Work hard: revision skills

Stages of exam preparation

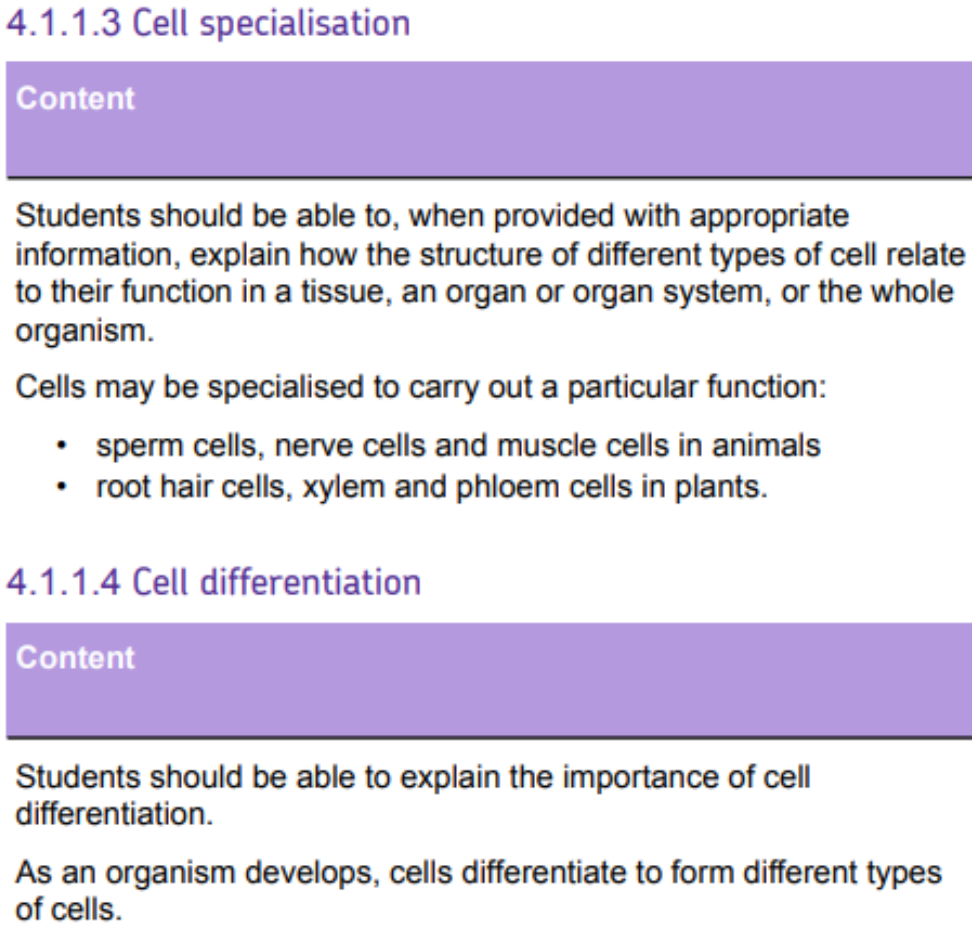
1. Learn the content first time around
   - Attend lessons
   - Work hard
   - Ask questions when you are unsure

Stages of exam preparation

2. Gather the information you need to revise

- Exercise books or notes or revision guides or knowledge organisers.
- Use specification to check you have all the information
- Start early (Spaced practice)

https://filestore.aqa.org.uk/resources/science/specifications/AQA-8464-SP-2016.PDF



4.1.1.3 Cell specialisation

Content

Students should be able to, when provided with appropriate information, explain how the structure of different types of cell relate to their function in a tissue, an organ or organ system, or the whole organism.

Cells may be specialised to carry out a particular function:

- sperm cells, nerve cells and muscle cells in animals
- root hair cells, xylem and phloem cells in plants.

4.1.1.4 Cell differentiation

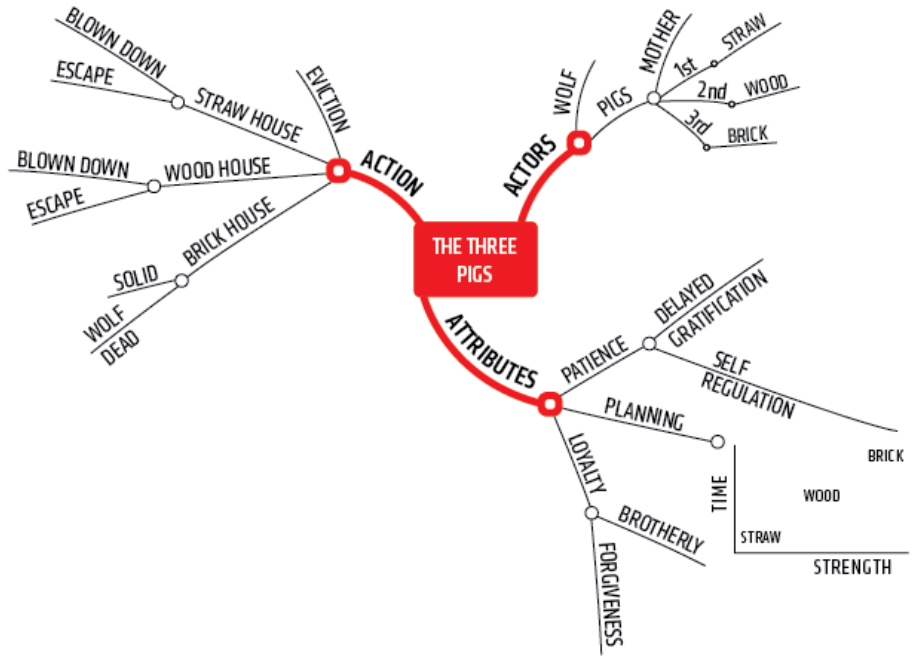
Content

Students should be able to explain the importance of cell differentiation.

As an organism develops, cells differentiate to form different types of cells.

Stages of exam preparation

3. Organise this information
   - Mind maps or flashcards or summarise into notes
   - Need to **think** hard



Strategies that are unlikely to be effective:
- Reading over your notes
- Copying text
- highlighting

front

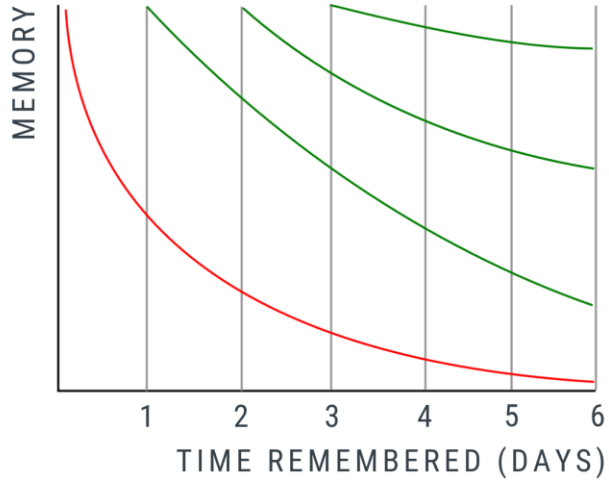
Weight
Mass

back

$[\ W = mg\ ]$

W	Newtons (N)
m	kilograms (kg)
g	Newtons per kilogram (N/kg)

Stages of exam preparation



4. Retrieval practice
    - Testing yourself increases the memory trace
    - Frequent testing embeds knowledge into long term memory
    - Strategies:
        - Recalling mindmaps from memory
        - Look-cover-write-check
        - Quizlet
        - Flashcard testing

Stages of exam preparation

5. Exam practice

Concluding Remarks

This paper was broadly similar to papers from previous series. The errors that students made in calculations were common errors, usually involving incorrect unit conversions or failing to convert units.

An area of the specification that stood out as being particularly poorly answered was section 4.2 which was tested in the Required Practical Activity in question 3 and again in question 10.

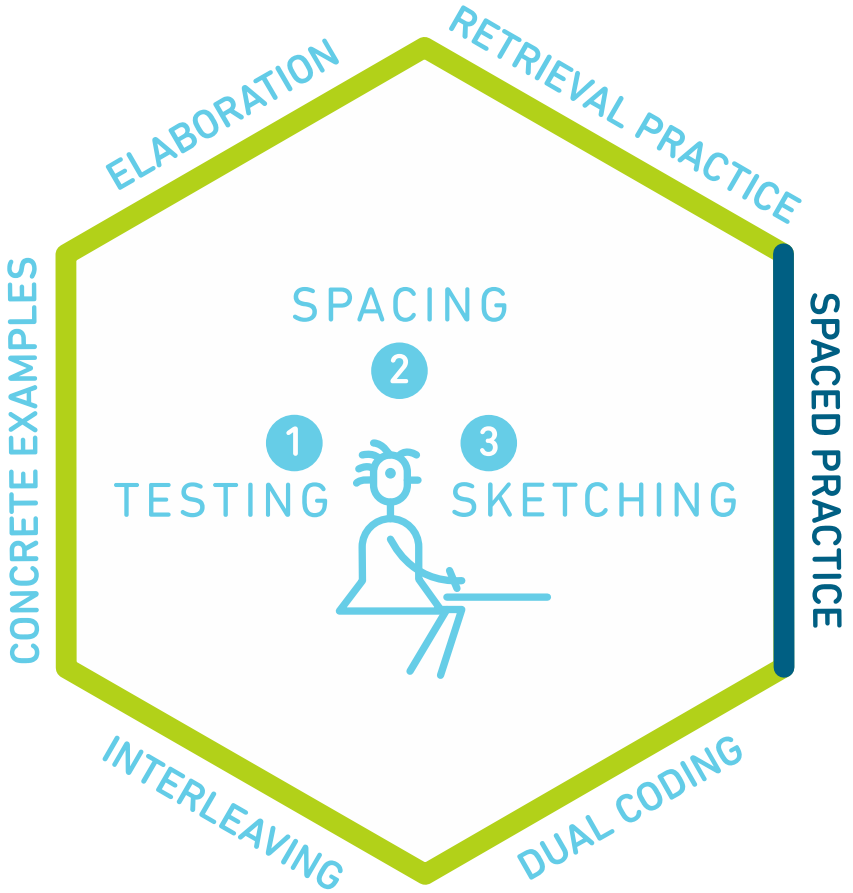
Most of the students understand the importance of showing clear working out when completing a calculation. This is crucial in the more complex calculations.

Similar to previous series, a significant number of the students were unable to read values from graphs accurately and failed to realise when numerical values were not given in standard SI units.

LEARN TO STUDY USING...

Spaced Practice

SPACE OUT YOUR PRACTICE OVER TIME



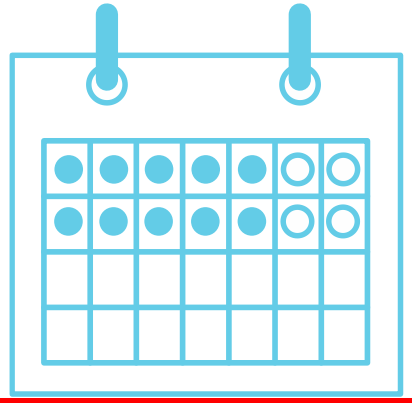
Work Hard- Be Kind- Be Proud

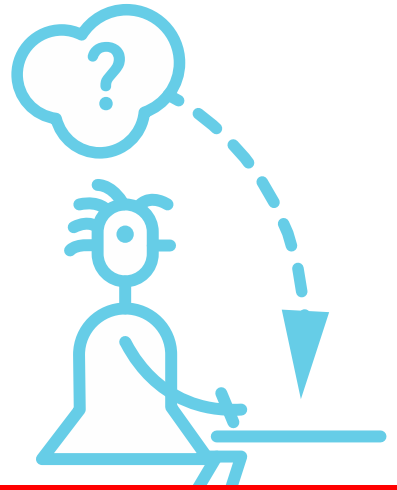
Spaced Practice

HOW TO DO IT

Start planning early for exams, and set aside a little bit of time every day. Five hours spread out over two weeks is better than the same five hours all at once.

M T W Th F Sa Su M T W Th F Sa Su

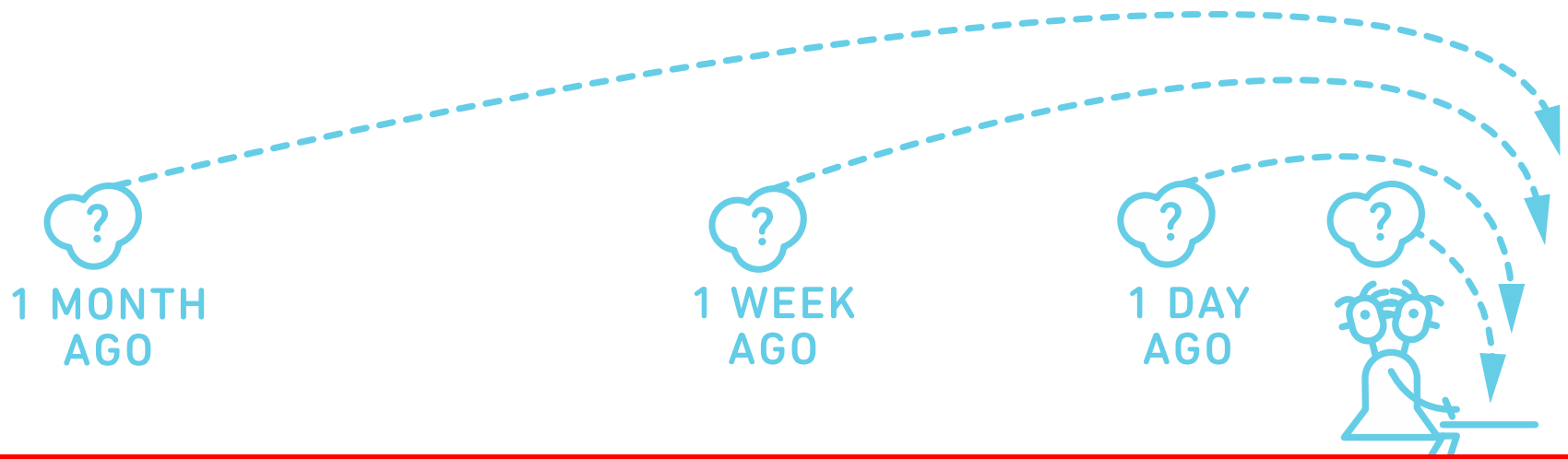




Spaced Practice

HOW TO DO IT

After you review information from the most recent class, make sure to go back and study important older information to keep it fresh.



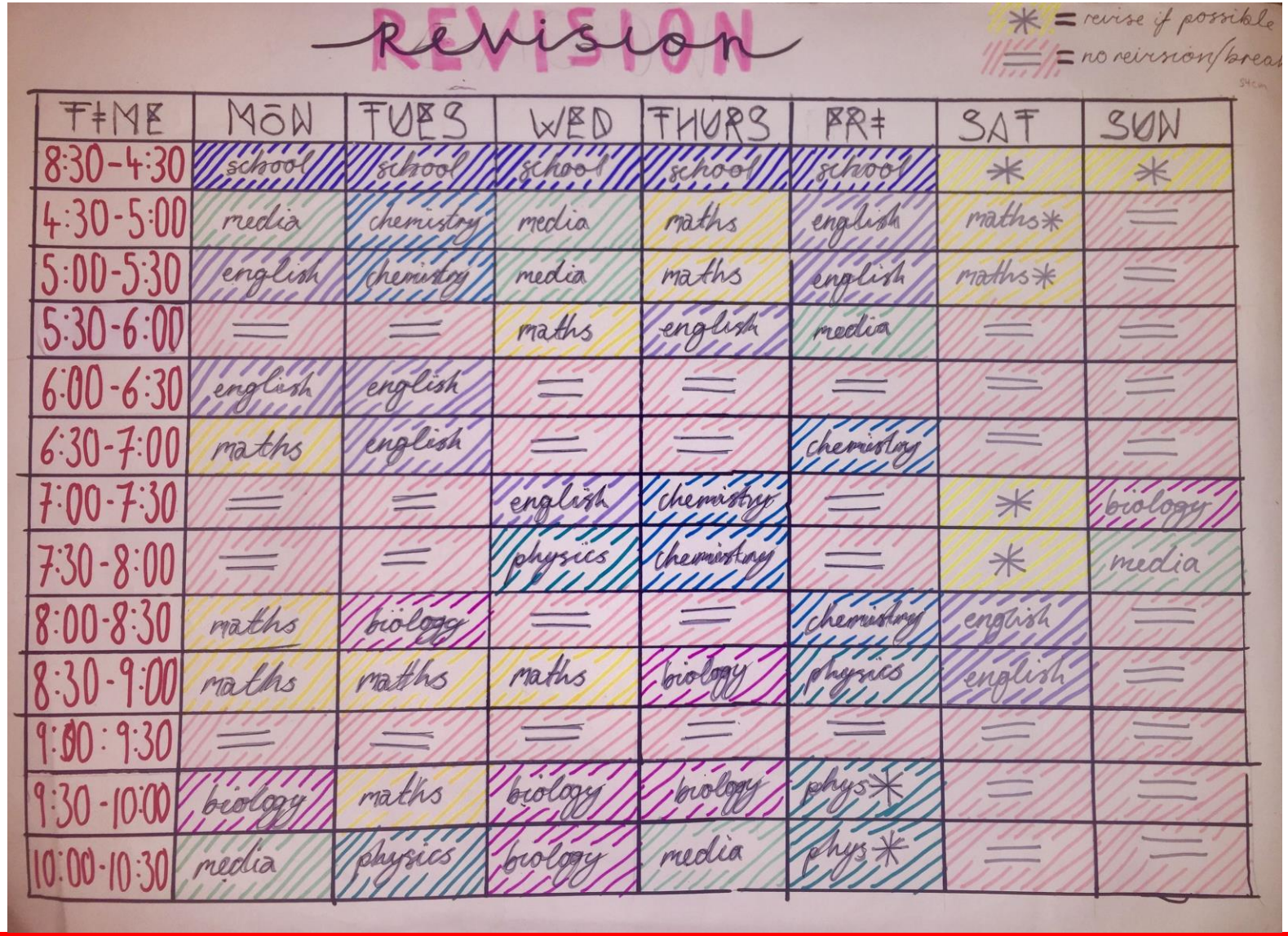
Spaced Practice

HOLD ON

This may seem difficult and you may forget some information from day to day, but this is actually a good thing! This forces you to retrieve information from memory.

When you sit down to study, make sure you are using effective study strategies rather than just re-reading your class notes.

Organise your time between now and the mocks



REVISION

* = revise if possible

= = no revision/break

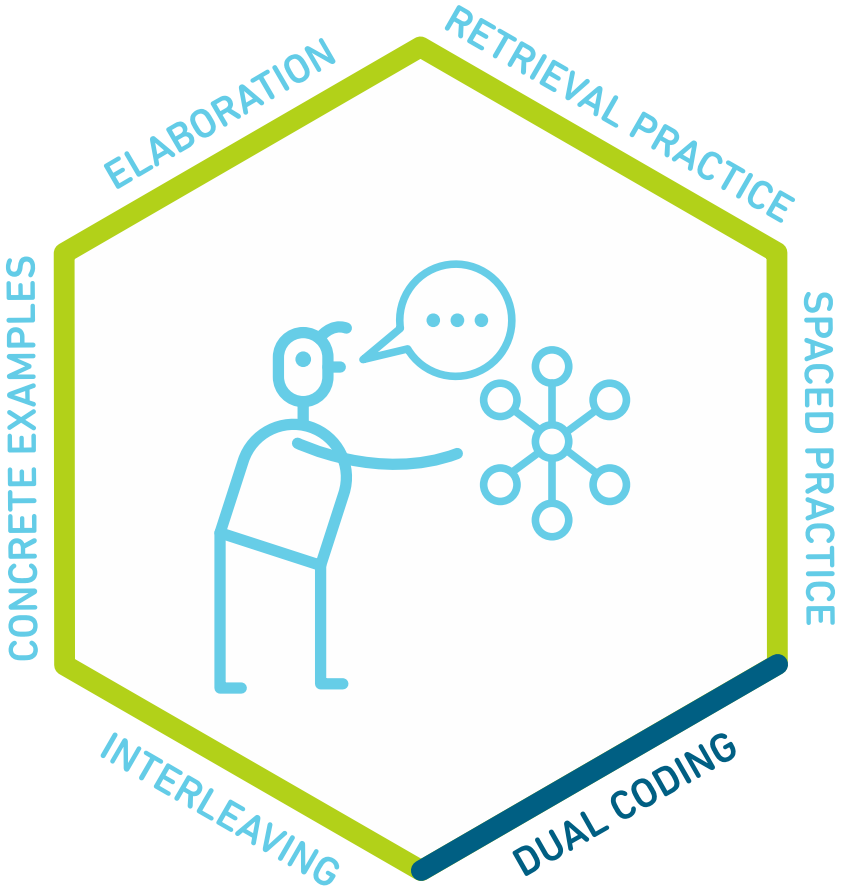
TIME	MON	TUES	WED	THURS	FRI	SAT	SUN
8:30-4:30	school	school	school	school	school	*	*
4:30-5:00	media	chemistry	media	maths	english	maths*	=
5:00-5:30	english	chemistry	media	maths	english	maths*	=
5:30-6:00	=	=	maths	english	media	=	=
6:00-6:30	english	english	=	=	=	=	=
6:30-7:00	maths	english	=	=	chemistry	=	=
7:00-7:30	=	=	english	chemistry	=	*	biology
7:30-8:00	=	=	physics	chemistry	=	*	media
8:00-8:30	maths	biology	=	=	chemistry	english	=
8:30-9:00	maths	maths	maths	biology	physics	english	=
9:00-9:30	=	=	=	=	=	=	=
9:30-10:00	biology	maths	biology	biology	phys*	=	=
10:00-10:30	media	physics	biology	media	phys*	=	=

Work Hard- Be Kind- Be Proud

LEARN TO STUDY USING...

Dual Coding

COMBINE WORDS AND VISUALS

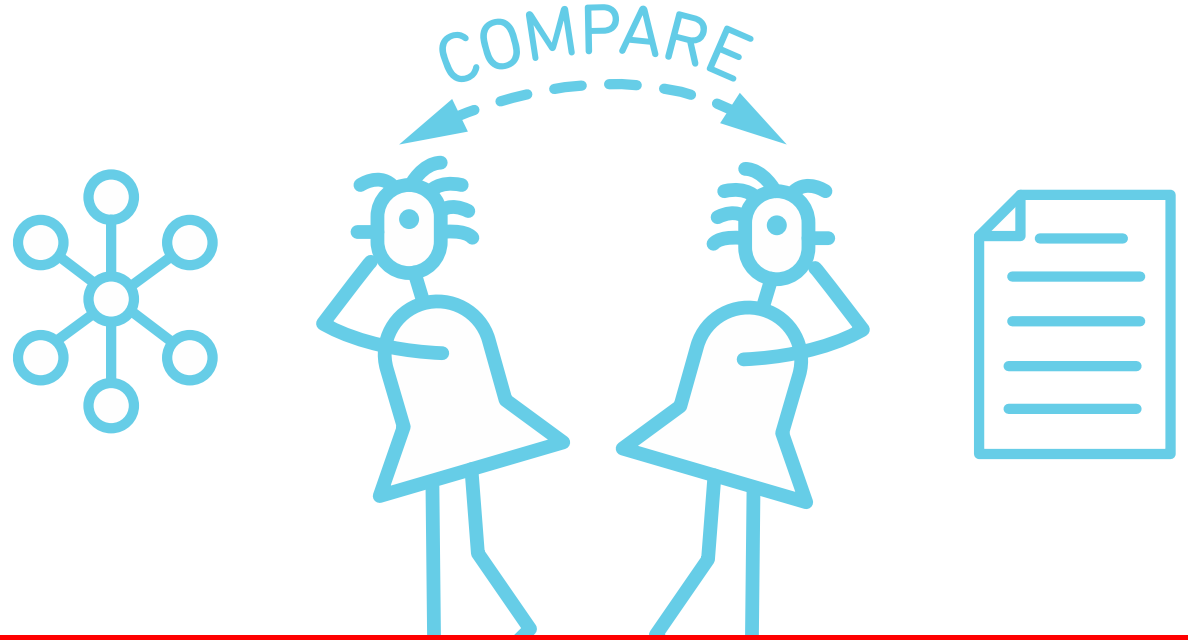


Work Hard- Be Kind- Be Proud

Dual Coding

HOW TO DO IT

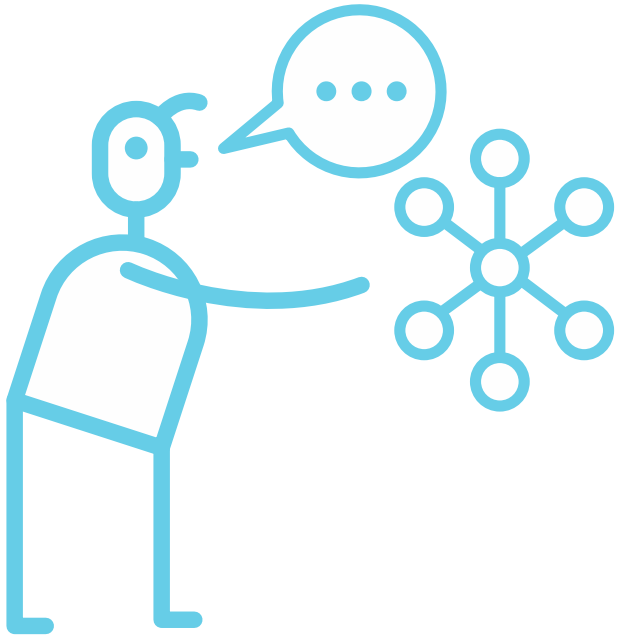
Look at your class materials and find visuals. Look over the visuals and compare to the words.



Dual Coding

HOW TO DO IT

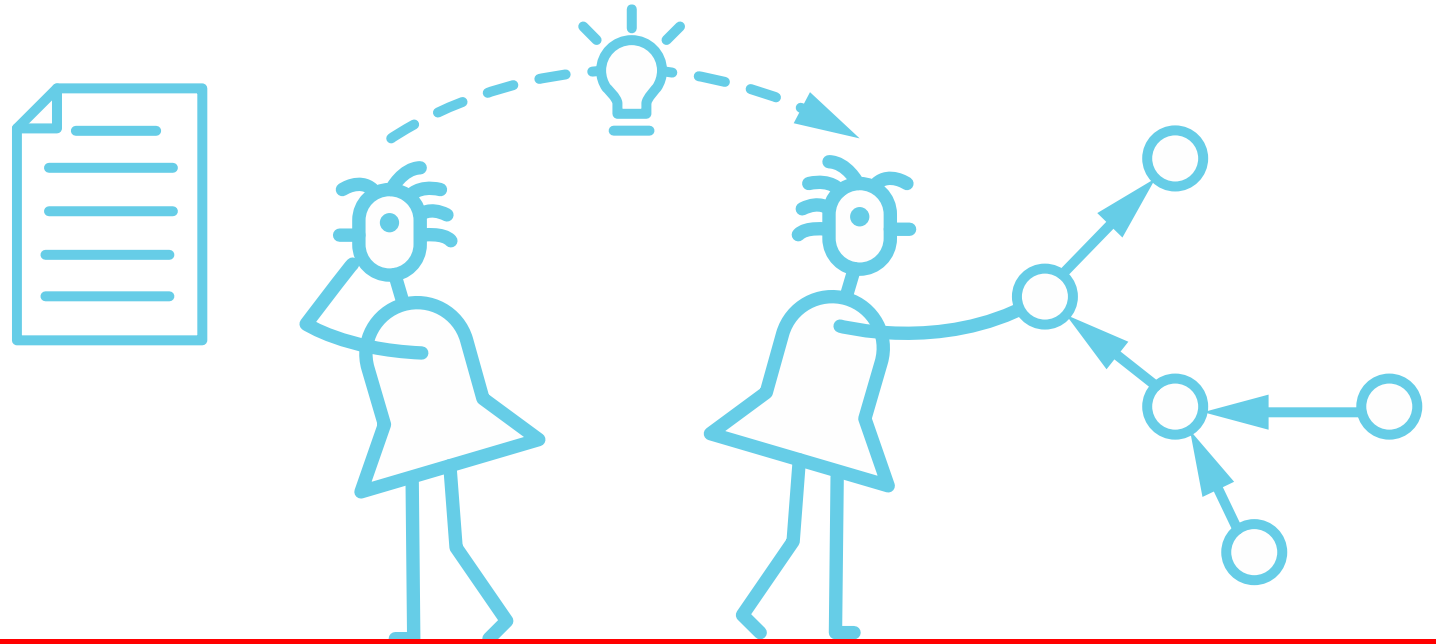
Look at visuals, and explain in your own words what they mean.



Dual Coding

HOW TO DO IT

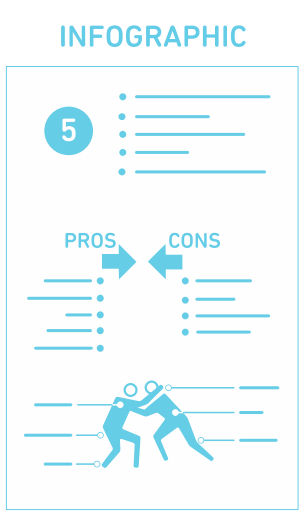
Take information that you are trying to learn, and draw visuals to go along with it.

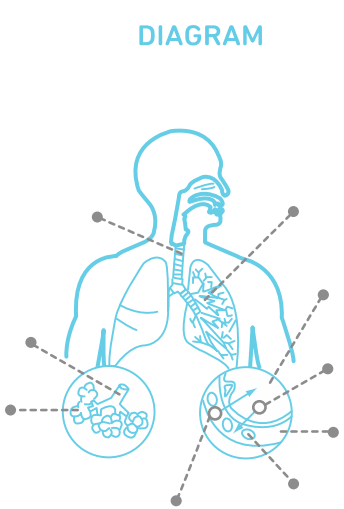


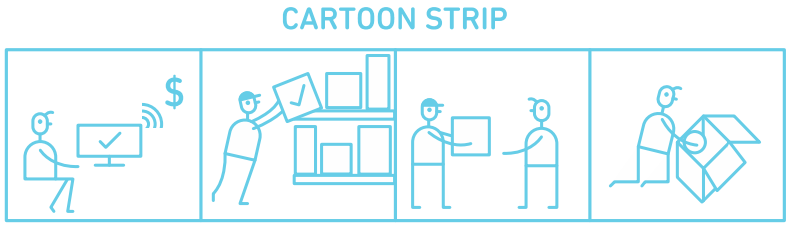
Dual Coding

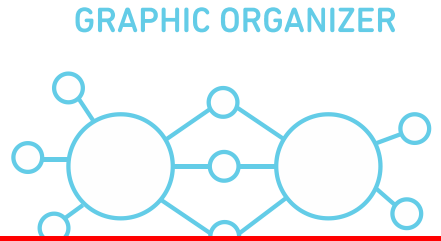
HOLD ON!

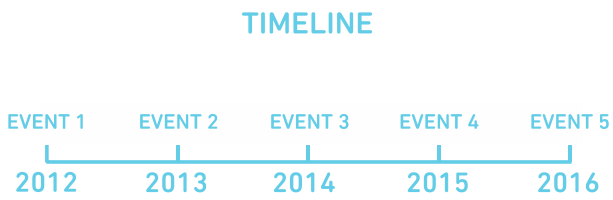
Try to come up with different ways to represent the information visually, for example an infographic, a timeline, a cartoon strip, or a diagram of parts that work together.











Avoiding stress

- Be aware of the signs of stress
- Eat well
- Get enough sleep
- Get some exercise
- Talk to someone about how you feel
- Make time for rest, other activities and hobbies
- Ask someone to help you with your revision

How Parents and Carers can support

- Make sure they have a suitable study space
- Support them with making a regular routine
- Help them plan out a schedule
- Encourage them to practice retrieval by testing them

KS4 Revision Strategies for Success

KIBWORTH MEAD ACADEMY

Why?

Your GCSE exams test up to five years worth of knowledge. Trying to learn **all** this knowledge in summer of Year 11 is too late- you need to be making the learning from EVERY lesson stick in your brain.
We need to space out the learning over time (spaced practice).
This will help you build up a really solid and deep understanding of each subject and will reduce your overall stress levels.
This guide is based on scientific research on how the brain works.
For more information go to www.learningscientists.org.

Post lesson REVIEW

After every lesson spend up to ten minutes doing a post-lesson review.

1. **R**ead over the lesson notes to review and check your understanding.
2. **E**xamine the knowledge organiser/revision guide/Bitesize
3. Retrie**V**al practice on key knowledge by self-testing
4. **I**nvestigate links to previous work ***Elaboration***
5. **E**xplain key concepts to yourself ***Elaboration***
6. **W**hat's coming up next lesson? Predict and anticipate.

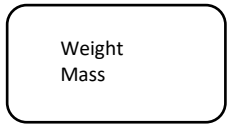
How to revise for a test/exam

1. Give yourself plenty of time so start the process early. ***Spaced practice.***
2. Gather together all your notes for the topic.
3. Make a mindmap or flashcards on the topic to organise the knowledge. *Use* ***dual coding****.*
4. Test yourself on the mindmap or flashcards (***retrieval practice***)
5. Use past paper questions without using your notes.
6. Identify where you have lost marks.
7. Review the topics where you have lost marks and try the past papers again.
8. Switch between different topics and in different orders ***interleaving****.*

Making and using effective flashcards

Flashcards work for learning definitions, vocabulary, quotes etc. and allow ***retrieval practice*** through recall.

- Put a question or heading/key word on one side and the answer or definition on the other.
- Try adding a picture (***dual coding****).*
- Only one question/keyword per card to ensure 100% recall
- Self test by calling out answers.
- Try it both ways round: start with the answer and recall the question.



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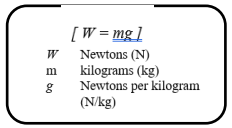
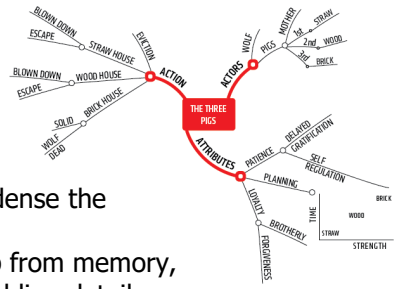


back

Making and using effective mindmaps

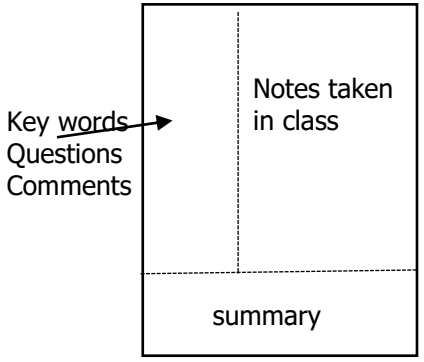
Mindmaps work for a theme or topic.

- Subdivide the topic into the main themes.
- Subdivide each theme further, adding keywords and key information.
- The aim is to summarise and condense the information.
- Self test by recalling the mindmap from memory, ***elaborating*** on each word and adding detail.



Cornell notes- a memorisation strategy

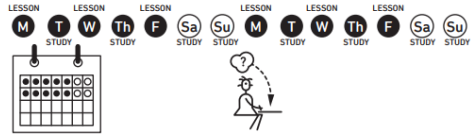
We don't **learn** without **thinking**. So your brain needs to be working hard in lessons and in your independent study.
Activities like copying text, where you are not thinking, do not help you learn. Cornell notes is a note taking technique that gets you to **think**.



Glossary- Revision strategies that are proven to work

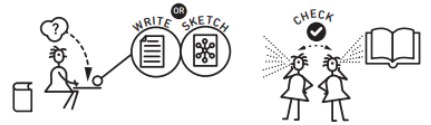
Spaced practice

Space out your revision over time. Review knowledge regularly, e.g. 1 month, 1 week, 1 day before test.



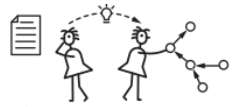
Retrieval practice

Practice recalling the knowledge from your memory. Regularly test yourself. Try revision apps like quizlet.



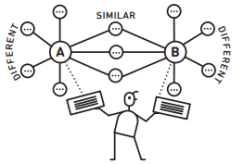
Dual coding

Combine words and visuals. The brain processes words and visuals separately so this leaves two memory traces.



Elaboration

Explain and describe ideas with many details. Make connections.



Interleaving

Switch between ideas during a revision session. Go back over the topics in different orders.