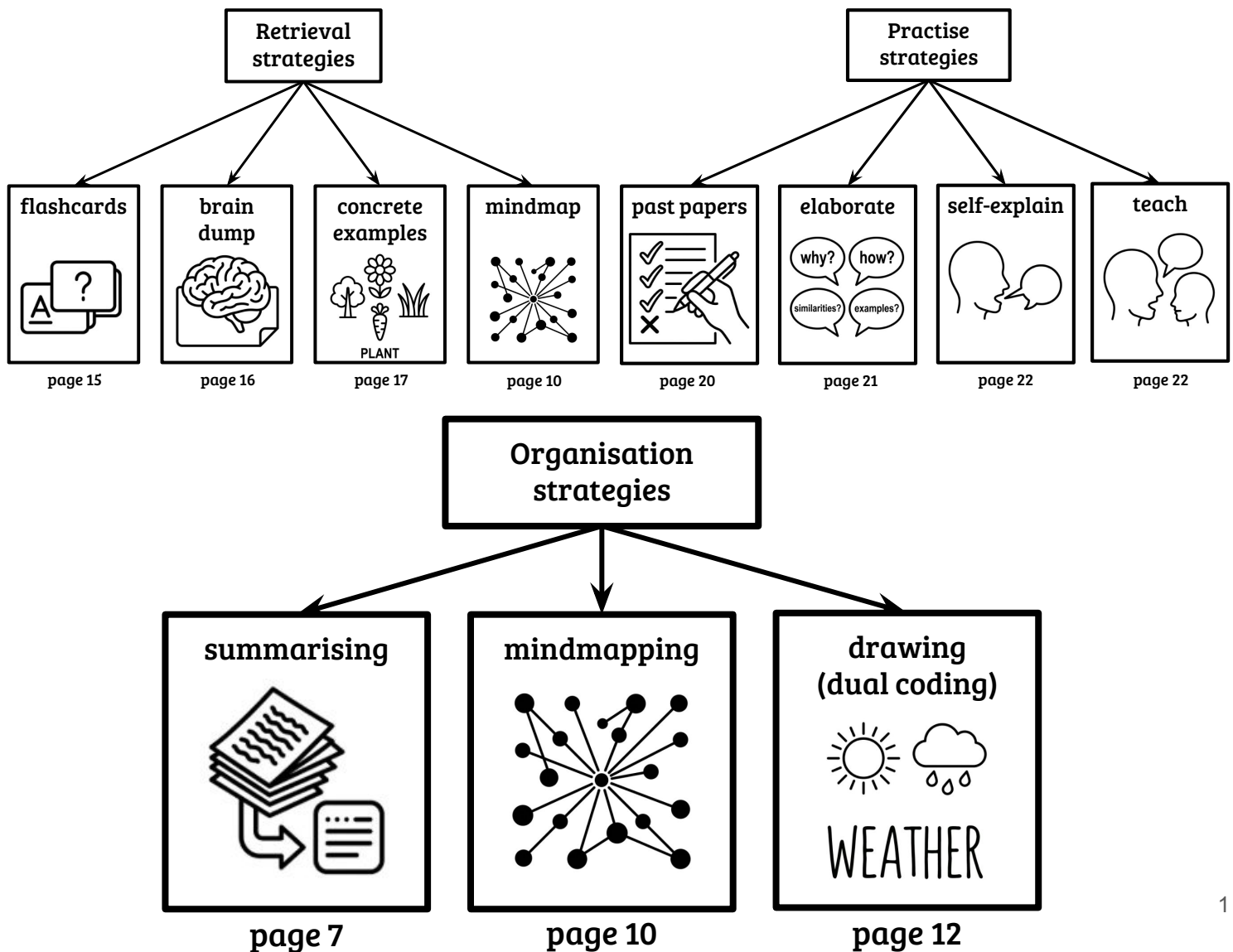


Beaumont School

Study Skills

Key Stage 5



Contents

Key Stage 5 Study Skills: Introduction	3
How does your brain learn?	4
The three stages of study	4
The Simple Model of Memory	5
Myths about learning	5
Study Skills for Organise	6
Summarising	7
Mindmapping	10
Drawing (dual coding)	12
Study Strategies for Retrieval	14
Flash cards	15
Brain dump	16
Concrete examples	17
Study Strategies for Practise	19
Past paper questions	20
Elaborate	21
Self-explain	22
Teach	22
Making a revision plan	24
Revision plan template	25
Online Resources	26

Key Stage 5 Study Skills: Introduction

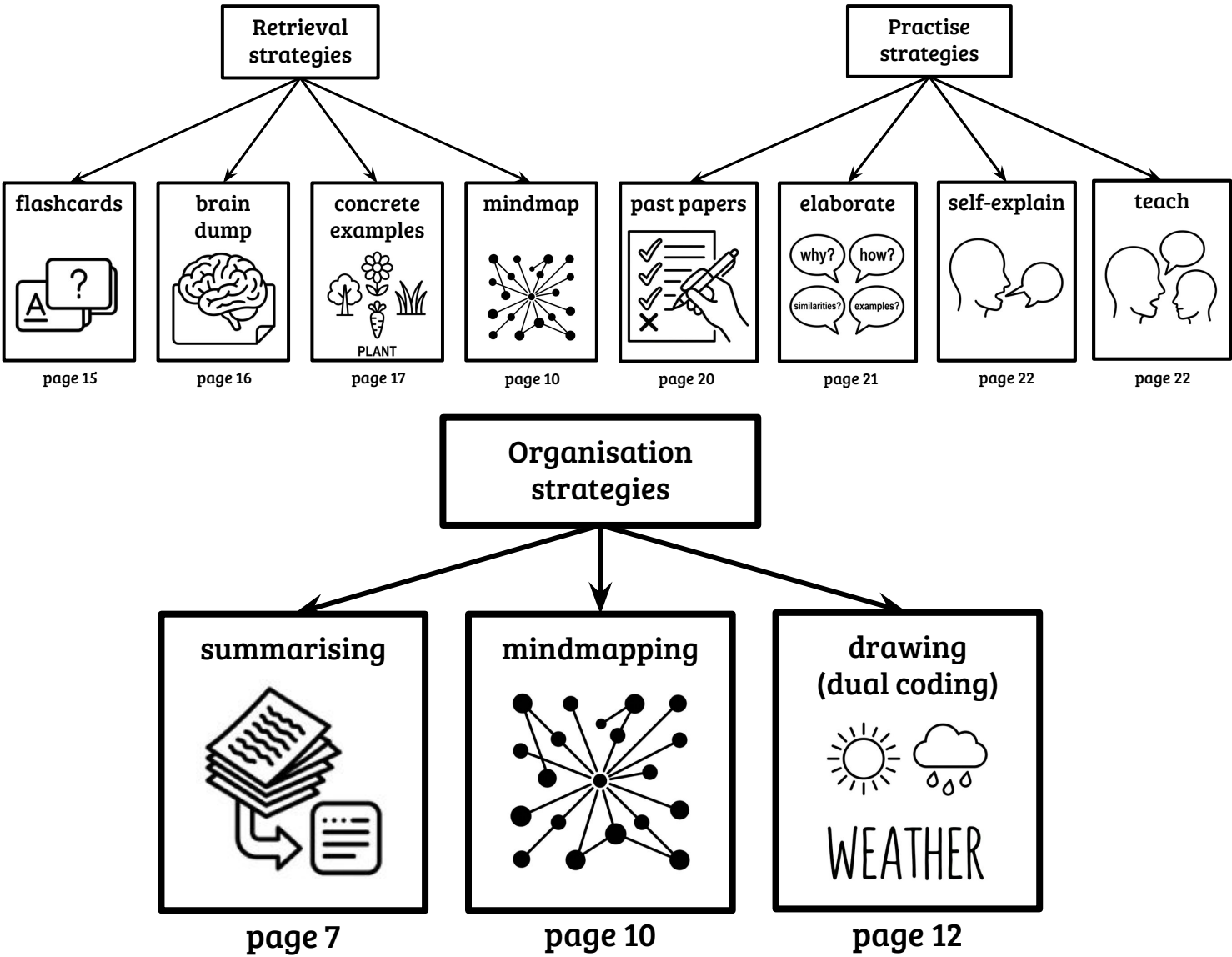
At Beaumont we pride ourselves on our excellent teaching, but students will benefit most from this if they also develop strong independent study skills. Learning how to learn is challenging, so we aim to support students to develop skills appropriate to the stage of their education.

Effective study skills fit into three broad areas: organising, retrieving and practising using information and skills.



During Key Stage 3 and 4 the focus was on retrieval and practise. These are still vital habits for success at Key Stage 5, but it's also helpful to learn strategies to organise the information you need to learn. This will be particularly important at Key Stage 5 when you will need to be more independent in your studies.

This guide provides an introduction to how learning happens, along with some examples of strategies to develop habits of retrieval, practise and organisation of your knowledge and skills:



How does your brain learn?

1. Learning means storing information and skills in long-term memory

Your brain works like a store cupboard - you need to be able to get information in and out so that you can make use of it. Practising recall helps you to get better at this.

2. Organise what you need to learn

Before you can learn or check you have learned something you need to know what you need to know. Summarising important knowledge can be a really helpful starting point.

3. Retrieval practice is key

Instead of just reading through your notes or revision guide, you should test yourself and practise bringing information up from your memory. This builds stronger memory pathways in your brain.

4. Spaced revision beats cramming

Studying a topic over several sessions spaced out over time is much more effective than doing it all at once. Revisit a topic several times before an exam for powerful revision.

5. Practise using what you know

Explaining a topic to another person (or yourself) forces you to organise and practise recalling the information. Answering practice questions is also a great way to strengthen memory.

The three stages of study



Top Revision Tips

- ✓ Use past papers and quizzes to practise retrieval
- ✓ Don't just read notes - rewrite them in new formats to organise information
- ✓ Mix up topics rather than block one subject for hours
- ✓ Spread your revision over days/weeks
- ✓ Check your understanding by using what you've learned

Spaced Practice

- ✓ Space your learning out
- ✓ The more times you revisit, the better



Your memory gets stronger with each spaced review.

- ✓ Flashcards ✓ Mindmaps
- ✓ Quizzes ✓ Past papers

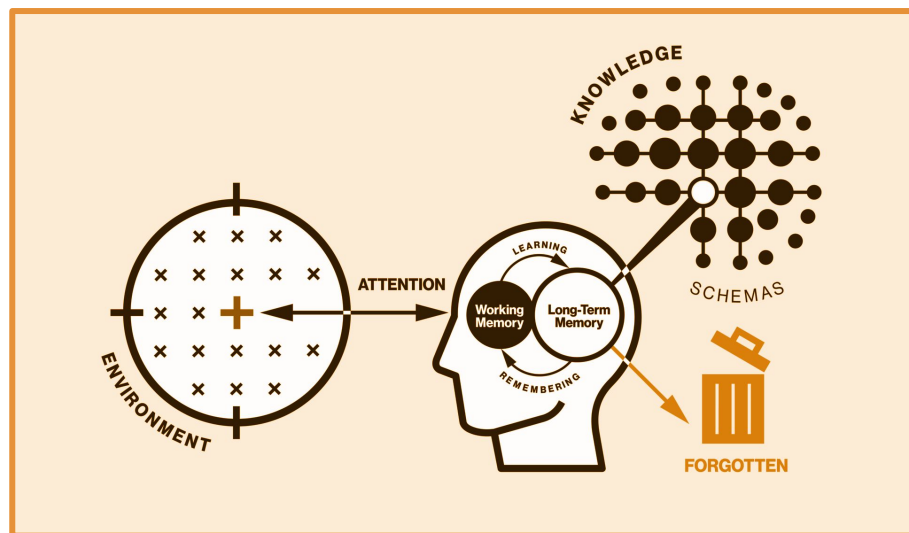
The Simple Model of Memory

2. Things which distract us from paying attention prevent us from learning so well.

What things distract you? What could you do to reduce these distractions when studying?

3. Working memory is what you are using when you think about something or bring knowledge to mind to help you solve a problem or answer a question.

1. We learn things which we pay attention to in our environment - reading, watching, listening.



4. Long-term memory is the store of all the things you have learned which you can recall to mind. The better you have learned it the easier it is to recall and use. You can think of it as the mindmap of knowledge within your mind.

5. Information which we don't recall regularly gets forgotten. Regularly reviewing learning helps to prevent forgetting and strengthen memory.

Myths about learning

It's important to understand how you learn because there are lots of unhelpful ideas in existence which might lead to you spending time doing less effective things. Knowing about these can help you to study in the best way possible. Some of the most common myths about learning are:

1. A good revision method is to re-read and highlight the information you need to learn

Studies show that students who use this method of revision do not remember as much information as those who revise using retrieval practice. This is probably because retrieval practice means they have to think harder about the content, so they benefit from desirable difficulties.

2. We learn things more effectively when we work in our favourite learning style (e.g. seeing, listening or doing)

It is true that people have preferences about their style of learning, but it makes no difference to how much they learn. It is much more sensible to base the style on what you are learning. Some things can be learned best by seeing (e.g. watching a painting technique in Art), some by listening (e.g. hearing an explanation in History) and some by doing (e.g. practice questions in Maths)

3. A good revision method is to make summary notes of all the topics you have learned

This is another commonly used revision method which is not strongly supported by research. It can be a really helpful first step to make sure you know what you need to learn but it is not enough. Studies show that students who use retrieval practice are more likely to remember the information than those who make summary notes.

**Remember that using good study strategies can help you to learn more.
Spending time studying is worth it - it makes you cleverer, but only if you
study in the right ways.**

Study Strategies for Organising

There are three important stages to effective study: **organising**, **retrieving** and **practising**.

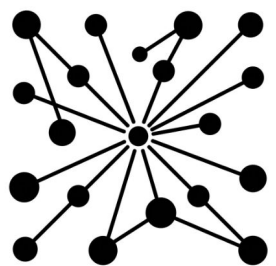


Organise the information you need to know. Always do this from memory to start with and then use your notes to add information which you have forgotten. You might organise information by:



Summarising

If I asked you to tell me about your day, you wouldn't tell me every detail. You would provide a summary of the most important things. This involves you selecting and organising the information. You can do a similar thing with your studies by selecting a topic and writing down the most important information in an organised way. It's vital that you think and use your own words, don't mindlessly copy your notes or revision guide. Start by writing a summary from memory, then use your notes or revision guide to improve what you have written.



Mindmapping

Mapping is a brilliant way of organising and learning information. It helps you to break down complex information, memorise it and see the connections between different ideas. Select a topic, write down the most important information, showing how ideas link together. Some examples are shown on the following pages so you can see what this might look like. Start by writing your mindmap from memory, then use your notes or revision guide to improve it.



Drawing (Dual Coding)

Using both text and images to remember information can be helpful. You can try turning text into some form of visual representation. To do so you will need to select and organise the information which matters; this forces you to think. Select a topic which you have summarised or made a mindmap of and try turning it into one of these visuals:

- An infographic to help represent facts and figures
- A labelled diagram
- A cartoon strip to tell a story
- A timeline to help remember what happened when
- A graphic organiser to show the links between different ideas
- A flow diagram to show a sequence or process

As always, its best to do this from memory to start with and then add to it using your notes.

WEATHER

Study Strategies - how to use them



Summarising

Summarising involves **selecting the most important information** and **organising it in a way which will help you to learn it**. This is a great place to start to make sure you know what you need to study.

You might summarise notes you have made during a lesson or you might be reading about a topic and making your own additional notes.

Cornell note taking and **'delete, substitute and keep'** are two helpful strategies. They work because **they make you think** about what information is most important.

Cornell note taking (see page 8 for examples)

CUES (reduce & recall)	DATE	MODULE/CLASS	TOPIC
NOTES (record) - AIM - reduce notes to essential ideas to practice recall - WRITE SOON AFTER CLASS Step 1. Review NOTES column + pull out: - key words - key concepts - authors - dates - facts Step 2. Formulate questions based on your NOTES e.g. what are Pascal's 4 principles of complexity theory? Step 3. Write these cues and questions in this column alongside the corresponding NOTES SUMMARY (reflect & review) - AIM - review the main ideas + reflect on their importance - WRITTEN AFTER CLASS Briefly summarise the main points from your notes. This section is useful when searching for info later. Think about: - why is this info important? - what conclusions can I draw?	NOTES (record) - AIM - record as many key points as possible - TAKE DURING CLASS! What do I write here? - key words and ideas - important dates / people / places - diagrams / charts - formulas - examples / case studies - critique - strengths / limitations Top tips: - use bullet points instead of full sentences - use symbols and abbreviations - leave a line between ideas - don't mindlessly copy from the slides or textbook - write in your own words where possible - use a method that works for you. Take notes in a format that you understand so you can make sense of them later.		

1. Write a title
2. Make notes in the main section of the page
 - Bullet points
 - Write in your own words
 - Keywords and ideas
 - Important dates / people / places
 - Diagrams / charts
 - Formulas
 - Examples / case studies
 - Critical analysis, e.g. strengths/weaknesses
3. Write cues, keywords and questions in the left-hand column
4. Summarise the most important information at the bottom of the page.

TITLE	NOTES	KEYWORDS	SUMMARY
①	②	③	④

Delete, substitute and keep

One effective method when summarising your notes or a textbook section or article that you are reading is to rewrite it ensuring that you:

- Delete some information - what information is superfluous to what you really need to know?
- Substitute some information - rephrase into your own words or abbreviate.
- Keep some information - what is the most important content?

Some examples of what this might look like are shown on page 9.

Examples of Cornell Note Taking

Topic: Carbocations (Alkenes)	
Recall cues What is a carbocation? Draw three examples of a: 1° carbocation 2° carbocation 3° carbocation What is the significance of whether a carbocation is 1°, 2° or 3°?	Notes Carbocations are molecules that carry a positive charge on a carbon atom. E.g. $\begin{array}{c} \text{CH}_3 \\ \\ \text{H}-\text{C}^+ \\ \\ \text{CH}_3 \end{array}$ Carbocations can be classed as primary (1°), secondary (2°) and tertiary (3°). In a primary carbocation, the carbon that carries the positive (+ve) charge is only attached to one other alkyl group. $\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3-\text{C}^+-\text{H} \\ \\ \text{H} \end{array}$ In a secondary carbocation, the carbon that carries the positive (+ve) charge is only attached to two other alkyl groups. $\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3-\text{C}^+-\text{CH}_3 \\ \\ \text{H} \end{array}$ In a tertiary carbocation, the carbon that carries the positive (+ve) charge is only attached to three other alkyl groups. $\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3-\text{C}^+-\text{CH}_3 \\ \\ \text{CH}_3 \end{array}$ 1°, 2° and 3° carbocations have different stabilities $\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3-\text{C}^+-\text{H} \\ \\ \text{H} \end{array} \quad 1^\circ \quad < \quad \begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3-\text{C}^+-\text{CH}_3 \\ \\ \text{H} \end{array} \quad 2^\circ \quad < \quad \begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3-\text{C}^+-\text{CH}_3 \\ \\ \text{CH}_3 \end{array} \quad 3^\circ$ least stable Most stable
Summary Carbocations are molecules with a +ve charge on a carbon atom. They can be 1°, 2° or 3° depending on how many alkyl groups (R) are attached to the +ve carbon. They have different stabilities $1^\circ \text{ R}-\text{C}^+-\text{H} < 2^\circ \text{ R}-\text{C}^+-\text{R} < 3^\circ \text{ R}-\text{C}^+-\text{R}$ least stable Most stable	

Topic: The Levellers	
Recall cues the formation of the movement the Levellers was the consequence of what? In broad terms, what did they seek? What was their constitution called? What were their main aims? Who was their leader? Alliance with NHA formed out of what event and when? When did this alliance end? Describe the events of 1649 that led to the ending of the Levellers' influence	Notes Breakdown of 1649 and 1649 authority Radical political ideas and movements → the Levellers → the Diggers Developed (1649) as a consequence of 1649 distress post civil war. • Mostly London-based → sought political, social and economic reform. Constitution: 'Agreement of the People' • Attracted 1649 authority • Little 1649 for 1649 and wanted to replace Kingship with a govt. of the 1649 • Leading 1649 = John Lilburne What happened? Levellers needed the support of the New Model Army Army Debates (1649) led to short-term pragmatic alliance → collapsed before 1649 1649 March - leading Levellers arrested 'The Hunting of the Foxes' attacks Cromwell Third Agreement is an attempt to inspire army mutiny May - Crushed by Cromwell May 1649. Rump Parliament's ability to 1649 army helped prevent unrest and limited influence and threat of Levellers.
Summary Breakdown of 1649 and 1649 authority Prompted by 1649 distress. Led by John Lilburne called for govt. of the 1649. Putney Debates (1649) → alliance with New Model Army → doesn't last long. Ends before 1649. Mar 1649 → leaders arrested → try to inspire army mutiny through Third Agreement Fails - Rump Parliament keeps army 1649 with 1649. Levellers crushed by Cromwell at Burford in May 1649.	

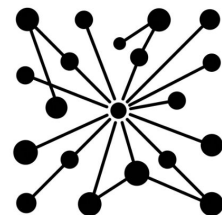
Examples of ‘delete, substitute and keep’

Original text The chemical reactions that take place in a cell are controlled by a group of proteins called enzymes. Enzymes are biological catalysts. A catalyst is a chemical which speeds up a reaction without being used up itself. It takes part in the reaction, but afterwards is unchanged and free to catalyse more reactions. Cells contain hundreds of different enzymes, each catalysing a different reaction. This is how the activities of a cell are controlled – because the nucleus contains the genes, which control the production of enzymes, which then catalyse reactions in the cytoplasm: genes → proteins (enzymes) → catalyse reactions Everything a cell does depends on which enzymes it can make, which in turn depends on which genes in its nucleus are working. What hasn't been mentioned is why enzymes are needed at all. They are necessary because the temperatures inside organisms are low (e.g. the human body temperature is about 37 °C) and without catalysts, most of the reactions that happen in cells would be far too slow to allow life to go on. The reactions can only take place quickly enough when enzymes are present to speed them up. It is possible for there to be thousands of different sorts of enzymes because they are proteins, and protein molecules have an enormous range of structures and shapes.	Delete, substitute, keep The chemical reactions that take place in a cell are controlled by a group of proteins called enzymes. Enzymes are <u>proteins</u> that are <u>biological catalysts</u>. A <u>catalyst</u> is a chemical which speeds up a reaction without being used up itself. It takes part in the reaction, but afterwards is unchanged and free to catalyse more reactions. Cells contain hundreds of different enzymes, each catalysing a different reaction. This is how the activities of a cell are controlled – because the nucleus contains the genes, which control the production of enzymes, which then catalyse reactions in the cytoplasm: genes → proteins (enzymes) → catalyse reactions Everything a cell does depends on which enzymes it can make, which in turn depends on which genes in its nucleus are working. What hasn't been mentioned is why enzymes are needed at all. They are necessary because the temperatures inside organisms are low (e.g. the human body temperature is about 37 °C) and without catalysts, the body's temperature is so low (37°C) that most of the reactions that happen in cells would be far too slow to allow life to go on. The reactions can only take place quickly enough when enzymes are present to speed them up: It is possible for there to be thousands of different sorts of enzymes because they are proteins, and protein molecules have an enormous range of structures and shapes:
Summary: Enzymes are proteins that are biological catalysts, chemicals which speed up a reaction without being used up. The activities of a cell are controlled because the nucleus contains genes, which govern the production of enzymes, which then catalyse reactions in the cytoplasm: genes → proteins (enzymes) → catalyse reactions Enzymes are necessary because the body's temperature is so low (37°C) that most reactions in cells would be far too slow to allow life to go on.	

Original text (from an AQA Religious Studies textbook) Bar Mitzvah can literally be translated as 'son of the commandments'. It is a recognition of the fact that a young man has reached the age by which he is personally responsible for his religious acts, and is marked by his first reading in the synagogue of the Torah. From this point on, he is regarded as an adult in all religious respects, for example, he should use tefillin in prayers and can count as one of the minyan, for example. In fact, he remains Bar Mitzvah all his life, it is not just for one day, as it refers to the duty of keeping the mitzvot, which is incumbent on all Jews. Males lead the service in an Orthodox shul and so reading from the Torah is a way showing the change in status from a child to an adult. Girls have different roles within Jewish life and so they have different ceremonies. Girls reach the age of maturity at twelve, and it is common to recognise that through the Bat Mitzvah ceremony. Girls reach the age of maturity at twelve and have different ceremonies, such as the Bat Mitzvah. There is no special ceremony, and it is common, especially in the Orthodox community to celebrate this at home, with the girl reciting a blessing and talking about the importance of the day. In the Reform and Liberal, and many of the Conservative traditions, in recognition of changing societal norms and a sense of equality, there are special events in the synagogue. In the Reform and Liberal traditions, a girl may read the Torah at synagogue, so the ceremony will be the same whichever gender.	Delete, substitute, keep Bar Mitzvah can literally be translated as 'son of the commandments'. It is a recognition of the fact that a young man has reached the age by which he is personally responsible for his religious acts, and is marked by his first reading in the synagogue of the Torah. From this point on, he is regarded as an adult in all religious respects; for example, he should use tefillin in prayers and can count as one of the minyan, for example. In fact, he remains Bar Mitzvah all his life, it is not just for one day, as it refers to the duty of keeping the mitzvot, which is incumbent on all Jews. Males lead the service in an Orthodox shul and so reading from the Torah is a way showing the change in status from a child to an adult. Girls have different roles within Jewish life and so they have different ceremonies. Girls reach the age of maturity at twelve, and it is common to recognise that through the Bat Mitzvah ceremony. Girls reach the age of maturity at twelve and have different ceremonies, such as the Bat Mitzvah. There is no special ceremony, and it is common, especially in the Orthodox community to celebrate this at home, with the girl reciting a blessing and talking about the importance of the day. In the Reform and Liberal, and many of the Conservative traditions, in recognition of changing societal norms and a sense of equality, there are special events in the synagogue. In the Reform and Liberal traditions, a girl may read the Torah at synagogue, so the ceremony will be the same whichever gender.
Summary: Bar Mitzvah is marked by a young man's first reading in the synagogue of the Torah. From this point on, he is regarded as an adult in all religious respects. Males lead the service in an Orthodox shul, so reading from the Torah shows the change in status from a child to an adult. Girls reach the age of maturity at twelve and have different ceremonies, such as the Bat Mitzvah. In the Orthodox community, it is common to celebrate this at home. However, in the Reform and Liberal traditions, a girl may read the Torah at synagogue, so the ceremony will be the same for whichever gender.	

Study Strategies - how to use them

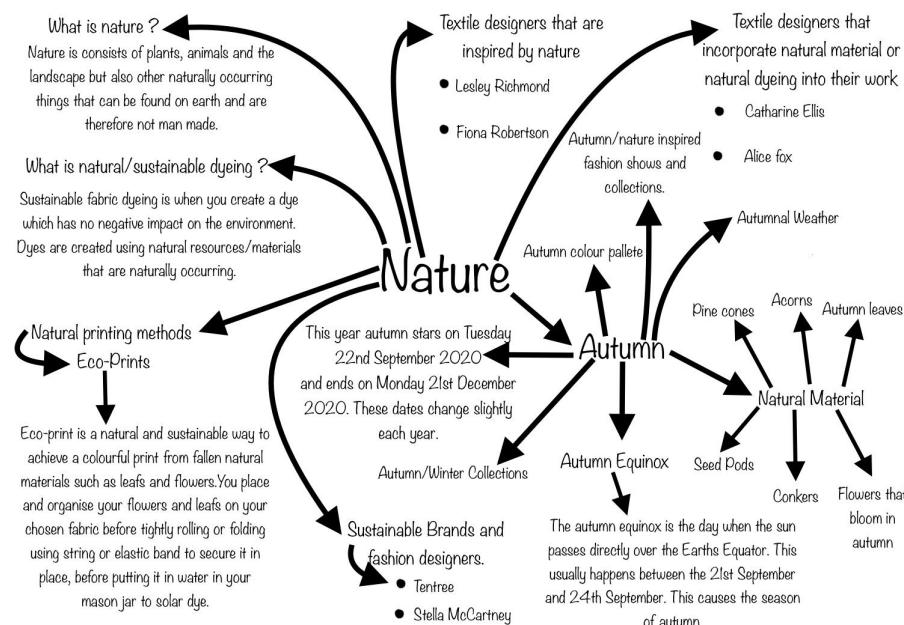
Mindmapping



Making a mindmap is an excellent way to organise your knowledge because you can show how different ideas relate to one another. You can add words to the arrows to show how different ideas link together. As with all revision strategies, make your mindmap from memory first and then improve it by looking things up.

Some examples of mindmaps are shown below and on the next page:

An example of a mindmap:

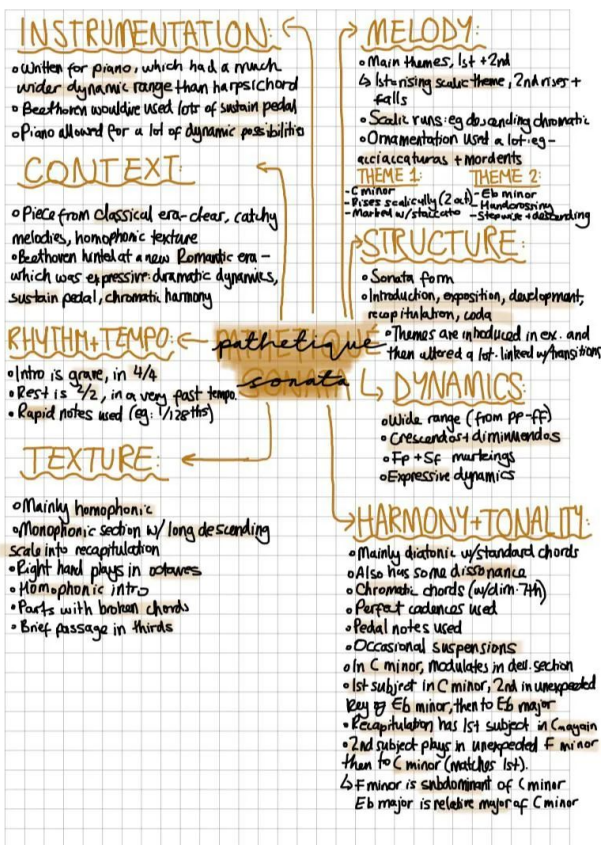


How to make a mind map

You start with a main idea in the middle of a page—like "Video Games" or "My Dream Holiday"—then draw lines out from it to show related ideas. Each of those ideas can have more lines branching off too.

It looks like a tree or a spider's web, with the main idea in the centre and other ideas spreading out.

An example of a mindmap for GCSE Music:

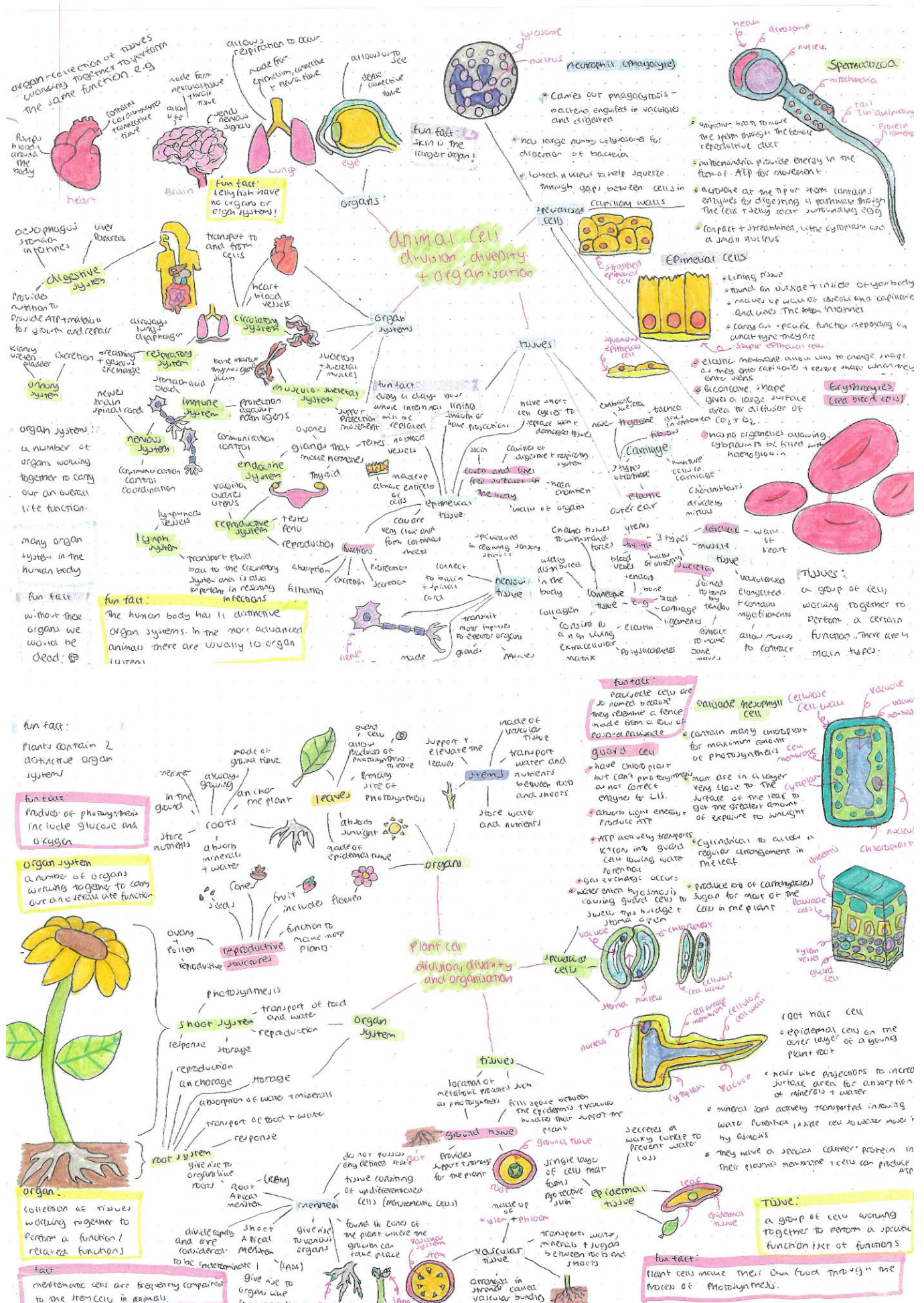


An example of a mindmap for A level French:



Mindmapping

An example of a topic mindmap for GCSE Biology:



Study Strategies - how to use them



Drawing (dual coding)

Dual coding is when information is represented using both text and images. Turning text into a visual representation, or combining images with words, can help you to remember things better.

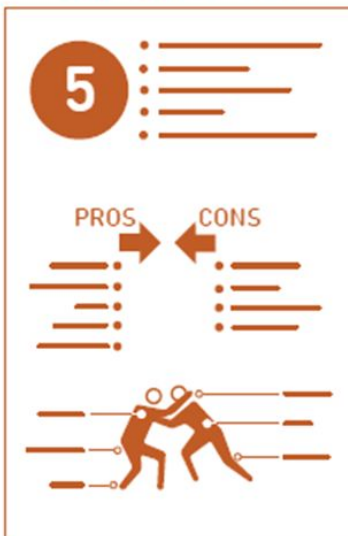
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1. Identify knowledge
2. Decide how it is best represented
3. Draw your visual representation

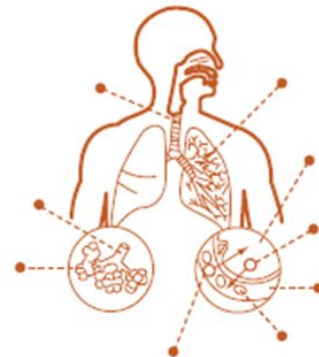
Remember that this is to help you, you are not making a work of art!

There are different ways to represent information visually:

INFOGRAPHIC



CARTOON STRIP

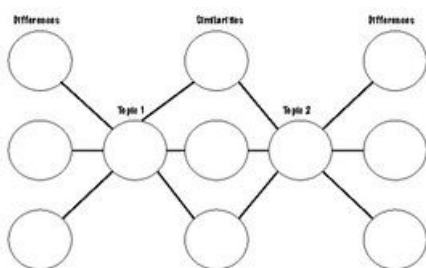


DIAGRAM

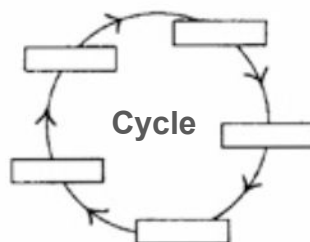
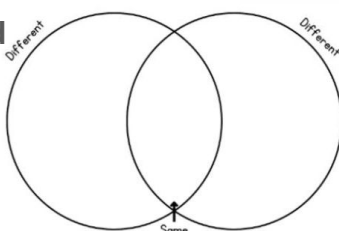


GRAPHIC ORGANIZER

TIMELINE

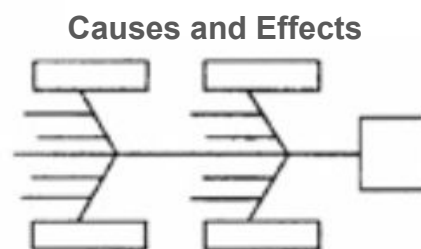


Similarities and Differences



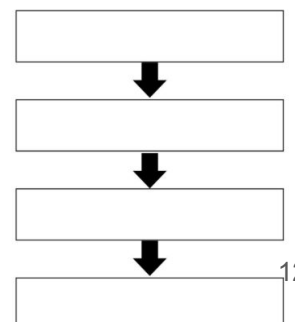
Cycle

Examples of graphic organiser structures

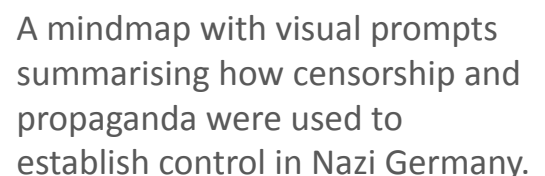
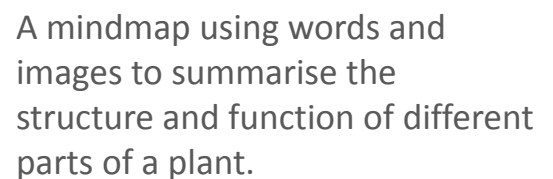
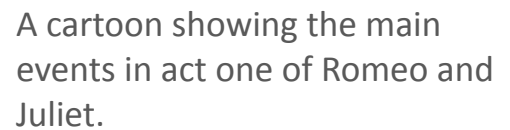


Causes and Effects

Process



WEATHER



Study Strategies for Retrieval



Retrieve the information you need to know from your memory. Some ways you can do this are:



Flashcards

Every time you bring a memory to mind, you strengthen it. Using flashcards is a great way to do this. Start by making simple 'question and answer' flashcards with a question on one side and the answer on the other. Make sure you write questions and answers for all the important information in the topic.

You can then use your flashcards to test yourself, putting the cards into two piles - the ones you know and the ones you couldn't remember: test yourself on these ones more frequently.

If you want to challenge yourself, you can try adding concrete examples to the answers.



Brain Dump

All you need for this retrieval strategy is a pen and a piece of paper. Choose a topic and write down everything you know about it from memory. It's good to try and organise the ideas you're writing down, but the most important thing is to recall as much information as possible. You can then use your notes to check what you have remembered and add anything you forgot. It might be helpful to make flashcards of the information you didn't remember so that you can test yourself on this later.



PLANT

Concrete Examples

It is important to learn the general ideas, concepts and definitions in a topic, but you will find it really helpful to have lots of concrete examples to show what they really mean. Select a concept or definition and see if you can come up with some concrete examples which represent it. What do all the examples you have selected have in common? If you can answer this, it will help you to understand the concept better.

For example, 'algorithm' is an abstract concept.

Definition: A set of rules or steps that leads to the solution of a problem or task.

Concrete examples: A recipe to make a cake, instructions about how to use the photocopier, the steps you use to solve a mathematical problem.

Study Strategies - how to use them

Flashcards

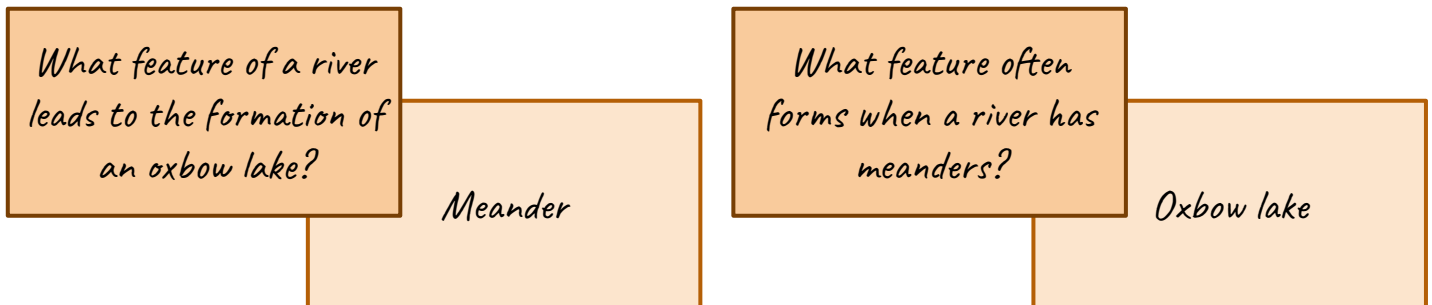


Making flashcards

Using ready-made flashcards to revise will certainly help you to remember more, but the most effective strategy is to make them yourself because this makes you think. You can make physical flashcards or electronic ones.

How to make your flashcards effective

- Write a single question on one side and the answer on the other.
- Make sure the questions cover all the key information - e.g. definitions, explanations, comparisons.
- Break complex concepts down across multiple flashcards
- Write multiple flashcards which test the same knowledge in different ways - this helps to make your knowledge more flexible.



- To stretch yourself further, try adding specific examples to the answer side of your flashcards (see 'Concrete Examples' on page 9).

Using your flashcards

- Say the answer **out loud** - it is important that you fully commit to what you think the answer is before checking. Even better, write your answer down.
- Use the flashcard both ways - can you say what the question was by looking at the answer?

The Leitner System

Electronic flashcard apps might do this for you, but you can use the Leitner System to help you to review the flashcards you're less confident with more frequently.

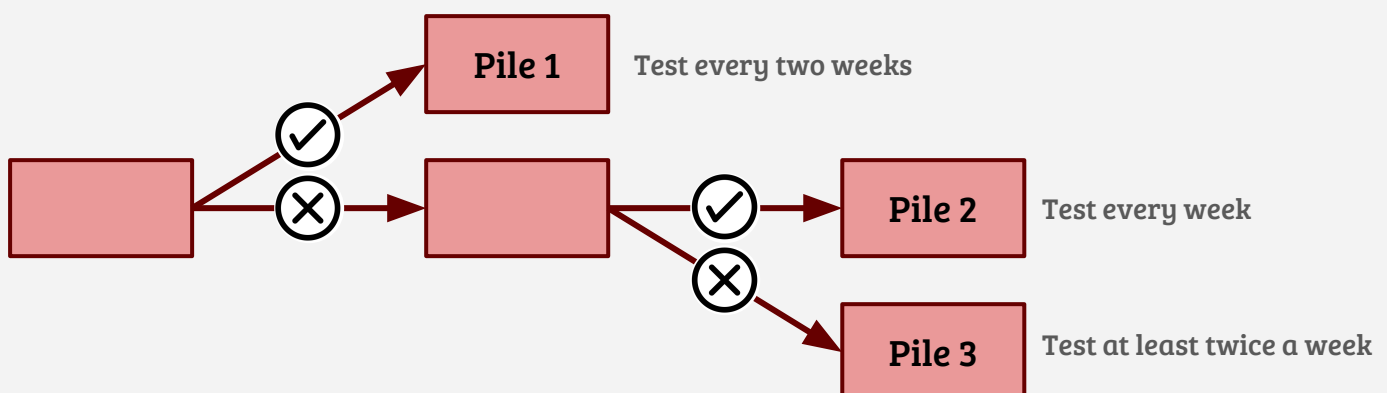
1. Test yourself on a flashcard
2. If you know the answer, put it in one pile. If not, put it in another.
3. Test yourself again on the cards you didn't know.
4. Again, put them into two piles.

You should test yourself on cards in Pile 1 every two weeks.

You should test yourself on cards in Pile 2 every week.

You should test yourself on cards in Pile 3 twice a week.

When you get a card from pile 2 or 3 correct, you can move it into the next pile up. Or if you get a card in pile 1 wrong, you can move it into pile 2 to test more often.



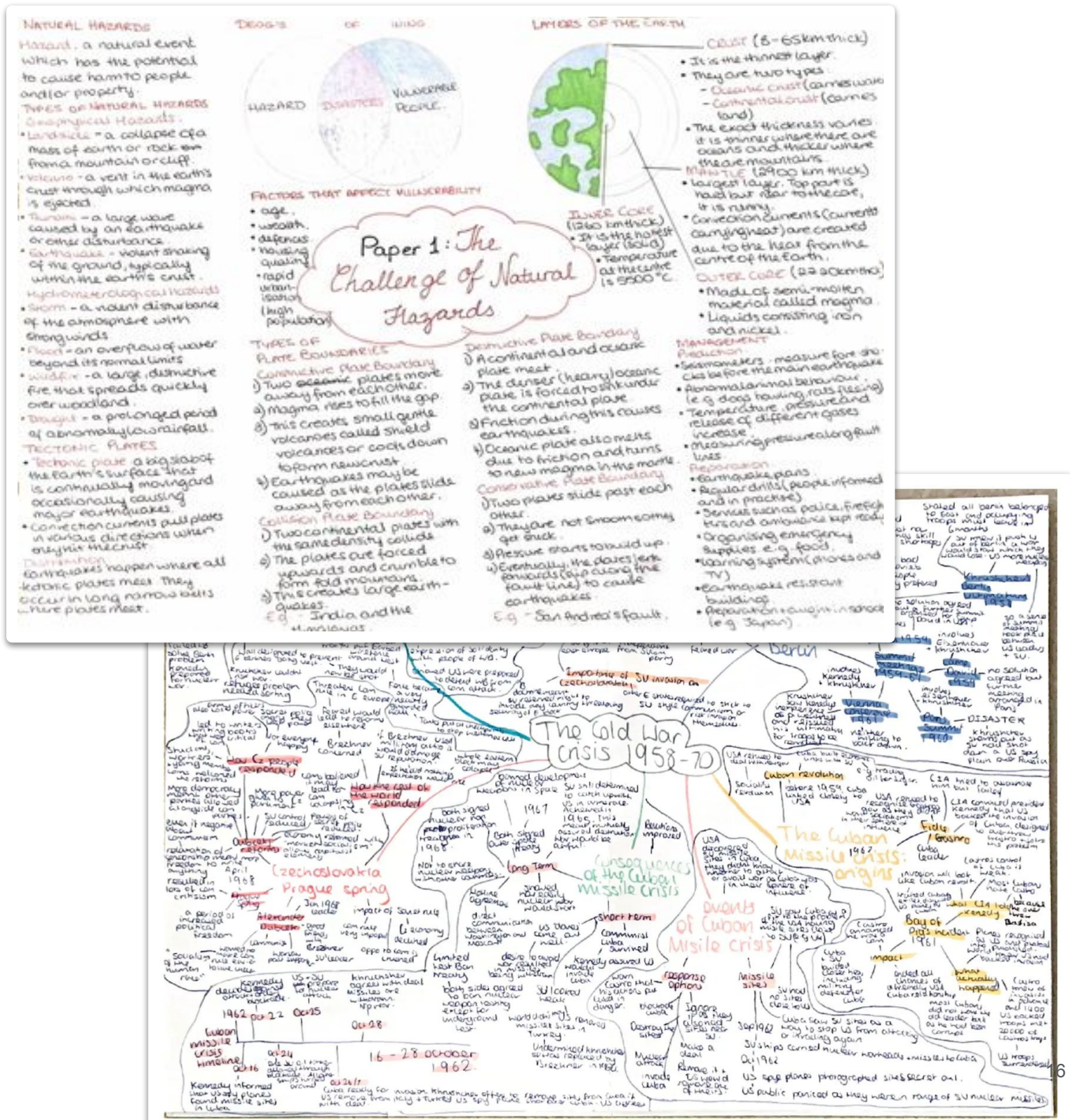
Study Strategies - how to use them



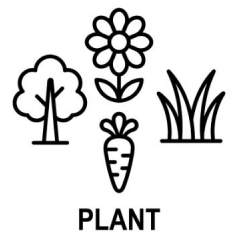
Brain dump

- Set a timer (10-15 minutes).
- On a blank sheet of paper write down everything you know about a topic.
- Use your class notes, textbook or revision guide to check, correct and add.
Use a different colour so that you can see which things you need to come back to.

Your brain dump can be continuous prose or you might prefer to make it like a mind map, showing the connections between different concepts.



Study Strategies - how to use them



Concrete examples

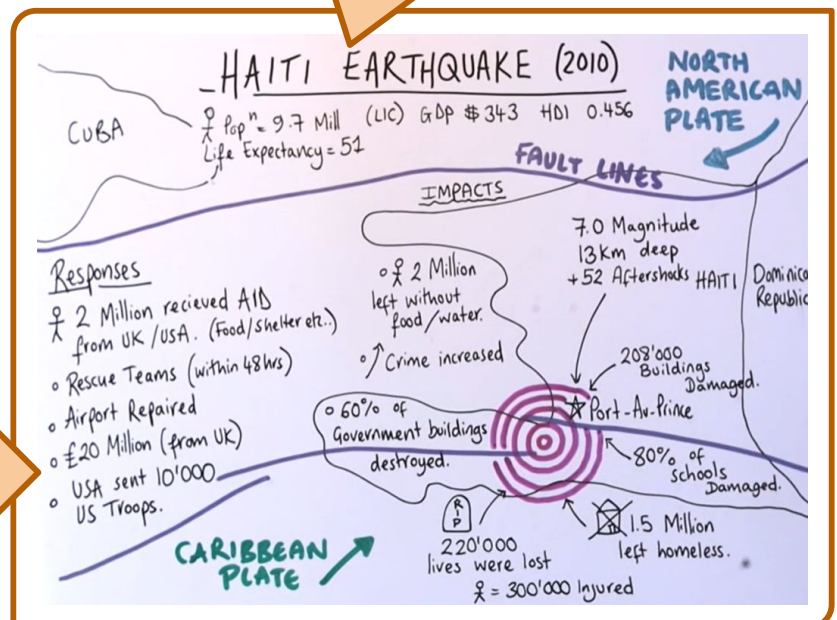
Whether you're summarising your notes in a mindmap, making flashcards to test yourself or representing your knowledge using pictures or a diagram, **it is really helpful to make sure you can give specific examples of the general ideas you need to know.** This might be case studies of natural disasters in Geography, quotes to support character traits in English or examples of organs in the body in Science.

Making sure you know these examples and how they relate to the general concept will ensure that your knowledge is more secure and transferable. If you know several examples it will help you to apply your knowledge when exam questions ask about different examples which you might not have seen before.

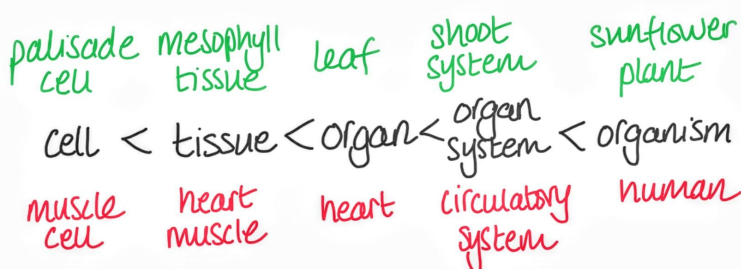


In English, as well as knowing what a character is like, you should be able to give concrete examples of quotes which demonstrate this.

This example also uses Dual Coding by showing the information on a diagram which helps you to understand and remember it.

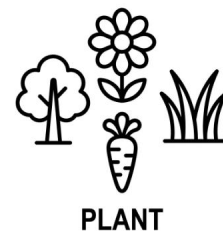


In Geography, as well as knowing the general effects of earthquakes, you should be able to give examples of the effects of specific earthquakes

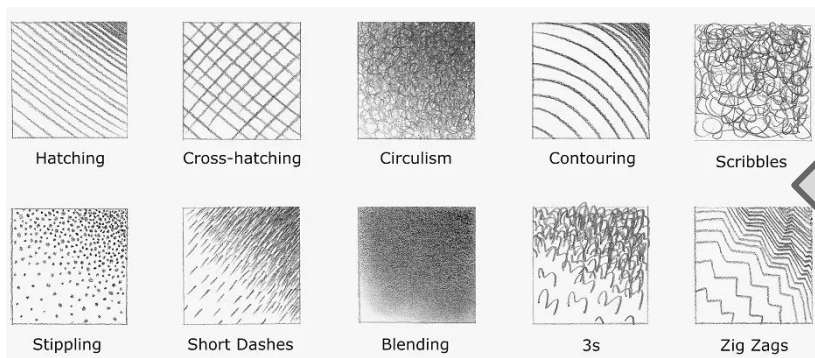


In Science, as well as knowing the levels of organisation in an organism, you should be able to give examples of each level.

Study Strategies - how to use them



Concrete examples of using concrete examples

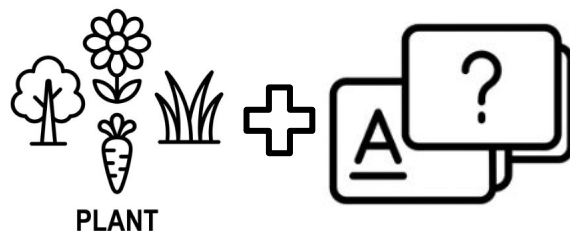


In Art, as well as knowing the names of shading techniques you should be able to show what they look like.

In Computer Science, as well as knowing what a programming language is you should be able to give examples of different languages.



Adding **concrete examples** to **flashcards** can help you to remember examples or case studies of abstract concepts



Define first ionisation energy

The energy required to remove one mole of electrons from one mole of gaseous atoms to form one mole of gaseous 1+ ions.

Simple flashcard
answer
&
with added
concrete example

The energy required to remove one mole of electrons from one mole of gaseous atoms to form one mole of gaseous 1+ ions.
Example: Energy required when one mole of Na atoms lose an electron from the 3s orbital to become Na⁺ ions.
$$\text{Na(g)} \rightarrow \text{Na}^+(\text{g}) + \text{e}^-$$

Study Strategies for Practise



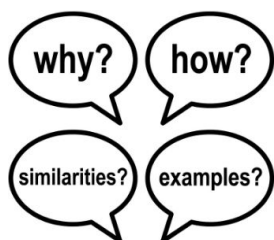
Practise using the information you have learned. Always do this from memory to start with and then use your notes to check and add to your answers. To practise using what you have learned you could:



Answer past paper questions

Once you have learned and understood the concepts, a vital part of preparing for exams is practising past paper questions. This helps you to check that you have understood things in the way that is needed to demonstrate your learning to the examiner. It might also help you to identify any gaps you still have in your understanding. General principles for using past exam papers are:

- Attempt the questions from memory
- Use your notes to check and add detail
- Use the mark scheme to check your answer, taking note of key words or phrases which the examiners want you to use - you might want to use these to adapt your notes or flashcards.



Elaborate

Elaboration is really about adding detail and depth to what you have learned so that it's not just a list of facts. It overlaps with self-explanation, but is also about making links with things you already know well. To elaborate you might:

- Keep asking 'how?' and 'why?' questions to explore how deeply you have understood a concept.
- Ask questions about the similarities and differences between different but related ideas to check that you really understand them.
- Give examples of applications of concepts you have learned to check that you understand how they relate to the real world.
- Think of analogies which you can use to help you remember complex concepts.



Self-explain

Explaining things to yourself might feel a bit strange, but it can be a really helpful way of strengthening learning. For maximum benefit, you should explain things aloud to yourself, not just in your head.

Some examples of what you might try to explain:

- A difficult concept.
- How two ideas or pieces of information link together.
- The steps in a process such as a scientific experiment or solving a mathematical problem - don't just say what the steps are but explain why they are important.
- The similarities and differences between two ideas or examples.



Teach

Explaining what you have learned to somebody else from memory can be a helpful way of seeing if you have really understood it. Are you able to explain it clearly, perhaps to somebody who knows less about it than you? Are you able to answer any questions they might have? Can you give concrete examples or use analogies to make abstract concepts clearer?

Study Strategies - how to use them



Answer past paper questions

1. Start with the right paper

Make sure you use:

- The **correct exam board** (AQA, Edexcel, OCR etc)
 - The **right subject and tier**
 - Recent papers

Past papers can be found on exam board websites

2. Try a paper without notes

Treat it like a real exam:

- Time yourself
- No phone
- No notes
- Quiet space

This helps you to practise **exam pressure** and **timing**.

3. Look at the mark scheme

Don't simply check the answers - read:

- How marks are awarded
- What **keywords** are needed
- How much **detail** is expected
- Read the examiner's reports

This shows you **how examiners think**.

4. Learn from your mistakes

Ask yourself:

- Was it a lack of **knowledge**?
- Was it a **misunderstanding**?
- Was it a **timing** issue?

Mistakes are learning opportunities!

5. Create a 'fix-it' list

Write down:

- Topics you struggled with
- Common mistakes
- Weak exam skills

Use this to focus your next revision session

6. Redo the same questions

After revising the topic further:

- Try the same questions again
 - Aim for full marks

This shows you that you have improved.

7. Practise exam timing

Learn how long to spend on:

- 1 mark questions
- 4-6 mark questions
- Extended answers

Good timing helps you get more marks.

8. Learn the command words

Know what these mean
(they might be different in different subjects):

- **Describe**
- **Explain**
- **Compare**
- **Evaluate**

They tell you **how** to answer the question

9. Different purposes

You can use papers for different purposes:

- Do full papers
- Practise questions from one topic
 - Focus on longer questions
 - Practise calculations

Mixing it up will help you stay motivated and learn more.

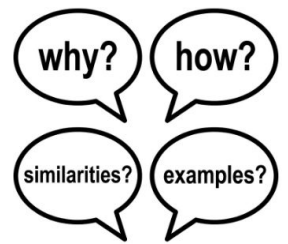
10. Track your progress

Keep a record of:

- Scores
- Weak areas
- Improvements

Seeing progress will boost your confidence.

Study Strategies - how to use them



Elaborate

Elaboration is all about adding depth to what you know and linking ideas together. You might try different techniques depending on the nature of what you're learning.

Ask 'how?' and 'why?'

Maybe you have learned a lot of material about World War II. Instead of asking when did this happen, ask yourself why did this happen? Or how did this happen? You can do this on your own or in pairs or even in a study group. The more information you have about a topic, the richer the conversation will be.

Perhaps you have learned some quotes from Macbeth such as the dagger scene:

"Is this a dagger which I see before me, The handle toward my hand?"

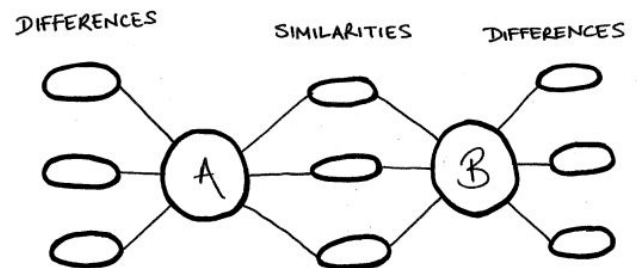
Once you have learned quotes like these, you might then move to asking yourself the following questions:

- Why does Shakespeare use this imagery here?
- What does this reveal about Macbeth at this part of the play?
- How does this connect with what we know with Macbeth at other stages in the play?

Ask questions about the similarities and differences

Asking questions about the similarities and differences between different but related ideas can help you to check that you have really understood things.

- In Science you might ask, 'What are the similarities and differences between plant and animal cells?'
- In Geography you might ask, 'What are the similarities and differences between the effects of earthquakes and volcanoes?'



Make links to prior learning

Ask, 'What does this relate to that I already know about?' Then explain the links.

Link to everyday examples or applications

Can you apply what you have learned to the real world?

- In Business Studies you might have learned about how much demand for a product is influenced by price. An everyday example: Compare Petrol vs. Chocolate Bars. If the price of your favorite chocolate doubles, you'll probably buy a different snack (Elastic). If the price of petrol doubles, people still have to drive to work, so they keep buying it (Inelastic).
- In Science you might have learned about osmosis. An everyday example: Shriveled fingers after a long bath. Which way is the water moving? Why?

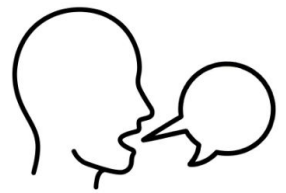
Think of analogies

Can you think of analogies which might help you to remember and think about abstract concepts.

- In Computer Science you might learn about RAM (Random Access Memory) vs. Secondary Storage.
The Analogy: A Desk and a Filing Cabinet. RAM is your Desk Surface. It's where you put the books you are reading *right now*. It's fast to reach, but you can only fit so much on it. Hard Drive is the Filing Cabinet. It stores thousands of books, but it takes much longer to walk over, open a drawer, and find what you need. **The Elaboration:** "Why does a computer slow down if you have 50 tabs open? (Hint: Think about how cluttered your desk would get!)"

By elaborating on what you have already learned, you will be able to establish new links and ideas and create a far richer mental model of the topic you are studying and will be far better prepared for answering more open exam questions.

Study Strategies - how to use them



Self-explaining

Self-explaining overlaps quite a bit with other study strategies, such as elaboration. The key to effective self-explanation is that you make yourself think more deeply about what you are learning by explaining things aloud to yourself. Explaining out loud makes it more likely that you will take notice when you're not sure how to explain something, whereas in your head it's easier to skip over this.

Some examples of what you might try to explain:

- Explaining a difficult concept.
- Explaining how two ideas or pieces of information link together.
- Explaining the steps in a process such as a scientific experiment or solving a mathematical problem - don't just say what the steps are but explain why they are important.
- Explaining the similarities and differences between two ideas or examples.

The prompts below might help you to use this strategy in different subjects.

"Intent" Prompts (e.g. English & MFL)

Best for analyzing texts, grammar, and writer's craft.

- "Why did the writer choose this specific word?"
- "What does this metaphor suggest?"
- "Why must I change the verb ending in this language?"
- "How would a different tone impact the audience?"
- "How does this sentence structure affect the pace?"

"Why" Prompts (e.g. Science & Geography)

Best for understanding processes, cycles, and cause-and-effect.

- "This step happens because..."
- "If [Variable X] were removed, the result would change by..."
- "The reason this part of the diagram is shaped like this is to..."
- "This process is similar to [Concept Y], but the main difference is..."
- "I'm seeing a pattern: every time [Factor A] increases, [Factor B]..."

"Significance" Prompts (e.g. History & Religious Studies)

Best for evaluating evidence, impact, and diverse perspectives.

- "This event was a turning point because..."
- "Person A and Person B would disagree because..."
- "The most important consequence of [X] was [Y]..."
- "This source might be biased because the writer wanted to..."
- "The evidence for this argument is strong, but a counter-argument is..."

"Logic" Prompts (e.g. Maths, Computer Science, Physics)

Best for breaking down calculations or algorithms.

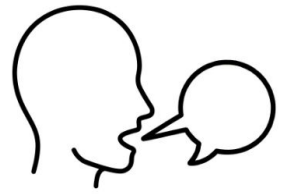
- "I am doing this calculation now so that I can..."
- "The rule allowing me to move from Line 1 to Line 2 is..."
- "I can check if this answer makes sense by..."
- "Even though this looks different, it's another version of..."
- "The 'input' is [X], and I am transforming it into [Y] by..."

Teaching

Instead of explaining to yourself you might prefer to explain things to somebody else. Ask them to ask you questions to probe how well you really understand. Can you explain it simply using concrete examples or analogies to make it clearer?



Study Strategies - how to use them



Self-explaining: Examples

History: Explaining causal links

The failure of the Weimar Republic

Instead of just listing the problems of the German government in the 1920s, you could explain the **causal link** between constitutional flaws and political instability.

The Fact: Article 48 of the Weimar Constitution allowed the President to rule by decree in an emergency.

The Self-Explanation: *"This was intended as a 'safety valve' for crises, but it actually acted as a 'legal' way to dismantle democracy. Because the Reichstag was often paralyzed by Proportional Representation (where too many small parties meant nobody could agree), the President started using Article 48 for everything. This is significant because it got the German public used to the idea of a single leader making all the decisions without Parliament, which effectively paved the road for Hitler's dictatorship."*

Maths or Physics: Explaining the steps to a solution

If you're solving a problem in Maths or Physics, rather than just following the steps it will help you to remember and understand them better if you explain why each step is the right one to take next.

You can do this as you work through a problem or when you have finished. It's also a great way of making sure you understand worked examples thoroughly.

Calculate the area of a triangle with a base of 6cm and a height of 4cm.

The Method: Base times height, divide by 2.

The Self-Explanation: *"If I just did 6 times 4, I would be finding the area of a **rectangle**. But a triangle with these dimensions is exactly **half of that rectangle**. That's why the formula has the 'divide by 2' bit—I'm basically calculating the full box and then cutting it in half diagonally to get the triangle I actually need."*

Art: Comparison (similarities and differences)

Monet (Impressionism) vs. Munch (Expressionism)

A student compares Claude Monet's *Water Lilies* with Edvard Munch's *The Scream* to explain how artists communicate different "realities."

The Observation: Monet uses soft, natural colors and light; Munch uses distorted shapes and unnatural, swirling colors.

The Self-Explanation: *"Both artists are moving away from realistic 'photo-like' painting, but for different reasons. Monet is focused on the physical eye. He uses dabs of color to show how sunlight hits the water at a specific moment. It feels calm because he's explaining what it's like to see the world. Munch, however, is focused on the mind's eye. He distorts the sky into blood-red swirls to represent an internal feeling of anxiety. While Monet explains the external light, Munch explains an internal emotion. So, even though both are 'unrealistic,' Monet is about the science of light and Munch is about the science of feelings."*

Making a revision plan

- Do you sometimes say, “**I should revise**”, but then don’t because you can’t decide what to do?
- Making a plan for your revision will make it more likely that you will actually do some revision.
- A revision plan will help you to **stay organised, stay calm** and protect other important things like relaxation or family time.

1	List your subjects and topics This helps you to see what you need to revise	• Write down all your subjects • Write down the topics within each subject
2	Be realistic about your time Don’t plan more than you know you can manage	• Block out school hours, home learning, clubs, work, relaxing time, family time • Plan where your revision will fit in
3	Create your timetable Don’t plan more than you know you can manage	For each revision slot identify the • Subject • Topic • Time
4	Mix your subjects Don’t revise one subject all day	• Helps with focus • Supports your memory • Prevents boredom
5	Use effective strategies Such as those described in this guide	• Flashcards • Past exam papers • Brain dump • Elaboration
6	Plan for breaks This helps you to focus	• 25-30 minutes revision • 5 minute break • Take a longer break after 2-3 sessions
7	Stick to the plan But be kind to yourself	• Your timetable is there to help you, not to make you stressed • If you miss a session just pick up with the next one.
8	Review your plan each week	• What is working? • What isn’t working? • Do you need more/ less time for a particular subject?

Revision Plan Template

Sunday							
Saturday							
Time							
Friday							
Thursday							
Wednesday							
Tuesday							
Monday							
Time							

Online Resources

There are lots of excellent online resources, but it can be difficult to know which are the best ones.

Your teachers will signpost online resources for you on Google Classroom.

Some of the sites your teachers will recommend are shown below:



The EverLearner

