made of dead cells.     Thick, strengthened cellulose cell wall.     Hollow lumen.
17.	Phloem cell		Moves food through the plant.	Made of living cells.     Connected by sieve plates to form a tube

#### Cell differentiation

- Cells differentiate to form different types of cells. Animal cells differentiate at an early stage, whereas many plant cells can differentiate throughout life.
- Differentiation is the generation of specialised cells which acquire different organelles to enable them to carry out specific functions.
- 20. Cells may be specialised to carry out a particular function.
- 21. Stem cells are unspecialised cells that can differentiate to form many different types of cells.
- 22. Stem cells from human embryos and adult bone marrow can be cloned and made to differentiate into different cells.
- 23. Stem cells may be used to treat paralysis and diabetes in the future.
- In therapeutic cloning an embryo with the same genes as the patient is produced. Cells from this embryo will not be rejected by the patient.
- 25. Risks e.g. transfer of viruses, associated with the use of stem cells in medicine
- 26. Stem cells from meristems in plants are used to produce clones quickly and cheaply

#### COMPONENT 1 - SECTION A: ADVERTISING





#### **Knowledge Organisers-Look, Cover, Write, Check**

At home **Look** over a small amount of content in your knowledge organiser.

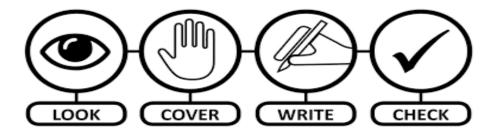
**Cover** it up with a sheet of paper.

Write down what you have just read.

**Check** if you have written down the correct information. **Repeat**.

- A simple strategy that your child can do independently but a great way to check whether that are starting to remember and recall the "threshold concepts" that they need for that particular subject.
- Helps pupils to become more resilient learners because they are then able to address the misconception for themselves.







#### **Chunking**

#### After chunking: 6 groups, or even 3 categories

CAT ABC IBM XYZ HENKFC

Chunking further: grouping by theme

CAT HEN IBM KFC XYZ ABC

Animals Companies Alphabet

**Step 1** is remembering the "big picture"

Step 2 is remembering the details under the headings





#### **Retrieval Practice**

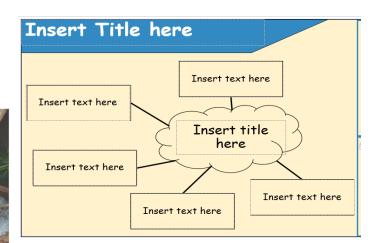
What's the name of the final ghost that visits Scrooge?

Check

Type your answer here...

 Scrooge asks the boy to run to the poulterers (a poultry) and buy the biggest turkey

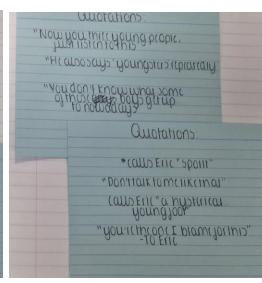




ACT 1 - Mr Birling
Mr Birling sconimscij as a mintor (hrs.)

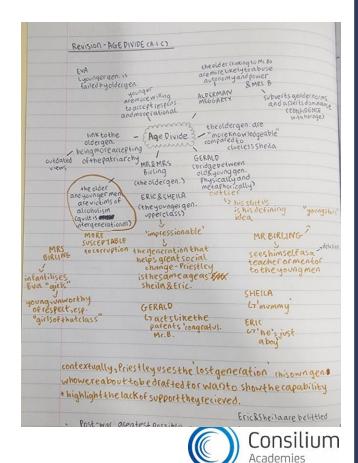
ACT 3. Mr Birling
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youngargentration, dispire rawing it

Injuntilisis men

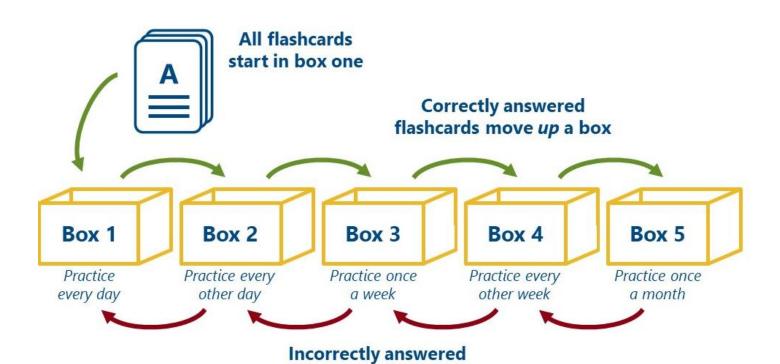


#### GCSE Revision Questions 2

- 1. Express 140 000 000 in standard form.
- 2. Write  $0.001 \times 2000000$  in standard form.
- 3. Factorise 3x + 6



#### **Flashcards**



flashcards move down a box

- Retrieve
- Re-order
- Re-shuffle
- One concept and one definition





#### **Elaboration**

• Put knowledge into a sentence or paragraph asking questions such as 'how', 'when', and 'why' to encourage deeper thinking

• Asking specific questions at home 'what can you tell me about...?', or 'how does this word link to your learning?'

• The knowledge organisers are on the school website to support with this.





#### **GCSE Pod and Online Learning**

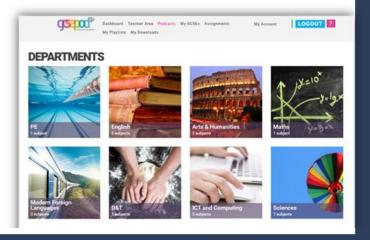
- Revision via 'podcasts', low stakes assessments, check & challenge, progress tracking.
- Autogenerated 'boost' playlists on areas that have been identified as needing extra learning.
- Data shows students using GCSEPod can achieve 1 additional grade higher in each subject.
- 'Interleaving'- revising different topics or subjects in one session rather than 'blocked learning'- 1 subject per night











### The Importance of Habits and Routines

- Start small and build up reduce distractions and use the 'Make It Stick' timetable.
- Make it attractive 'rewards' at the end of a revision session
- Make it satisfying challenge yourself, track your own progress (different coloured pens to see the progression), tick off lists/timetable.
- Make it obvious Have a revision area, leave revision materials out ready, ensure the environment is clear, uncluttered and comfortable.







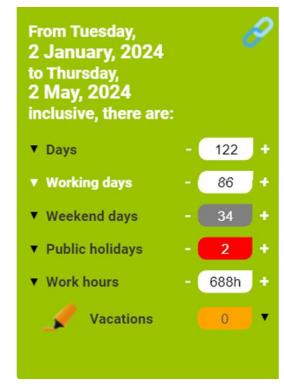
### Make it Stick Opportunities means pupils will gain...

21 hours for core sessions

10 and a half hours for non-core sessions

Make It Stick silent room is open **three times a** week for 45 minutes.





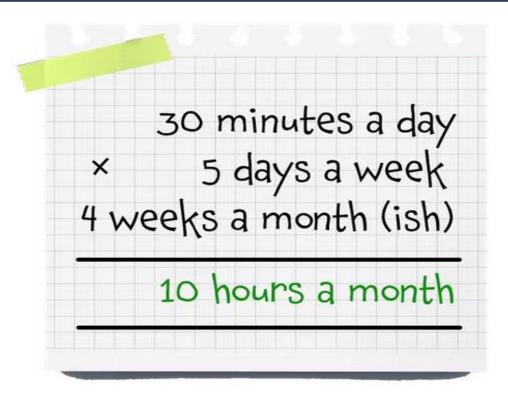






# If students start revising now...





That's roughly the equivalent of 2 extra school days of study time each month.

(...and 30 minutes a day is easily manageable!)



## **Support for Parents**

- First progress reports –26th February 2024
- Parents' Evening 29th February 2024
- Pastoral Team/Teachers/Everyone!
- Instagram/Twitter/ Website/Email
- ClassCharts Parent App
- Half-termly Year 11 Parent Newsletter/ Bulletin
- Weekly Headteacher Update



Any questions after the evening, please email MHSyear11@consilium-at.com







# Making it Stick in

Maths

# Moorside High School

Mr Pinches
Director of Maths

Enriching Lives, Inspiring Ambitions

#### Fact: Retrieval practice improves knowledge and retention.

- Reviewing, rereading, and highlighting are not effective study strategies if students do not then follow up on them.
- We recommend frequent, low-stakes quizzes and other activities that require active, effortful recall.
- Make use of the opportunities on offer.
   Compulsory homework, WTM's, Staple challenge, intervention, papers society,
   The Moorside Website.

Autumn Term 1a	Retrieval Quiz 1	Year 10 H
These questions all test topics th	at you have previously met throughout years 7 – 9.	
Try your best to answer each qu	stion fully, showing all working out and making your answ	er clear.
Once you have marked your wor	c, use HegartyMaths to revise any topics where you have r	not got full marks
or are not feeling very confident		
You will be retested on the same	topics next week.	
Divisibility Tests		Video 26
N 1. If a number can be divided	y 9, then the sum of its digits is divisible by	
Square Numbers		Video 99
.v 2. Circle all the square numbe	s	
	. 2 3 4 5	
Cube Numbers		Video 100
N 3. What is the fifth cube numb	er?	
Addition and Subtraction of Deci	mals	Video 47
4. What is the sum of 2.4 and	3.78?	
Addition and Subtraction of Deci	mals	Video 47
ਲ 5. What is the difference betw	een 6 and 2.7?	

autumn Term 1a	Retrieval Quiz 1	Year 10
Writing Algebraic Expressions 1		Video 151
A 6. Write the expression that i	means "Start with n and take 5"	
14/-11/- Alb'- F		Video 151
Writing Algebraic Expressions 1  A		Video 151
7. Write the expression that r	neans "Start with t, double it and add 4"	
Substitution 1		Video 780
A		
8. If $x = 12$ , find the value of	x-5	
Namina Cidas and Angles		Video 456
Naming Sides and Angles		Video 456
	rallel in the trapezium?	Video 456
S		Video 456
S	rallel in the trapezium? AB and AD	Video 456
S		Video 456
s 9. Which pairs of lines are <b>pa</b>	AB and AD AB and BC	Video 456
s 9. Which pairs of lines are <b>pa</b> 0 c	AB and AD	
9. Which pairs of lines are pa	AB and BC AB and BC AB and CD	
9. Which pairs of lines are pa	AB and AD AB and BC	
9. Which pairs of lines are pa	AB and AD AB and BC AB and CD ium could be described as "acute"?	
9. Which pairs of lines are pa	AB and BC AB and BC AB and CD	
9. Which pairs of lines are pa	AB and AD AB and BC AB and CD ium could be described as "acute"?	Video 456
s 9. Which pairs of lines are pa 0. Which pairs of lines are pa 0. C C C C C C C C C C C C C C C C C C	AB and AD  AB and CD  AB and CD  ium could be described as "acute"?  ABC  BAD	
9. Which pairs of lines are pa	AB and AD  AB and CD  ium could be described as "acute"?  ABC	Video 455
9. Which pairs of lines are pa  D  C  Naming Sides and Angles  10. Which angle in the trapez	AB and AD AB and BC AB and CD  ium could be described as "acute"?  ABC BAD BCD	
9. Which pairs of lines are pa  D  C  Naming Sides and Angles  10. Which angle in the trapez	AB and AD  AB and CD  AB and CD  ium could be described as "acute"?  ABC  BAD	Video 455
s 9. Which pairs of lines are pa 0. Which pairs of lines are pa 0. Compared to 1.	AB and AD AB and BC AB and CD  ium could be described as "acute"?  ABC BAD BCD	Video 455
s 9. Which pairs of lines are pa 0. Which pairs of lines are pa 0. Compared to 1.	AB and AD AB and BC AB and CD  ium could be described as "acute"?  ABC BAD BCD	Video 455







### Certain "desirable difficulties" improve learning.

- Students will always seek the path of least resistance. Students will revise topics they are always comfortable with
- Use of QLA's from mock papers.
- 'When students struggle with a problem, attempt solutions, fail, and try again, learning is improved. The effort required employing retrieval promotes consolidation — fixing ideas into long-term memory'

Questions	Topic	S	оге	П	Sparx Code
1	Solving single inequalities	2	1 2	2	U759
2	Prime factor decomposition	2	I /2	2 [	U739
3	Sharing amounts in a given ratio, Finding fractions and percentages of amounts	2	1 5	5 [	U577, U881, U554
4a	Using standard form with negative indices	1	$ I ^{-\epsilon}$	1 [	U534
4Ь	Using standard form with positive indices	1	$ I ^{-\epsilon}$	1 [	U330
4c	Multiplying and dividing numbers in standard form	0		2 [	U264
5	Angles in polygons	3		3	U427
6a	Plotting graphs of quadratic functions	1	I /2	2 [	U989
6Ь	Plotting graphs of quadratic functions	1	I /2	2 [	U989
6c	Solving quadratic equations graphically	1		2 [	U601
7	Volume of cuboids, Calculating with density, Writing and simplifying ratios	3		3 [	U786, U910, U687
8	Finding averages from grouped data	0		3 [	U877
9	Finding the surface area of cubes and cuboids	0		3 [	U929
10a	Drawing cumulative frequency graphs			1	U182
10Ь	Drawing cumulative frequency graphs			2 [	U182
10c	Interpreting cumulative frequency graphs			1	U642
10d	Interpreting cumulative frequency graphs	1		2 [	U642
11	Calculating with ratios and algebra	1		3 [	U676
12	Converting recurring decimals to fractions	1		3	U689
13	Using Pythagoras' theorem in 2D, Finding the area of circles	1		3	U385, U950
14a	Estimating gradients of non-linear graphs using tangents	1		3	U800
14Ь	Calculating distances from velocity-time graphs		•	1	U611
15a	Geometric proofs with vectors			2	U560
15Ь	Solving geometric problems using vectors	1		3	U781
16	Tree diagrams for independent events	1		4	U558
17	onstructing direct proportion equations, Constructing inverse proportion equation	0		4	U407, U138
18	Multiplying mixed numbers, Indices of the form 1/a, Negative indices	0		4	U224, U985, U694
19	Adding and subtracting algebraic fractions, Using the quadratic formula	4		4	U685, U665
20	Equations of circles and tangents	0		4	U567
21	Finding the area of sectors	3	_	5	U373
	Total	36	1 8	0	



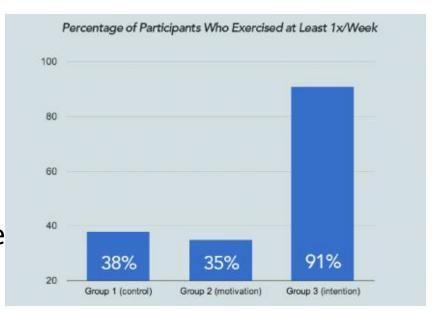


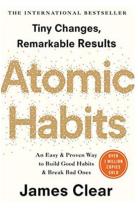


# The Surprising Results: Motivation vs. Intention How to build an intentional revision schedule.

- Research shows motivation without a plan shows no impact on results.
- You are between two and three times more likely to follow through with a plan if you specify when, where and how you are going to implement it
- Remove 'foggy' statements of intent. 'I'm going to revise tonight'.
- Try 'I will (BEHAVIOUR), at (TIME), in (LOCATION)'.
- EXAMPLE I will revise Multiplying Numbers in Standard Form, Sparx code U264, at my revision desk on Tuesday.









### An intentional revision timetable.

Interleaved subjects will improve long term memory

Sustainable break days built in

Mon 10/1 J	Tue 11/10	Wed 12/10	Thu 12/10	Fri 13/10	Sat 14/10	Sun 15/10
1. PE – functions		1. Maths – Finding	1. Maths –	1. Maths – Surds		1. French -
of the skeletal		averages from	Equations of	U534		Phrases
system	X	grouped data	Circles U567	2. English – Motifs	/ X	2. History – The
2. Computer		U877	2. Science –	in Macbeth		NHS from
science – 1 and 2		2. French – Past	Covalent bonds			retrieval booklet
dimensional		Tenses	3. History –			3. Maths – Tree
arrays		3. English –	Restoration			diagrams U558
3. Science – Units		Inspector calls	England.			
and prefixes						



Intentional specific revision. Topic, sub topic and method



# Those who adopt a growth mindset are the most effective learners.

Short term goals but not short-termism

- Beware short-termism
- "I just need a grade \_\_\_ to get into college"
- "It's ok, as long as I get a pass."
- Know your long-term goal then set a series of short-term goals to reach this
  - November 2023 within two grades of target.
  - January 2024 within one grade of target.





#### **TOP TIPS FOR STUDENTS**

- Take charge of your learning.
- Build an intentional revision schedule.
- Accept learning is difficult, then rise to the challenge.
- Make habits of the three keystone strategies;
  - Retrieval of knowledge.
  - Space out the retrieval practice.
  - Interleave your practice.
- Use your teachers, use your QLA's and make use of everything on offer.





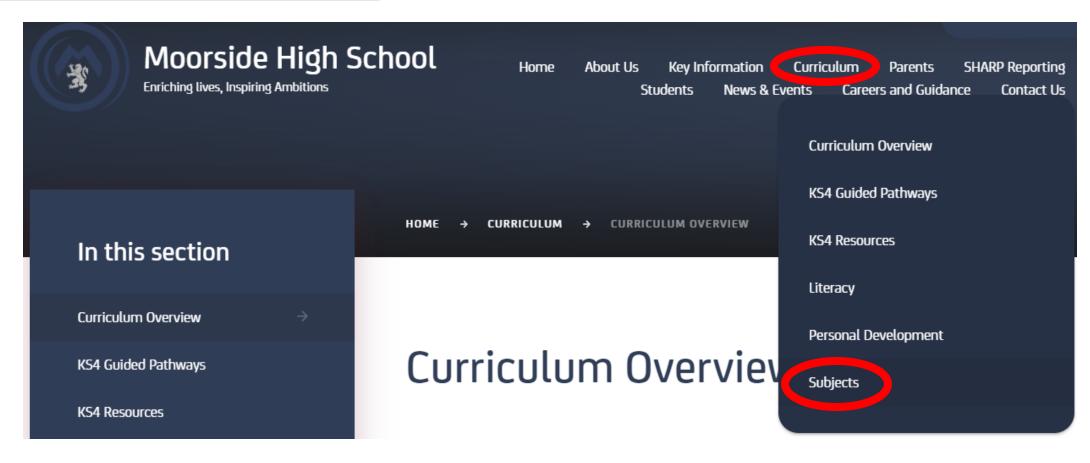
#### **TIPS FOR PARENTS**

- Ask students to talk about what they learned today, push for specifics.
- Use their notes to create low stake quizzes, ask how did you do this?
   Why did you do this here?
- Encourage retrieval and appropriate difficult challenges rather than rereading and highlighting notes, encourage the use of QLA's, Sparx and past papers.
- Encourage attendance to all intervention sessions.
- Stay in Contact





## **Useful Resources**







## **Useful Resources**





#### **Revision Resources**

#### **Year 11 Revision Resources**



#### **Revision Checklists:**

- Edexcel Checklist: Foundation
- Edexcel Checklist: Higher
- . Sparx Maths Checklist: Foundation
- Sparx Maths Checklist Higher

#### **Practice Papers:**

- Corbett Mathsorbett
- Maths Genie
- Revision Maths
- Pearson

#### **Revision Sites:**

- Corbett Maths
- Maths Genie
- Mr. Barton Maths
- · Physics and Maths Tutor



## **Useful Resources**













# Making it Stick in

English

# Moorside High School

Ms Ghelichi
Director of English

Enriching Lives, Inspiring Ambitions

#### **Eduqas GCSE English Language**

Component 1: 1 hour 35 minutes

Section A (40 marks)

5 questions based on one unseen fiction extract.

Section B (40 marks)

A choice of four narrative writing titles.

**Component 2: 2 hours** 

Section A (40 marks)

6 questions based on two unseen nonfiction extracts.

Section B (40 marks)

Two persuasive writing tasks.



#### **Eduqas GCSE English Literature**

**Component 1: 2 hours** 

Section A (15 marks + 25 marks)

Macbeth

Section B (15 marks + 25 marks)

Anthology poetry

Component 2: 2 hours 30 minutes

Section A (40 marks)

An Inspector Calls

Section B (40 marks)

A Christmas Carol

Section C (15 marks + 25 marks)

Unseen poetry



### What students think 'good' revision looks like in English...

- Memorising quotes for English Literature this is important but only forms part of a good revision strategy.
- Re-reading information.
- Re-visiting what they enjoy or feel comfortable with.





## What effective revision looks like in English....

#### **English Language**

- Past exam papers.
- Essay writing.
- Having a bank of voc Read can be manipulated for
- be 'dropped' into ar

**English Literature** 

Read!

Developing a charac Read!

the plot

links between different rs, themes and ideas.

**Macbeth** 

**Violence** 





#### How can you support your child?

#### Help them identify areas they need to improve.

- Students will often focus on areas they feel confident in.
- Often the more challenging texts (Macbeth) are left until the last minute.

#### Monitor your child's homework on Seneca.

- You can view how long your child has spent on their homework.
- You can view homework your child has completed.
- You can view the percentage of correct answers they have achieved.

https://senecalearning.com/en-GB/parents

# 'Book talk' - question your child about the texts they are studying.

- Why is X character important?
- What are the most important parts of the text?
- What is the writer trying to covey?

#### Consider how your child uses AI (Chat GPT).

 Do they use AI software to help them write their essays or are they using AI software to write their essays?







# Making it Stick in

Science

Moorside High School

Mr Deva
Director of Science

Enriching Lives, Inspiring Ambitions

# What is on each paper?

	Biology	Chemistry	Physics
Paper 1 – Nov Mock	Cell Biology; Organisation; Infection and response; and Bioenergetics.	Atomic structure and the periodic table; Bonding, structure, and the properties of matter; Quantitative chemistry; Chemical changes; and Energy changes.	Energy; Electricity; Particle model of matter; and Atomic structure
Paper 2 – Jan Mock	Homeostasis and response; Inheritance, variation and evolution; and Ecology	The rate and extent of chemical change; Organic chemistry; Chemical analysis; Chemistry of the atmosphere; and Using resources.	Forces; Waves; and Magnetism and electromagnetism  Triple: Space





# Revision in Science – Recall is king!

Reactions of Metals			
1. What name is given to a list of metals ordered by	The reactivity series		
their reactivity?			
2. In terms of electrons, what makes some metals	They lose their outer shell electrons more easily		
more reactive than others?			
3. What is an ore?	A naturally occurring rock containing metal compounds		
4. What is the result of an oxidation reaction?	Addition of oxygen, loss of electrons		
5. What is the result of a reduction reaction?	Removal of oxygen, gain of electrons		
6. How are metals less reactive than carbon extracted	Reduction with carbon		
from their ores?			
7. How are metals more reactive than carbon extracted from their ores?	Electrolysis		
8. What is a displacement reaction?	When a more reactive metal knocks out a less		
·	reactive metal from it's compound		
Acids and Alkalis			
9. What is the pH range for acids?	1-6		
10. What is the pH range for alkalis?	8-14		
11. What pH range is neutral?	7		
12. In terms of H <sup>+</sup> ions, what is an acid?	A substance that releases H+ ions when dissolved in water		
13. How do you measure the pH of a substance?	Universal indicator or pH probe		
14. Why can't you use universal indicator to do a titration	It is not used in titration because they have different		
High Scho	pH ranges		

15. What is a strong acid?		An acid where the molecules completely ionise in water		
16. What is an alkali?		A substance that dissolves in		
		water to form a solution above		
		pH 7		
17. What is a neutralisation		A reaction between an acid and a		
reaction?	Salt			
18. What is a weak	22. What is a salt?		A compound formed when a metal	
19. What is an alka			ion takes the place of a hydrogen ion	
			in an acid	
	23. What is the salt produced in a		Chloride	
20. What is a neuti	reaction involving hydrochloric acid?			
reaction?	24. What is the salt produced in a		Nitrate	
21. What is the ion	reaction involving nitric acid?			
neutralisation?				
	25. What is the salt produced in a		Sulfate	
	reaction involving sulfuric acid?			
26. How can ye		ou obtain a solid salt	Crystallisation	
	from a solution	1?		
27. When an a		cid reacts with a metal,	Metal	
which species		is oxidised?		
	28. When an acid reacts with a metal,		Hydrogen	
	which species is reduced?			

# The difficulty when revising Science

- 28 individual pieces of knowledge (facts) for one unit of work
- They have will be assessed on 13 units worth of work for paper 1!
- That's approximately 299 individual facts to learn...for just paper 1!
- Without recall there is no application





# Quizzing is key

- Fold the KO's
- Pupils create their own quizzes with answers.
- Give them to people at home breakfast quiz, car quiz, bus quiz.
- Use the carousel study packs!
- MAKE SURE THEY DO THEIR HOMEWORK....
- PROPERLY





# **Beyond recall**

 Explanation of....but....

Moorside High School

**Enriching lives, Inspiring Ambitions** 

About Us

Key Information

Curriculum Students

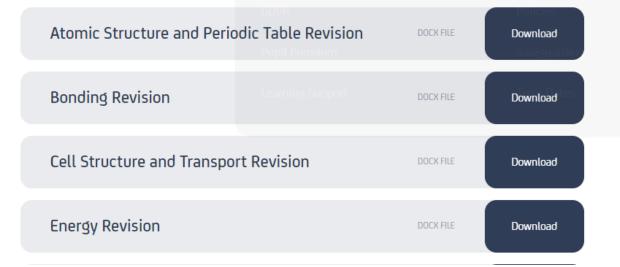
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Practice q



- https://achemicalorthodoxy.wordpress.com/2019/03/13/all-the-slop-you-need/
- https://adam-robbins.com/2020/06/12/biology-slop-the-next-generation/



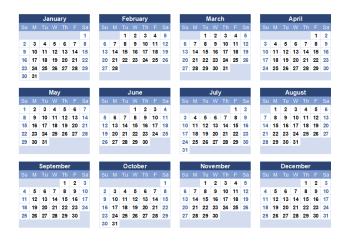


Curriculum -> Subjects -> Science



## **Key Dates**

- Parents' Session 'Make It Stick' Evening 2nd November 2023
- IThrive Managing Exam Stress sessions for students 12th December 2023
- Mock Exams 10th January 26th January 2024
- Mock exam results assembly for students 15<sup>th</sup> February 2024
- First progress reports –26th February 2024
- Parents' Evening 29th February 2024
- External Exams 9<sup>th</sup> May 19th June 2024
- Year 11 Prom 20th June 2024 (TBC)





Any questions after the evening, please email MHSyear11@consilium-at.com





# Thank- you for your continued support

# Moorside High School

Have a safe journey home.

Enriching Lives, Inspiring Ambitions

# Consideration

Considerate about ourselves, others, and our community.

Aspiration

Aspire to be the very best in all that we do.

Resilience

Work hard and never give up. Seek help and help others.

quality

Value diversity and tackle discrimination.



**#We are Team Moorside** 

