



Revision Techniques

The purpose of this session is to:

- Share a range of practical techniques that can be used to support revision.
- Suggest how families can support with the revision process.



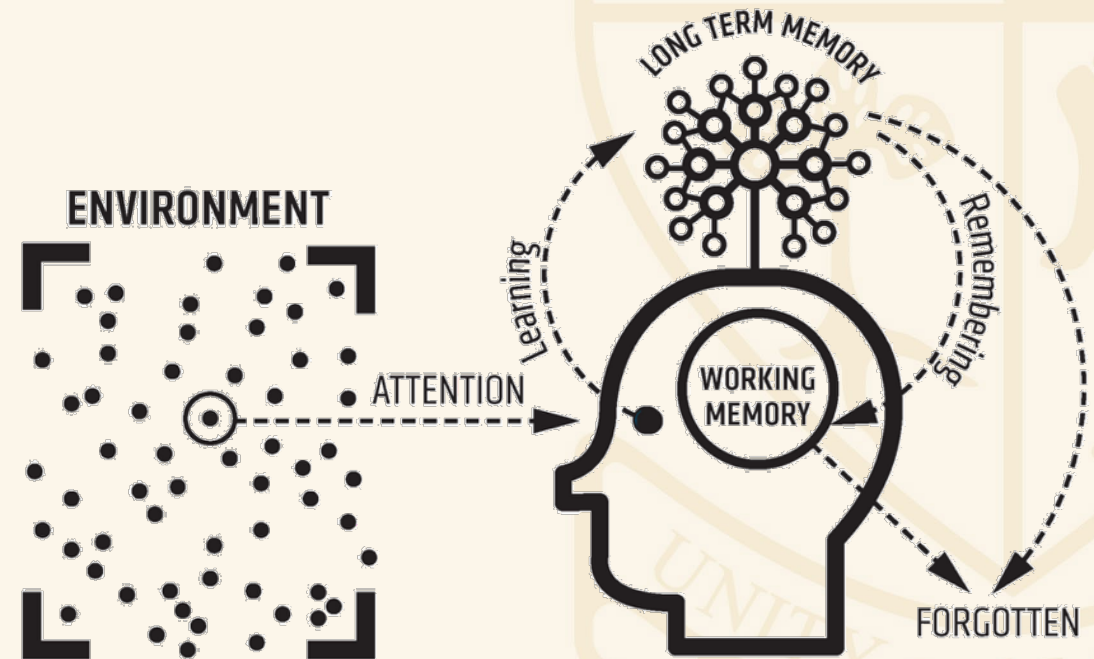
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The Purpose of Revision

- Revision increases and strengthens the knowledge you have built and the learning you have completed so that it is readily available and retrievable when needed.
- When we retrieve information from our long-term memory, we strengthen a cue (a signal) associated with that piece of information, as well as cues associated with related information.

Revision should be used to increase the number of cues by completing activities that require prior learning to be used in multiple ways.



The Purpose of Revision

- Some revision techniques will **not** be effective in enabling retrieval, e.g re-reading or highlighting notes, copying out a mind map, answering questions using a textbook, etc. These techniques are classed as **passive**.
- For learning to be embedded, **ACTIVE retrieval** is needed.
- Active revision strategies require you to do a lot more thinking. It makes revision harder work, but if active revision is completed in a structured way (e.g. with the help of a structured revision timetable / plan), you **will** feel confident and ready for your exams.



The Learning Scientists

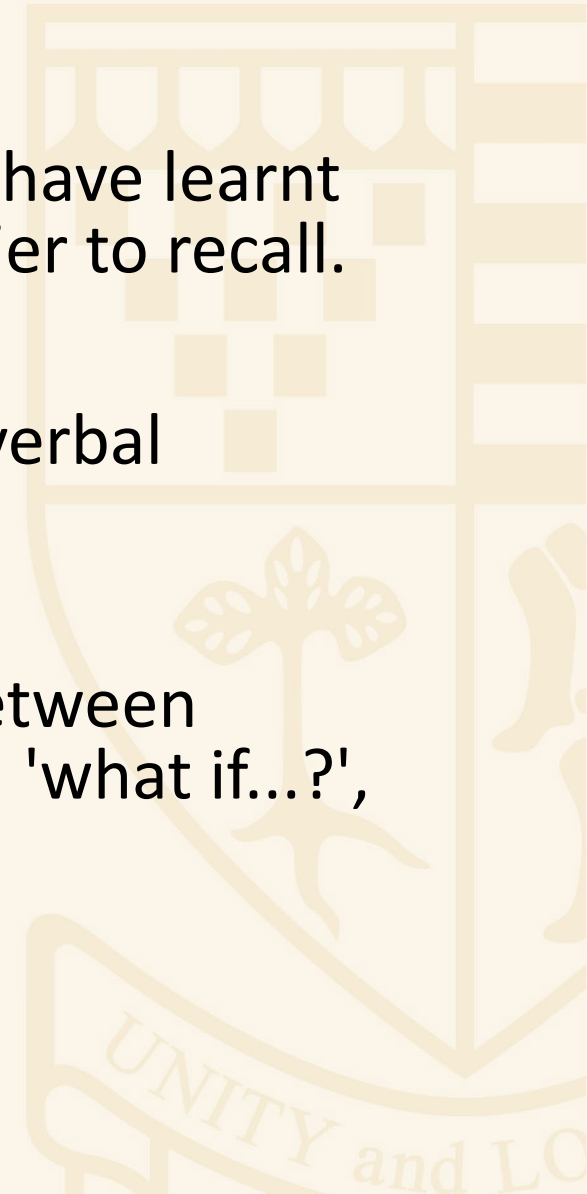
The Learning Scientists are cognitive psychological scientists whose research focuses on the science of learning.

They have come up with the **‘six strategies for effective learning’**, all of which can underpin your revision.



Key Learning Principles

- **RETRIEVAL PRACTICE** focuses on remembering what you have learnt so that the learning becomes more embedded and is easier to recall. Put simply, it's the backbone of revision!
- **DUAL CODING** is the process of learning with visual and verbal materials, e.g. having diagrams to sit alongside text to aid understanding. We'll come back to this.
- **ELABORATION** is about strengthening the connections between different concepts in the long-term memory. It's thinking: 'what if...?', 'why does...?' or 'how do we know...?', to build a deeper understanding.



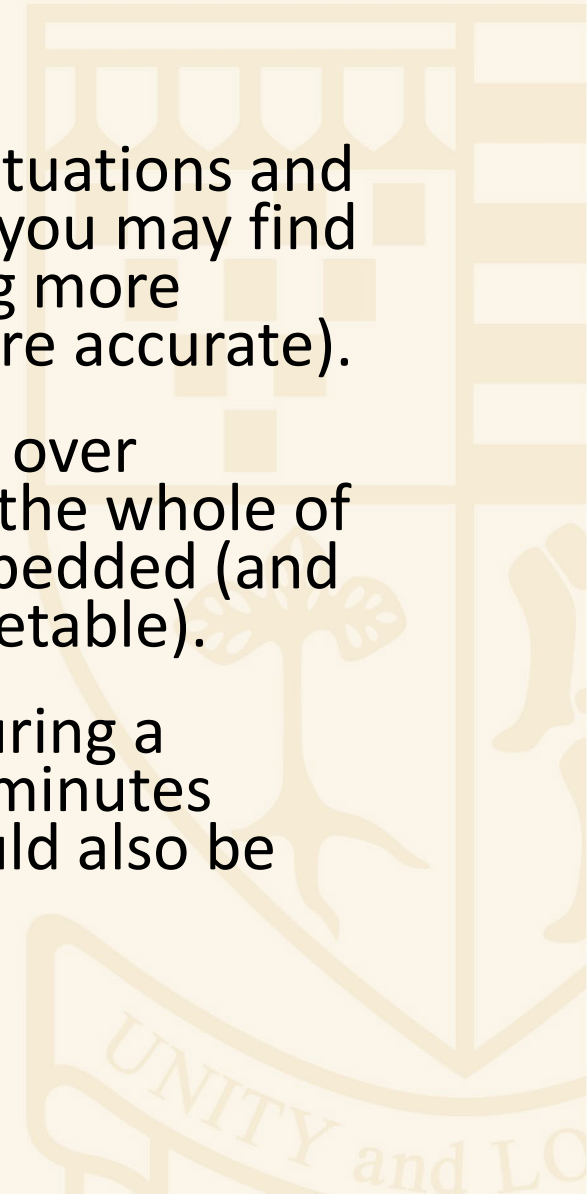
Key Learning Principles

- **CONCRETE EXAMPLES** is about applying learning to real-life situations and examples. Teachers will have shared examples in lessons, but you may find it useful to find your own, particularly if it helps make learning more relevant to you (although it's worth checking your examples are accurate).
- **SPACED PRACTICE** is when you spread the learning for a topic over different revision sessions rather than spending time revising the whole of one topic in a day. This helps knowledge to become more embedded (and should be considered when planning a long-term revision timetable).
- **INTERLEAVING** is when you move between different topics during a revision session to improve productivity, e.g. spending 20-30 minutes revising a topic before moving on to a different one. This should also be considered when planning your revision timetable.



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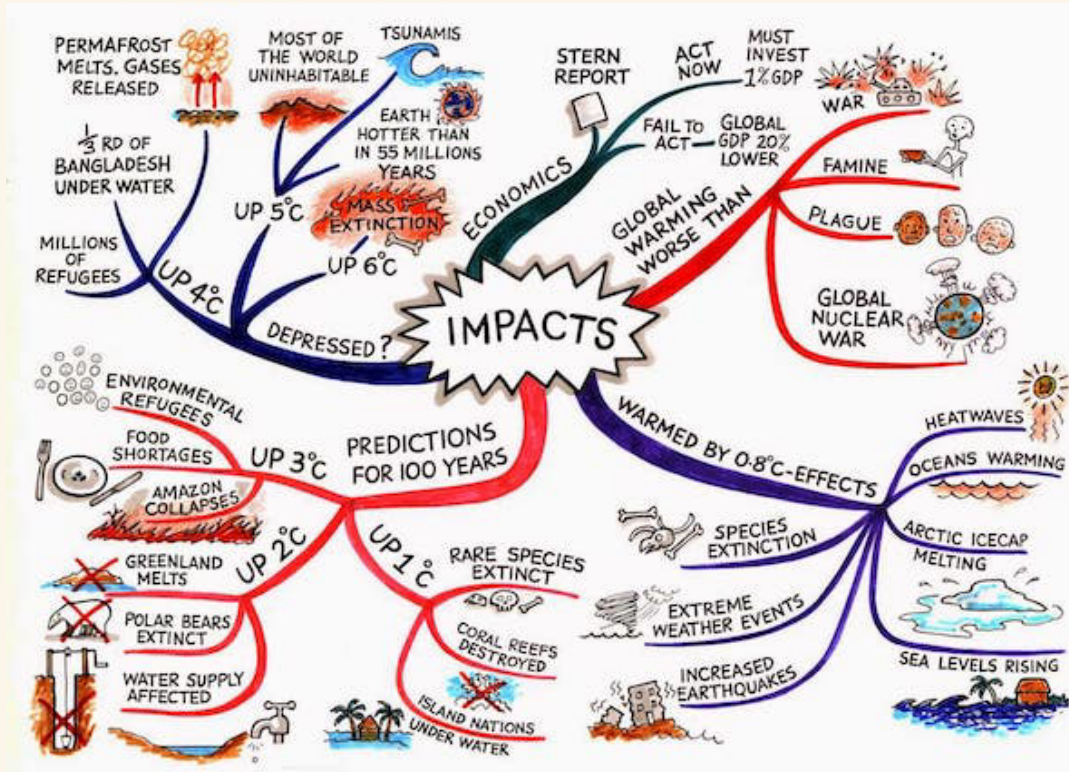


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Revision Strategies: Brain Dump



- Choose a topic to revise. Then, on a blank piece of paper, and **without** access to any notes, write down everything you know about that topic. This could be in the form of a mind map, bullet points, diagrams, etc. Choose a method that works for you!
- Once you have remembered what you can, look back at your notes to see what you missed out. Write this onto your page in a **different colour**.
- Repeating this exercise will help to embed knowledge. You should see that you remember more and more each time!

Revision Strategies: Flashcards

- Flashcards are a very popular tool for revision. You may choose to use them straight away, or you might want to turn to them after brain dumps have helped to embed more knowledge.
- Typically, flashcards have a question / key term / key word on one side, and the answer on the other side.
- They're a very simple tool to use to test knowledge (as long as the answer is not checked before the knowledge has been recalled).

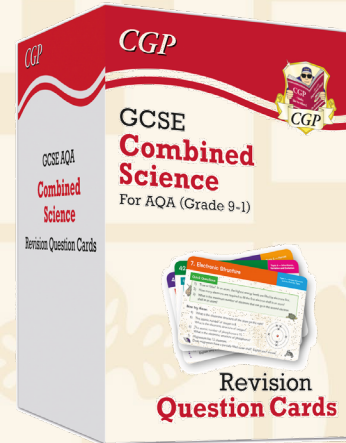
CARMELISATION

The browning of sugar when cooked at 160-170 degrees, causing colour (clear → burnt) and flavour changes (sweet → bitter).

Revision Strategies: Flashcards

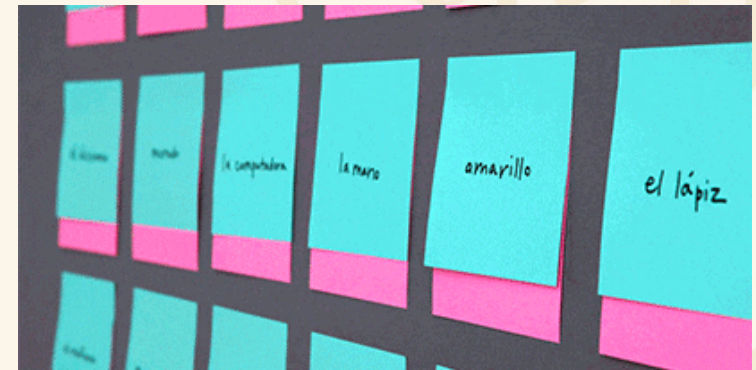


- Flashcards can be purchased but also created from white or coloured card.
- Pre-made flashcards are also available for some GCSE subjects, such as Science. However, you may find that learning becomes more embedded when flashcards are written out.
- Apps, such as QUIZLET, also help with the creation of flashcards. BUT, if used on mobile devices, it is important to consider if this will make it easier to be distracted!



Revision Strategies: Sticky Notes

- In a similar way to flashcards, you can use sticky notes to test key knowledge. They can also be used to make learning more visual.
- The benefit over flashcards is that sticky notes can be stuck up around the house, e.g. next to your mirror so you can revise when getting ready.
- Just like with flashcards, you can write a question / key term / key word on one side, and the answer on the other side.
- Post-it notes can be particularly handy when revising for languages with lots of key vocab to learn.



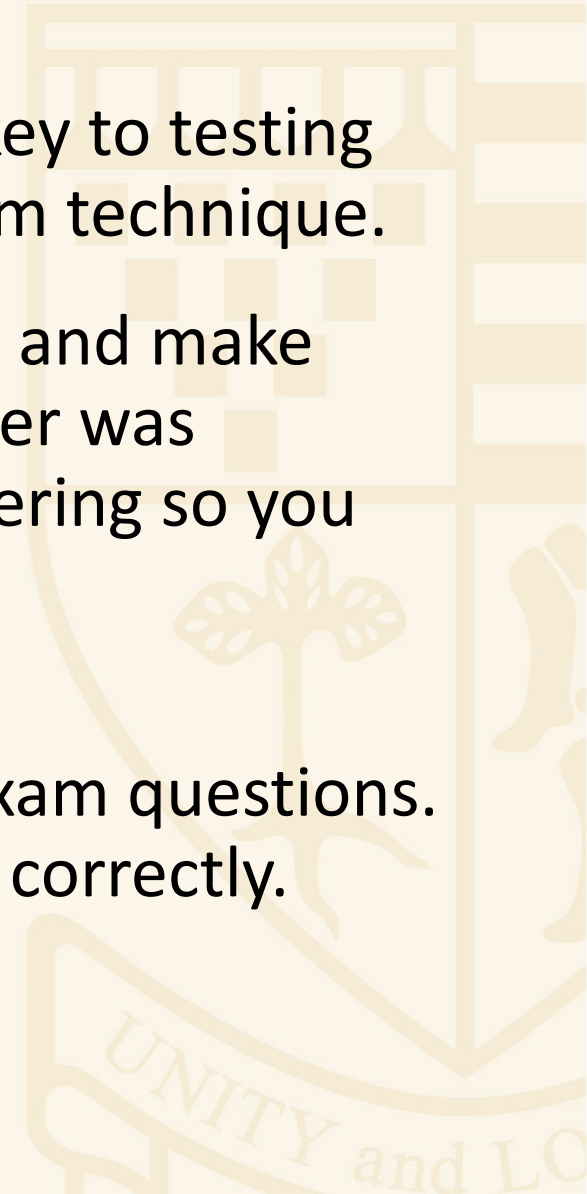
Revision Strategies: Exam Practice

- Practicing past exam questions and papers will be really key to testing your knowledge, whilst enabling you to practice your exam technique.
- **TOP TIP:** Build in exam practice throughout your revision, and make sure you are using mark schemes to see what the examiner was expecting to see. Where possible, set a timer when answering so you have a more realistic experience.
- Exam practice will:
 - Help build confidence with reading and interpreting exam questions.
 - Check that you are retrieving and applying knowledge correctly.
 - Develop your exam skills in timed conditions.



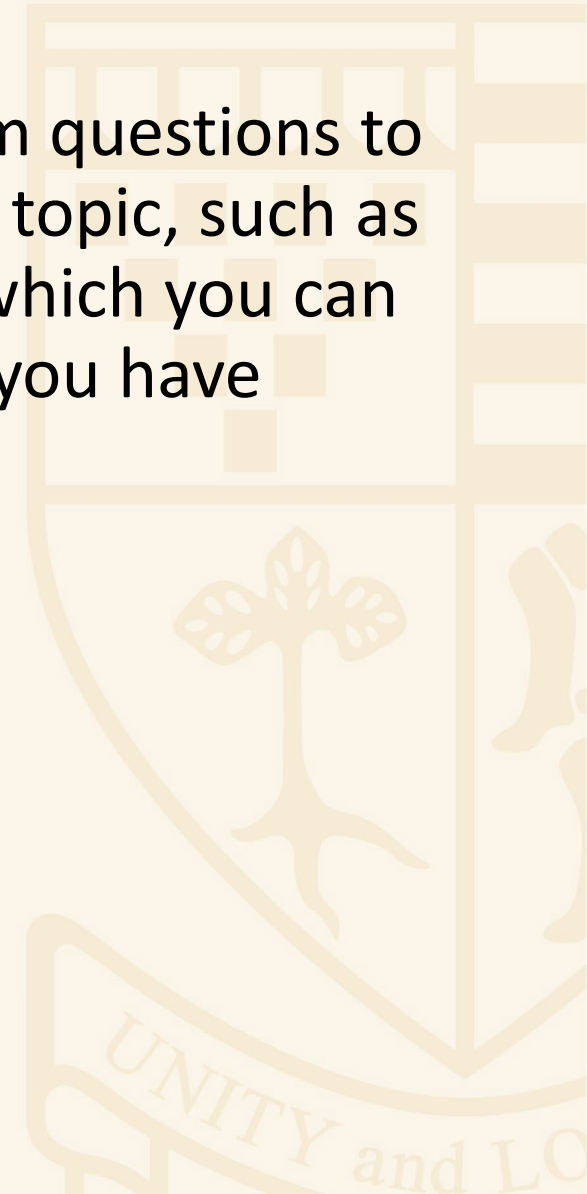
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Revision Strategies: Exam Practice


- Exam practice can also be built in by writing yourself exam questions to complete. For example, once you have finished revising a topic, such as earthquakes in Geography, you could write 5 questions, which you can return to later in the week to test if you remember what you have learnt.



Revision Strategies: Knowledge Organisers

- Many subjects use knowledge organisers to concisely convey knowledge that needs to be learnt about a topic. As part of revision, you may find it useful to create your own. You could then use a blank template to do a brain dump.

		Sources	Functions	Excess / Deficiency	
MICRONUTRIENTS	Minerals	Calcium	<ul style="list-style-type: none">• Milk, cheese, yogurt and other milk products• Green leafy vegetables• Tinned fish (with soft bones)• Added to flour by law	<ul style="list-style-type: none">• Main mineral in the body• Strong bones and teeth• Makes nerves and muscles work properly• Enables blood to clot over a wound following injury• Works with Vitamin D	<ul style="list-style-type: none">• E: Calcium deposits in organs, which stops them working• D: Osteoporosis, weak bones and teeth, issues with muscles and nerves, blood will not clot after injury
		Iron	<ul style="list-style-type: none">• Red meat (e.g. beef), kidney, liver• Wholemeal bread, green leafy vegetables (e.g. spinach), egg yolk, plain chocolate• Added to wheat flour by law	<ul style="list-style-type: none">• Needed to make haemoglobin in red blood cells to carry oxygen to all body cells• Works with Vitamin C	<ul style="list-style-type: none">• E: Too much iron is poisonous to the body• D: Anaemia – symptoms include tiredness, weakness, pale skin, weak nails
		Sodium (Salt)	<ul style="list-style-type: none">• Salt• Foods that have salt added to flavour / preserve them, e.g. cheese, stock cubes, bacon, butter, etc.	<ul style="list-style-type: none">• Controls the amount of water in the body• Helps to control nerves and muscles• Helps the body to use energy	<ul style="list-style-type: none">• E: High blood pressure• D: Muscle cramps
		Fluoride 	<ul style="list-style-type: none">• Fish and seafood• Some water supplies• Toothpaste	<ul style="list-style-type: none">• Strengthens bones and enamel in teeth• Prevents tooth decay	<ul style="list-style-type: none">• E: Discoloured teeth (permanent)• D: Weak enamel and tooth decay
		Iodine	<ul style="list-style-type: none">• Seafood• Vegetables• Milk and dairy foods	<ul style="list-style-type: none">• Produces the hormone thyroxin, which controls the metabolic rate of the body (the rate at which chemical reactions happen)	<ul style="list-style-type: none">• D: Goitre – swelling in the neck
		Phosphorus	<ul style="list-style-type: none">• Found in a wide range of foods	<ul style="list-style-type: none">• Helps make teeth strong, working alongside calcium• Essential for the release of energy and other chemical reactions in the body	<ul style="list-style-type: none">• N/A



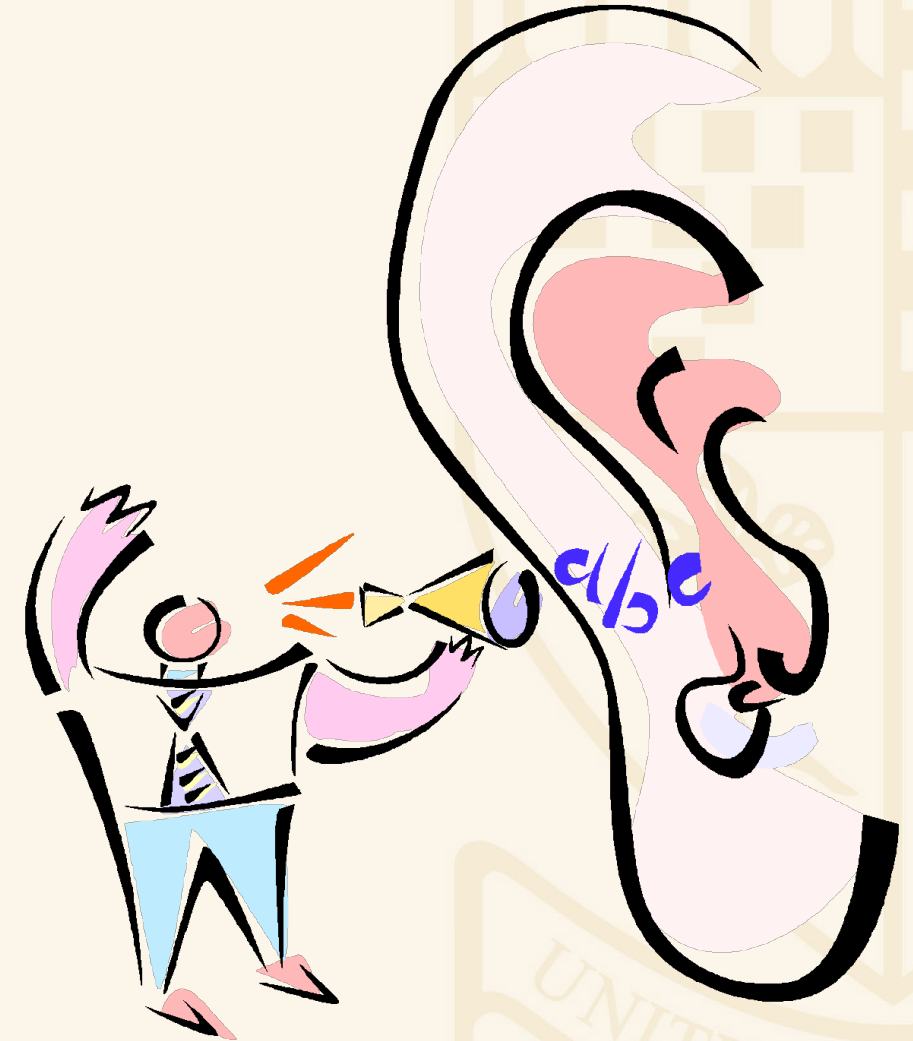


What micronutrients to the following food provide? What are their functions?



Revision Strategies: Voice Recordings

- If you prefer to listen to information, you may find it beneficial to make voice recordings about different topics, which you can then listen back to over and over again.
- This may not work for all subjects, but if used, it is important to combine this technique with other ones that will then test your retrieval.



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Revision Strategies: Paired Ping Pong

- If you are revising a topic with someone else, you could have a game of revision ping pong. Choose a topic, and start recalling learning, taking it in turns to see how much you can retrieve. You may wish to start of with a list of key words to prompt you.



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Revision Strategies: Folding Frenzy

Using Folding Frenzy



Notes

Students write a page of notes on a piece of blank paper on a specifically chosen topic. Focussing on;

1. key vocabulary
2. summarising content
3. using symbols

Fold



Graphic Organiser

Students then create a graphic organiser representing the core terminology of the notes.

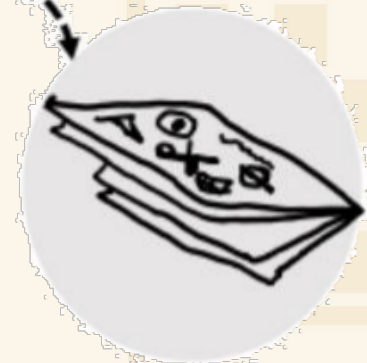
Fold



Flashcard

Students write down 5/6 keywords that summarise the topic.

Flip



Symbols

Students use the symbols from their original notes.

Image from Dallam School



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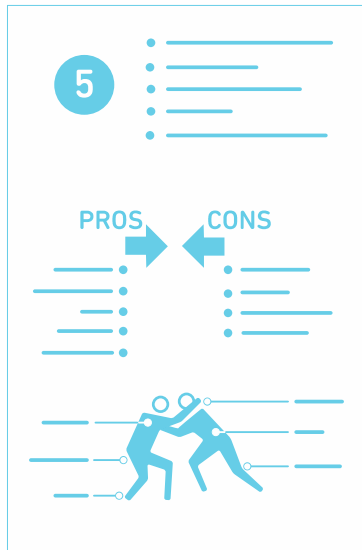
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This approach combines a number of the strategies we have explored, with a focus on condensing learning to enhance retrieval.

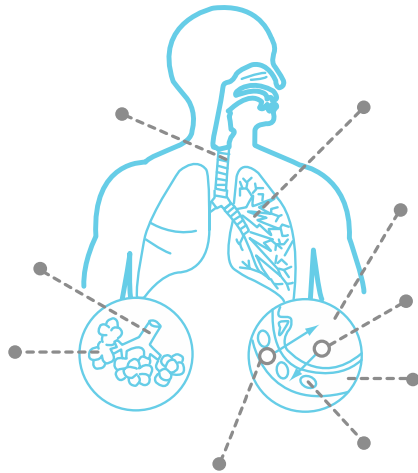
Dual Coding

As mentioned, Dual Coding is the process of learning with visual and verbal materials, e.g. having diagrams to sit alongside text to aid understanding.

INFOGRAPHIC



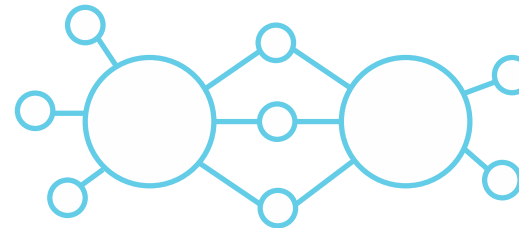
DIAGRAM



CARTOON STRIP



GRAPHIC ORGANIZER



TIMELINE



These images suggest different ways information could be presented to aid learning and retrieval of knowledge.

Final Top Tips

- Test out different **revision strategies** to see which ones work best for you. BUT try and use more than one strategy so that you continue to retrieve and apply knowledge rather than getting used to what something says (e.g. flashcards).
- Consider the best way to present information on the resources you are developing, and consider using **dual-coding** so that information is presented in different ways to aid understanding.
- **Exam practice** is key to exam preparation. Make sure you are utilising past exam papers, which can be accessed from exam board websites. Websites, such as BBC Bitesize, also have **quizzes** that you can use to test your knowledge.
- Focus your time and energy on **retrieving and applying** knowledge, not on creating beautiful resources. It's the knowledge that will help you in the exams!

Revision Strategies: How can family help?

- **Flashcards** – test your child using their flashcards! How much can they recall? What areas do they need to focus more on?
- **Question Setting** – Review topics that have been revised and write your child a list of that will questions quiz them about what they have learnt.
- **Just a Minute** – ask your child to speak for one minute, without stopping, about a topic they have been revising. What can they **retrieve**?
- **Elaboration** – Assist your child with ‘elaboration’ to strengthen the connections they are making between different concepts in their long-term memory. Encourage them to question 'what if...?', 'why does...?' or 'how do we know...?', to build a deeper understanding.
- **Links to Learning** – If you read or watch something that’s in the news and links to a topic your child is learning about, share it with them to build their bank of **concrete examples**.



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Suggested Revision Resources

- Flashcards
- Sticky notes
- A4 (and maybe A3) plain and lined paper
- Black / blue biros
- Coloured pens / pencils
- Highlighters
- Revision guides





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