# Learning How to Learn
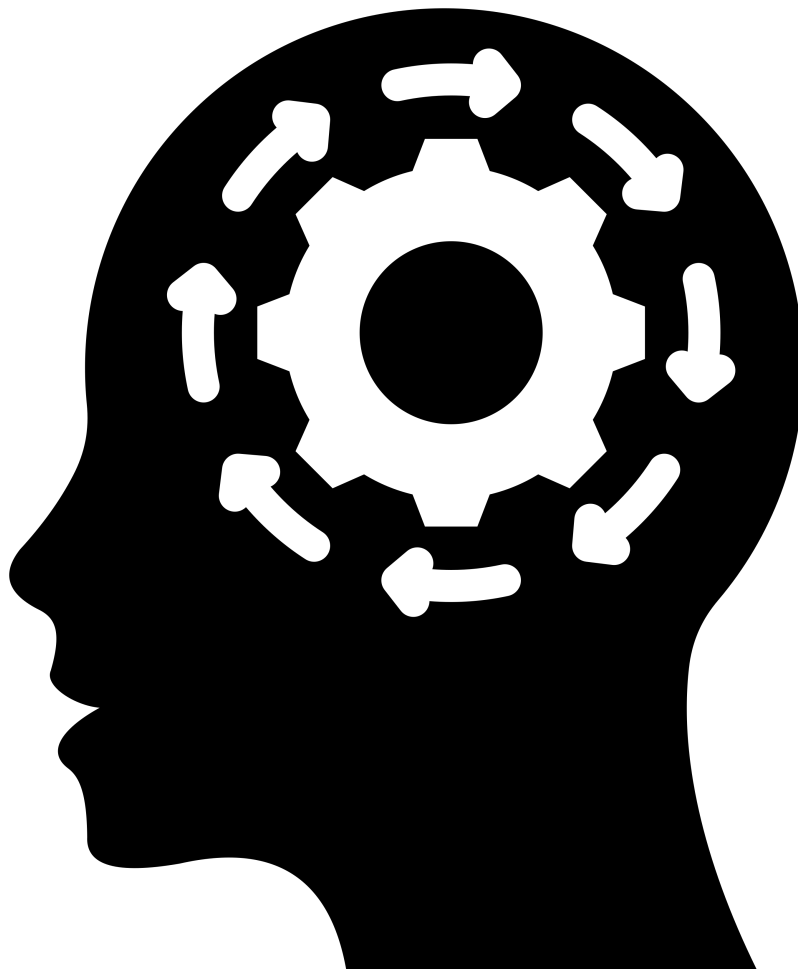
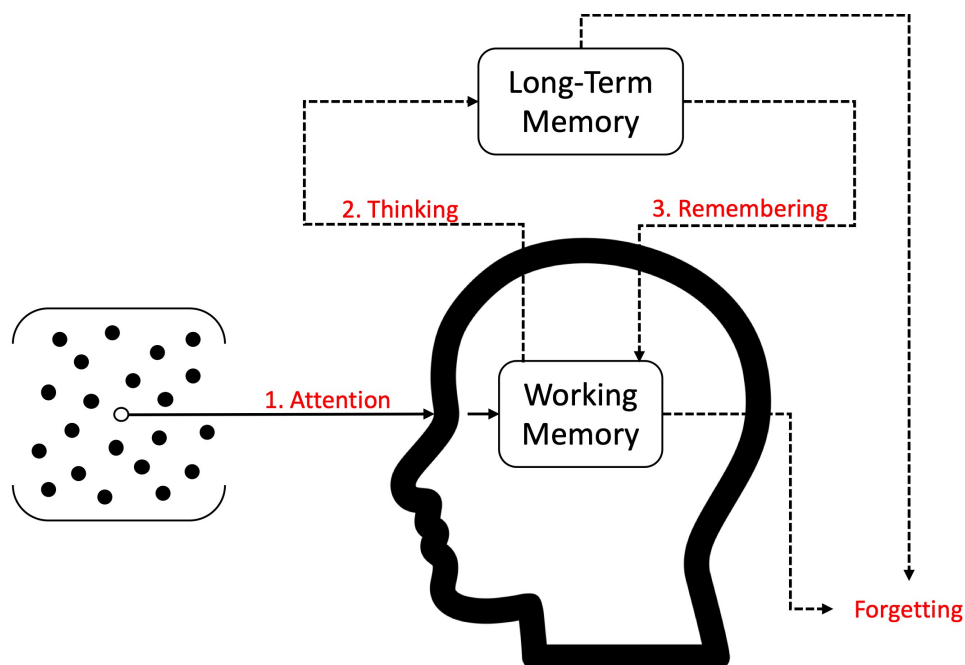## The Y13 Edition

The Camden School for Girls 2024-25

*Compiled by Simon Flynn*

# A simple model of how learning happens

Learning is a complex cognitive process that involves several interconnected stages, as illustrated in the attached image. The diagram presents a simplified model of how information is processed and retained in our minds and focuses on a few key steps. Each presents a possible choke point in learning, which can impact its progress.

**Attention is the gateway to learning.** Unfortunately, attention is a finite resource, and we have a limited capacity for concentration at any given time. This limitation can impede our ability to absorb and process information effectively. This is why it's necessary to remove all possible distractions while studying. Research has repeatedly shown that multitasking reduces learning.

Working memory is our mental workspace and is essential for tasks that require reasoning, comprehension, and learning new information. It has limitations, like a restricted capacity and information fading quickly over a few seconds if not actively maintained.

The cognitive psychologist Daniel Willingham has said that **'memory is the residue of thought'**. In other words, if you don't think about something, you won't remember it. Of course, it's more complicated than this. Your prior knowledge is crucial in learning and can affect how you understand and integrate new information. Effective learning often depends on connecting new concepts to existing knowledge… which requires thinking!

**Regularly recalling information from long-term memory strengthens connections in the brain**, making that knowledge easier to access in future. This also helps organise our understanding and frees up working memory, enhancing overall learning.

# Reflecting on your learning

Ask yourself the following questions. Write your answer down, if possible, before you move on to the next question.

1. **How do you study?**

What methods do you use to help progress your learning when covering something new, i.e., while having lessons on whatever it is? What methods do you use to help progress your learning when reviewing things you've already covered?

2. ***Why* do you study this way?**

What are the reasons for your choosing the methods you use?

3. **Do your ways of studying work? If you answer 'yes', how do you *know*?**

Seriously, how do you know your studying methods are as effective as possible?

Students often rely on rereading their notes or textbooks and highlighting text as primary study methods. While these techniques may feel productive, research shows they do not significantly enhance understanding or retention compared to more active learning strategies.

If your methods feel easy, they're almost certainly not effective. If an athlete or musician wanted to make noticeable and continual improvements, how easy are their methods for achieving this likely to be? What's the difference if we change 'athlete' or 'musician' to 'learner'?

A study showed that students often misinterpret the feeling of 'This is hard!' to mean 'I must not be learning much!'. The truth is that more effortful strategies produce much more significant long-term learning gains. The longer and deeper we think about something, the more likely we are to commit it to memory; the more aspects of an idea we uncover, the more easily we can connect it to other parts of knowledge and retrieve it in the future. Difficulty is *desirable* even if it isn't always *desired.*

Effortful thinking is fundamental to learning. As demonstrated in the simple learning model presented earlier, the effort we put into thinking about a topic significantly impacts how well we learn it. For instance, testing or quizzing ourselves is more challenging than merely rereading notes. Numerous studies have shown that this increased cognitive effort results in better long-term retention of the material. The strategies outlined later in this booklet will emphasise this approach.

# Successful learning in a hardshell

If you're going to accelerate your learning, you must work hard *and* well. Both have to happen continuously over a length of time. This booklet is aimed to help you achieve both of these things.

There are, sadly, no quick fixes. When it comes to learning, we're *all* tortoises.

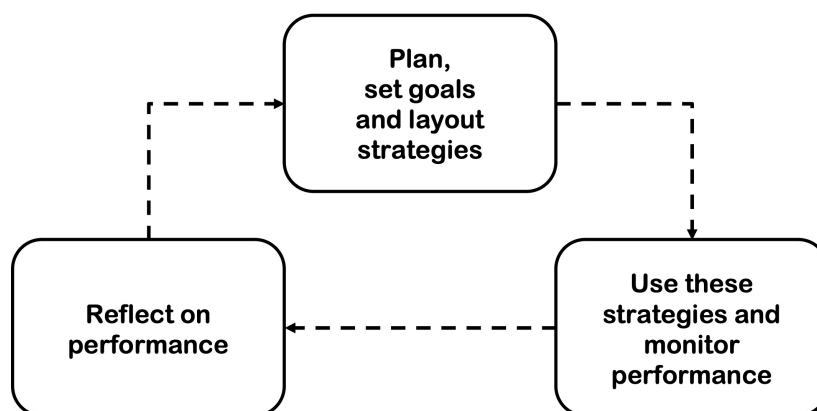|  |  |  |  |  |  |
|---|---|---|---|---|---|
| E | D | C | B | A | A* |

But we have the choice to run as quickly as possible and train to get faster and faster. A combination of these two things will determine how far we get.

|  |  |  |  |  |  |
|---|---|---|---|---|---|
| E | D | C | B? | A | A* |

We have more control over our learning than you may think; if you focus on the *process,* the *outcome* will take care of itself. Here's what the process might look like.

**Plan, set goals and layout strategies**

**Reflect on performance**

**Use these strategies and monitor performance**

In addition, you need to develop the right habits to support the process. The strategies you employ must require effortful thinking. A simple question that you can repeatedly ask yourself to help guide your decisions and actions is:

*What would an effective learner do?*

Your goal is to become a more and more effective learner. As you achieve this, your learning will accelerate. The question above will help you consider your decisions within the process above more objectively.

What follows is designed to provide you with strategies for removing potential barriers to learning, improving your study habits, employing more effortful thinking, and monitoring your progress. It will hopefully help you answer the question:

*What would an effective learner do?*

# Using a Retrospective Study Timetable

A retrospective timetable is a study planning tool that focuses on reviewing and revising topics based on your current understanding and needs rather than following a pre-set schedule. This approach is particularly useful for identifying and addressing weak areas in your knowledge, making it a flexible and effective method for exam preparation. Here's how to use a retrospective timetable.

1. **List Topics**: List all the topics you need to cover for each subject. This helps break down the syllabus into manageable parts, making it easier to track what needs attention.
2. **Study and Record**: As you study each topic, record the date you reviewed it. This can be done using a spreadsheet or a dedicated app like Notion. Each time you revisit a topic, update the date in your timetable.
3. **Assess Understanding**: After studying, assess your understanding of the topic. You can use colour coding or a rating system (e.g. RAG – red, amber and green) to indicate how well you grasp the material. For example, use red for topics you find difficult and green for those you are confident about.
4. **Prioritise Weak Areas**: Focus your study sessions on topics marked as weak or those you haven't reviewed recently. This ensures that you continuously improve areas that need the most attention.
5. **Regular Updates**: Continuously update your timetable with new study sessions and assessments. This dynamic approach allows you to adapt your study plan based on your evolving understanding and external factors like time constraints.

| (Sub)Topic | Initial RAG rating | Date covered and current RAG rating | | | |
|---|---|---|---|---|---|
| **Algebra and functions** | R | 19/11 – R | 25/11 – R | 01/12 – A | 04/12 – A |
| **Coordinate geometry** | A | 23/11 – A | 30/11 – G | 21/12 – G | |
| **Sequences and series** | R | 18/11 – R | 24/11 – A | 02/12 – G | 12/12 – G |
| **Trigonometry** | R | 20/11 – A | 27/11 - A | 04/12 – G | 11/12 – G |
| **Exponentials and logarithms** | R | 21/11 – R | 26/11 – R | 29/11 – R | 05/12 – A |
| **Differentiation** | A | 24/11 – A | 03/12 – A | 09/12 – A | 16/12 – A |
| **Numerical methods** | A | 26/11 – G | 06/12 – G | | |
| **Vectors** | R | 22/11 – A | 28/11 – G | 05/12 – G | |

This method lets you focus on what truly needs improving, ensuring a more targeted and efficient study process. By continuously assessing your understanding, you can make informed decisions about where to allocate your study time, ultimately leading to better exam preparation.

# Improving your study habits

When studying at home, you'll need to employ various strategies to manage your learning environment, minimise distractions, and enhance your concentration. Consider the following approaches to optimise your focus and productivity.

### Know Where and When

Hundreds of studies have shown that planning where and when you intend to do something makes it more likely to happen. Saying 'I will [BEHAVIOUR] at [TIME] in [LOCATION]' can make a difference e.g. I will start my homework at 3.45 pm in the school library.

### Use Habit Stacking

Make a list of your current habits. Now, link your new intended habit with a current one. For example, I will learn a new word after I have brushed my teeth in the evening. Increase the chance of this happening by leaving the notebook where you'll write the new word and its definition on your pillow.

### Establish a Dedicated Study Space

It's crucial that you designate a specific area for studying that's free from distractions. Your dedicated space should be comfortable, well-lit and equipped with all necessary materials, such as textbooks, notebooks and stationery. Avoid using areas associated with leisure activities, like your bedroom, as this can blur the boundaries between work and relaxation, making it harder to focus. The school library is a quiet place to work after school.

### Minimise Digital Distractions

Your smartphone, tablet and computer can be significant sources of distraction. Turn off notifications on these devices to avoid the constant temptation of social media, messages or unnecessary internet browsing. Consider using apps or browser extensions that block distracting websites or limit your screen time on certain apps during study sessions. Keeping your phone in another room or setting it to 'Do Not Disturb' mode can also help reduce your impulse to check it frequently. Some apps can help, too. The FOREST app helps you focus by having you plant a virtual tree that only grows when you stay off your phone. The longer you avoid distractions, the bigger your tree and virtual coin collection grows. FOREST makes resisting phone habits into a rewarding game.

### Set Goals and Rewards

Establish specific, achievable goals for each study session. Knowing your goal provides a clear direction and helps maintain your focus. Reward yourself after completing tasks or reaching goals, whether it's a small treat, a short break or some leisure time. Positive reinforcement can motivate sustained attention and effort.

**Establish a Consistent Routine**

Developing a regular study schedule with scheduled breaks can help condition your mind to focus during specific periods. Techniques like the Pomodoro Technique can effectively maintain high concentration levels without leading to burnout.

1. Decide on the task to be done.
2. Set a timer (typically for 25 minutes).
3. Work on the task.
4. End work when the timer rings and take a short break (typically 5–10 minutes).
5. Go back to Step 2 and repeat until you complete four pomodoros.
6. After four pomodoros are done, take an extended break (typically 20 to 30 minutes) instead of a short break. Once the long break is finished, return to step 2.

**Prioritise and Organise Your Tasks**

At the start of each study session, create a to-do list and prioritise your tasks based on importance and deadlines. This ensures that you focus on the most critical tasks first, rather than getting lost in less important activities. Break down larger tasks into smaller, manageable segments to make them less overwhelming and easier for you to tackle with sustained attention.

**Manage Your Physical Environment**

Try to control the noise level in your study environment. Ensure that your study area is clutter-free, as a tidy space reduces distractions and makes it easier to find necessary materials. If possible, adjust the room temperature to a comfortable level, as extremes in temperature can distract you and affect your concentration.

**Incorporate Movement and Exercise**

Incorporate short physical activities into your study breaks, such as stretching, walking, or light exercise. This can help refresh your mind and body and improve your concentration when you return to studying. Consider using a standing desk or alternating between sitting and standing during study sessions to keep your energy levels up.

**Prioritise Your Well-being**

Ensure you get adequate sleep, as tiredness can significantly impact your attention and concentration. A well-rested mind is more capable of sustained focus. Stay hydrated and eat a balanced diet, as proper nutrition fuels your brain and enhances cognitive function. Additionally, practise mindfulness or meditation techniques to improve your mental clarity and reduce stress, both of which are beneficial for maintaining focus.

# Active Learning and Regular Retrieval Practice

To learn something successfully, you have to be actively involved in constructing your understanding so that it can be stored in your long-term memory. This knowledge then needs to be regularly retrieved to help its use become automatic. Here are some guiding principles designed to help achieve this.

## Summarising

When asked a question such as 'what have you done today?', you'll likely provide a summary. This involves you selecting, organising and integrating the critical moments of your day. Taking a similar approach to your studies can have a powerful effect on your learning. What is vital is that you use your own words and don't mindlessly copy your notes or revision guide.

## Self-testing

Research has shown that every time you bring a memory to mind, you strengthen it. And the more challenging you make this retrieval, the greater the benefit. Self-testing improves the recall of information, transfer of knowledge and making inferences between information. Equally, there are many indirect effects, such as a greater appreciation of what you do and don't know, which helps you plan your next steps.

## Mapping

Mapping is a brilliant way of organising and learning information, demonstrated on various pages in this booklet. It helps you break down complex information, memorise it, and see the connections between different ideas.

## Drawing

This involves turning text into some form of drawing. Doing so consists in selecting, organising and integrating the information that matters, which forces you to think. This approach can be incorporated into the three strategies above too.

## Self-explaining

Continually ask yourself 'How?' and 'Why?' when studying a topic and then try to answer these questions. Doing so helps you to see connections and differences between ideas. Self-explaining can also involve you saying loud the steps you're taking when solving a problem. For example, a recent analysis of 64 research studies showed that 'it is better to ask a student to see if they can explain something to themselves, than for a teacher or book to always explain it to them'.

## Teaching

Einstein is supposed to have said, 'if you can't explain it simply, you don't know it well enough'. This strategy works best when you know in advance that you will be teaching someone. As with self-explaining, you're forced to select and organise what's important so that your teaching is as straightforward as possible. Having someone to interact with and ask you questions strengthens your learning.

# List It

This is a simple free recall task that is very versatile. It can feel challenging, but this is a good thing, and it provides clear feedback on what you do and don't know. Choose a topic, set yourself a time limit and...

- List as many keywords as you can
- List as many facts as you can
- List as many key events/quotes/individuals as you can
- List as many causes of X as you can
- List as many consequences of Y as you can

# Brain Dumps

Brain dumps can be incredibly effective as an extension of 'list it' above. Spend, say, fifteen minutes with a blank piece of paper and write down everything you know about a topic. Once finished, look at your class notes, textbook and/or revision guide and check that what you've written is correct. Then look at what you've forgotten and focus on this. Finally, date the sheet and store it away. Later, do the exercise again and compare the sheets – hopefully, you will remember more the second (third, fourth etc.) time and will be able to see the improvement you've made.
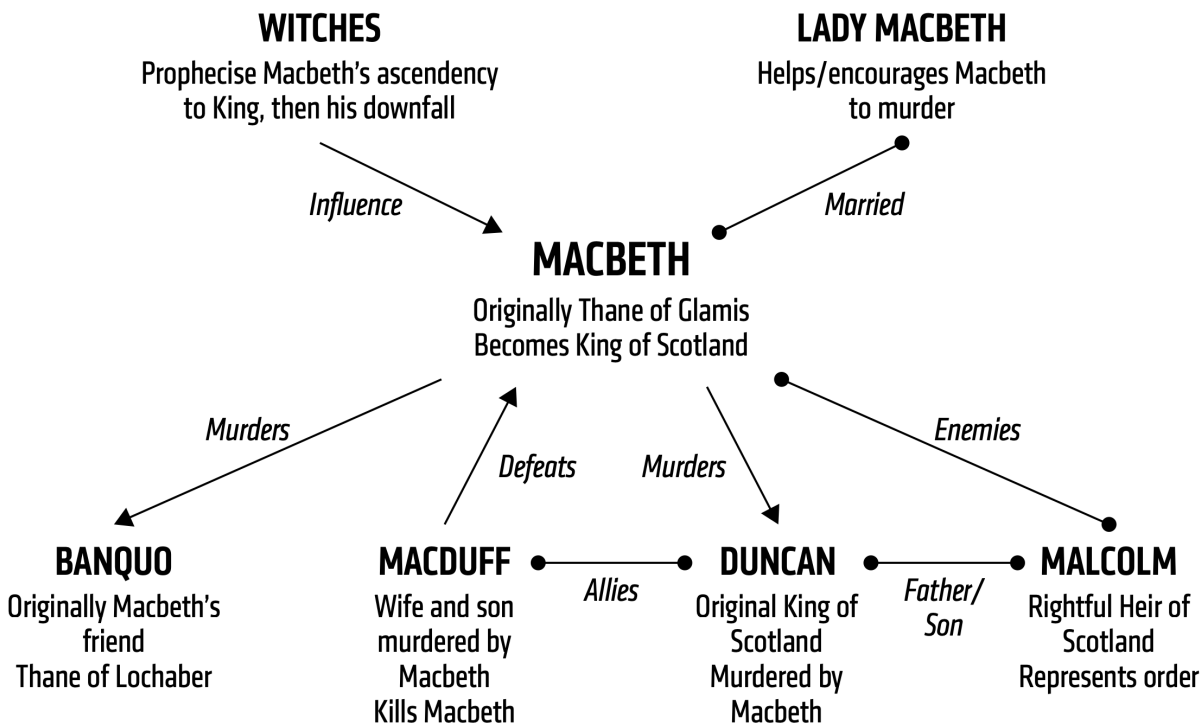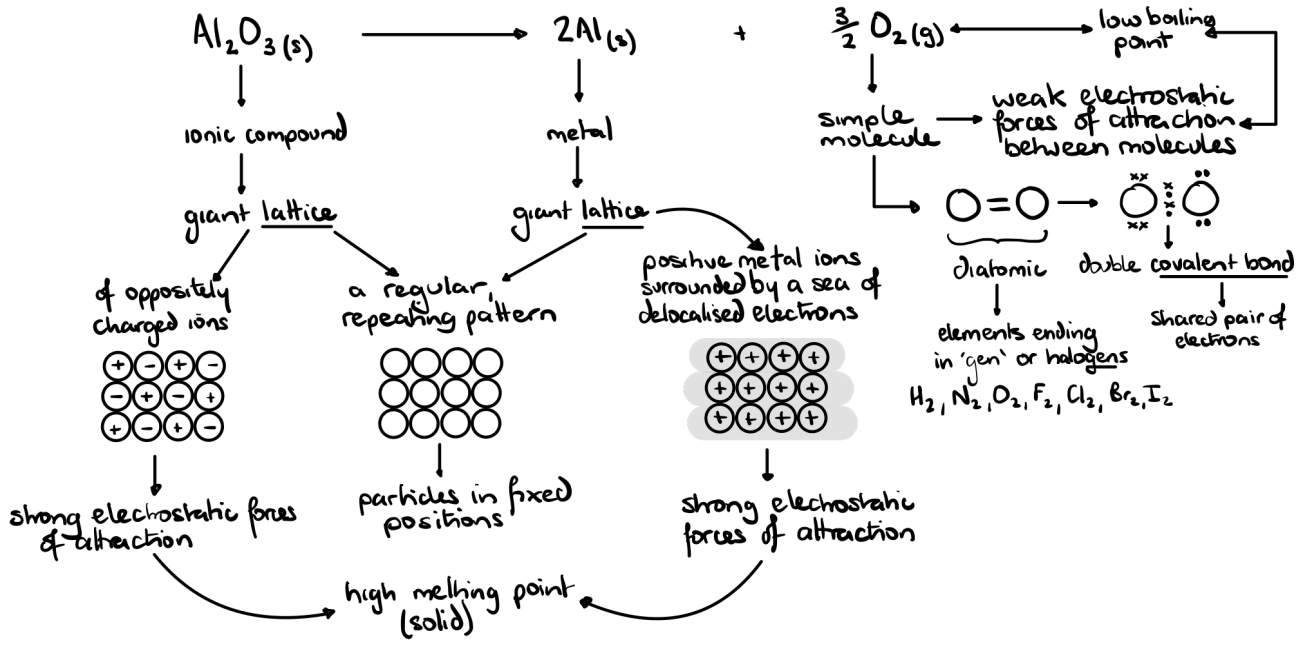
**Brain dumps made easier**

Brain dumping can be a terrifying exercise. To create a gentler, if less effective, version, compile a list of keywords, terms, people, countries etc., connected with a topic and write uninterrupted for fifteen minutes using these as prompts. For example. For example, if your brain dump was on the 'Energy' topic in Physics, your prompts could be:

$= ½ mv^2$   $= W/t$   $= F x s$   $= mc\Delta T$   $= mgh$   biofuel   **chemical**   conduction **conservation of energy**   dissipate   **distance**   efficiency   **elastic potential**   electricity **electrostatic**   force   **fossil fuels**   friction   **geothermal**   gravitational potential   **heating** hydroelectric   **insulation**   Joule (J)   **kilogram (kg)**   kinetic   **lubricant**   magnetic **metre (m)**   Newton (N)   **non-renewable**   nuclear   **power**   renewable   **Sankey diagram**   solar **specific heat capacity**   store   **thermal**   tidal   **transfer**   useful energy **wasted energy**   water waves   **Watt (W)**   waves   **wind**   work done

So, a brain dump on energy might start... *Energy cannot be created or destroyed but is only transferred from one store to another. There are eight energy stores. These are: kinetic, gravitational potential, chemical, elastic potential, internal (thermal), nuclear, electrostatic, and magnetic. Anything moving has a kinetic energy store. Anything raised a height has a gravitational potential store. Food, fuels and batteries are examples of chemical stores. Anything that can be squashed or stretched has an elastic potential store. A change in temperature means a change in the internal (thermal) store. There are four energy transfers: work done (mechanical), radiation...*

# Knowledge Maps

Knowledge maps are like Brain Dumps in that you try to recall everything you know about a topic onto a blank piece of paper. The difference is that you connect ideas visually rather than in continuous prose. As with Brain Dumps, once finished, look at your class notes, textbook and/or revision guide and check that what you've written is correct. Then look at what you've forgotten and focus on this. Here are two entirely different examples:

$$Al_2O_{3\,(s)} \longrightarrow 2Al_{(s)} \quad + \quad \frac{3}{2}O_{2\,(g)}$$

ionic compound → giant lattice
- of oppositely charged ions → strong electrostatic forces of attraction → high melting point (solid)

metal → giant lattice → a regular, repeating pattern → particles in fixed positions → high melting point (solid)

→ positive metal ions surrounded by a sea of delocalised electrons → strong electrostatic forces of attraction

$\frac{3}{2}O_{2\,(g)}$ → simple molecule → weak electrostatic forces of attraction between molecules ↔ low boiling point

O=O → diatomic → double covalent bond → shared pair of electrons

elements ending in 'gen' or halogens
$H_2, N_2, O_2, F_2, Cl_2, Br_2, I_2$

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**WITCHES**
Prophecise Macbeth's ascendency to King, then his downfall

— Influence →

**LADY MACBETH**
Helps/encourages Macbeth to murder

— Married —

**MACBETH**
Originally Thane of Glamis
Becomes King of Scotland

— Murders → **BANQUO**
Originally Macbeth's friend
Thane of Lochaber

— Defeats ← **MACDUFF**
Wife and son murdered by Macbeth
Kills Macbeth

— Murders → **DUNCAN**
Original King of Scotland
Murdered by Macbeth

— Enemies → **MALCOLM**
Rightful Heir of Scotland
Represents order

MACDUFF — Allies — DUNCAN

DUNCAN — Father/Son — MALCOLM

# Powerful Feedback

Effective learning is about more than endlessly repeating the same information. It's about identifying your weaknesses and addressing them head-on. Paying attention to the feedback from your retrieval practice can make your revision more targeted and efficient.

## Understanding Feedback from Flashcards

- Identify Weak Areas: Pay attention to which flashcards you consistently struggle with. These indicate areas that need more focus.
- Track Progress: Record how often you get each card right or wrong. This will help you see improvements over time and pinpoint persistent challenges.
- Adjust Content: Modify cards that are too easy or too difficult. Simplify complex cards or add detail to overly simple ones.
- Spaced Repetition: Use feedback to determine the intervals you review each card. Review difficult cards more frequently and easier ones less often.

## Utilising Feedback from Brain Dumps

- Highlight Gaps: After completing a brain dump, compare your notes to your study materials. Highlight any missing information or inaccuracies.
- Focus on Gaps: Use identified gaps to guide your next study session, concentrating on these areas to build a more comprehensive understanding.
- Reflect on Understanding: Assess the depth and breadth of your knowledge. Are there areas where you only have a surface-level understanding? Use this insight to deepen your study.
- Revisit and Revise: Perform brain dumps on the same topic regularly to track progress. Use feedback to revise your study strategy, focusing on areas that show little improvement.

## Incorporating Feedback from Knowledge Maps

- Visualise Connections: Consider how concepts are connected as you create a knowledge ma. Identify any missing links or areas where connections are unclear.
- Identify Key Concepts: Use the map to pinpoint key concepts central to your understanding. Ensure you have a solid grasp of these before moving on to more complex ideas.
- Spot Gaps: Look for areas in the map that need more detail. These gaps indicate where further study is required.
- Iterate and Expand: Continuously update your knowledge map as you learn more. Use it to track your understanding and ensure all relevant information is included.

By actively engaging with feedback from flashcards, brain dumps, and knowledge maps, you can tailor your study approach to address weaknesses, reinforce strengths, and enhance learning efficiency.

# SQ5R – Survey, Question, Read, Respond, Record, Recite, Review

The SQ5R study method encourages active reading, improving material comprehension and retention.

## Survey

Before reading a chapter or passage, read the introduction and summary. Skim topic headings, bold-faced words, pictures, charts, and graphs to get an idea of the general structure and content before starting to read.

## Question

Come up with questions from the topic and headings skimmed in the survey step. Ask who, what, where, when, why, and how questions: the best questions are general, covering main topics and important points. Doing this provides you with a purpose for your reading.

## Read

Break the material into sections that take about 20 minutes to read. Look for: answers to your questions, key concepts, and supporting details. Pay attention to charts, graphs, tables, and pictures that present new information and tie together ideas from your reading.

## Respond

After each section, think about the material you have just read and answer the questions you have asked. This can often be done during reading. This step aims to think about the material and notice what is important.

## Record

Make summary notes – see the following sections (*Summarising and Note Taking – Delete, Substitute and Keep* and *The Cornell Note Taking Method*) for guidance on how best to do this.

## Recite

Next, look away from the material and try to recite the key information and ideas in your own words. Then, reread the material until you can recall the most important points. This may be frustrating at first but it will lead to better understanding and save review time in the long run.

## Review

After reading the entire chapter, scan and review the information aloud or in your head; discuss the material with a classmate if possible. Identify overall themes and relationships between concepts. Finally, edit your notes to improve them further.

(Adapted from https://www.etown.edu/offices/learning/SQ5R_Method.aspx)

# Cornell Note Taking Method

This is the best way for taking and reviewing notes.

1. Write notes on the area in question using the tips below.
2. Create recall cues one or two days later.
3. After a few days, write a summary of the key points.
4. At any future point, cover the notes and summary and use the recall cues to test yourself.

| Topic: | Sub-topic: | Date: |
|---|---|---|
| **Recall cues**<br><br>Questions and tasks based on the notes opposite | **Notes**<br><br>Tips<br>• Bullet points<br>• Symbols and abbreviations<br>• Write in your own words (don't mindlessly copy)<br>• Make sure it makes sense to you<br><br>What to write<br>• Keywords and ideas<br>• Important dates / people / places<br>• Diagrams / charts<br>• Formulas<br>• Examples / case studies<br>• Critical analysis, e.g. strengths/weaknesses | Adapted from https://chloeburroughs.com/choose-best-note-taking-method/ |

**Summary**

Summarise the main points in the notes above. Think about:

• Why is this info important?
• What conclusions can I draw?

**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 NMA 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 👑 and 🏛 authority
↓
radical political ideas and movements
⟶ the Diggers
the Levellers ⟵
└ • developed (1646) as a consequence of £ distress post civil war.

- Mostly London-based ⟶ sought political, social and economic reform. Constitution: 'Agreement of the People'

- Attacked 👑 authority

- Little 🕐 for 👑 and wanted to replace kingship with a gout. of the 🧍🧍🧍🧍🧍🧍

- Leading 🧍 = John Lilburne

**What happened?**
(NMA)
- Levellers needed the support of the New Model Army
Putney Debates (1647) lead to short-term pragmatic alliance ⟶ collapsed before 🗡👑👤.
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 £ army helped prevent unrest and limited influence and threat of Levellers.

**Summary**

Breakdown of 👑 and 🏛 authority ⟶ radical movements e.g. The Levellers (1646)
Prompted by £ distress. Lead by John Lilburne called for gout. of the 🧍🧍🧍🧍🧍🧍. Putney Debates (1647) ⟶ alliance with New Model Army ⟶ doesn't last long. Ends before 🗡👑👤.
Mar 1649 ⟶ leaders arrested ⟶ try to inspire army mutiny through Third Agreement Fails — Rump Parliament keep army 💰 with £. Levellers crushed by Cromwell at Burford in May 1649.

# Folding Frenzy

You can complete the 'folding frenzy' learning strategy in one sitting or spread it out over time. Here's how you would go about it, with the option of taking breaks between stages:

1. **Notes**. Begin by writing a page of notes on blank paper about a specific topic. As you write, focus on key vocabulary, summarising content, and using symbols.
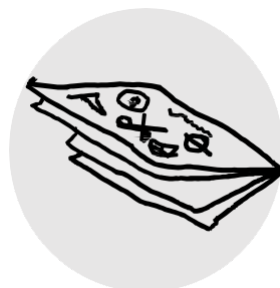
2. **Graphic Organiser**. Fold the paper and flip it over. Now, create a graphic organiser representing your notes' core terminology on this new side. This helps you visualise and structure the information.

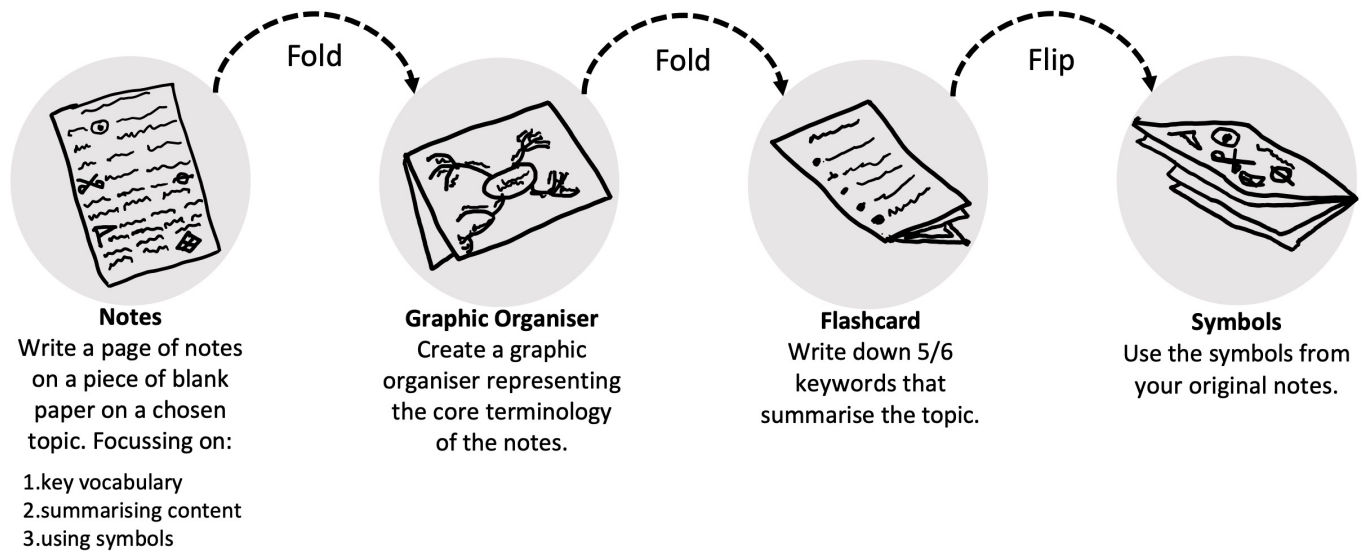3. **Flashcard**. After completing the graphic organiser, fold the paper once more. Write down 5 or 6 keywords summarising the topic in this new section. This condensed version helps reinforce the most crucial points.

4. **Symbols**. Fold the paper to reveal the last section. Use the symbols from your original notes on this last side. These act as visual cues to help you recall the information.

## Summary of Method

**Notes**
Fold → **Graphic Organiser**
Fold → **Flashcard**
Flip → **Symbols**

**Notes**
Write a page of notes on a piece of blank paper on a chosen topic. Focussing on:

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

**Graphic Organiser**
Create a graphic organiser representing the core terminology of the notes.

**Flashcard**
Write down 5/6 keywords that summarise the topic.

**Symbols**
Use the symbols from your original notes.

Allowing for small gaps in time between stages allows you to process the information more thoroughly. This spaced approach can be particularly beneficial for retention, allowing your brain to consolidate the information between each stage.

## Using Your Folding Frenzy

Once you've created your folding frenzy, whether in one go or over a period of time, you can use it in several ways:

- **Self-testing**: Use the words or symbols sides to test yourself, then unfold the paper to check your answers.
- **Peer testing**: Have a partner create retrieval practice questions based on your folding frenzy and vice versa.
- **Knowledge regulation**: Organise your folding frenzies into 'stacks' based on your level of understanding:

  1. Picture side up: You're exam-ready.
  2. Flashcard side up: You're almost there.
  3. Graphic organiser side up: You understand the material but have low recall.
  4. Notes side up: You're just starting.

By using this multi-layered revision technique regularly, either in one sitting or spread out over time, you'll rigorously encode and synthesise knowledge for better retrieval during exams.

# Cued → Free Recall

This method is a brilliant way to enhance your recall of information without prompts gradually. Here's how it works:

1. Begin by creating a comprehensive list of cues or prompts for all the information you need to remember. This is your master list.

**Trade policy and trade negotiations:**
Protectionism
- Protectionism
- Infant industries

Types of restriction on trade
- Tariffs
- Quotas
- Subsidies to domestic producers

Non-tariff barriers
- Voluntary export restraints
- Embargos
- Red tape

Impact of protectionism
- Distortion
- Cost
- Risk

Government failure

**Sperry:**
Lateralisation of function
Localisation of function
Corpus callosum
Aim
Sample – how many, surgery they had, sampling type
Visual tests
- One visual field
  - What they did?
  - Left visual field could…
  - Right visual field could…
- Both visual fields
  - If in left visual field…
  - If in right visual field…

Tactile tests
- One hand
  - What they did?
  - If in left hand…
  - If in right hand…
- Both hands
  - What they did?
  - In right hand…
  - In left hand…

Conclusion

2. When you're ready to practise recall, grab a fresh paper sheet or open a new document. You then jot down some of these cues and use them to spark your memory.

**Trade policy and trade negotiations:**
Protectionism and infant industries
Types of restriction on trade (3)
Non-tariff barriers (3)
Impact of protectionism (4)

**Sperry:**
Lateralisation of function
Localisation of function
Corpus callosum
Aim
Sample
Visual tests
- One visual field
- Both visual fields

Tactile tests
- One hand
- Both hands

Conclusion

3. After you've written down everything you can remember based on the cues, you compare your recall with your notes. This allows you to fill in any gaps or correct any mistakes.

**Trade policy and trade negotiations:**      **Sperry:**

| Trade policy and trade negotiations: | Sperry: |
|---|---|
| Protectionism and infant industries | Key terms (3) |
| Types of restriction on trade | Aim |
| Non-tariff barriers | Sample |
| Impact of protectionism | Visual tests |
| | Tactile tests |
| | Conclusion |

4. Gradually reduce your cues as you become more familiar with the material. This is a crucial step in the process.

**Trade policy and trade negotiations:**      **Sperry:**

5. Eventually, aim to recall the information without cues - this is free recall.

# Elaboration

Elaboration is a powerful learning strategy that can enhance your comprehension and retention by connecting new information with what you already know. Elaboration is crucial because it transforms superficial learning into deep learning by fostering meaningful cognitive connections. It helps you not only remember information but also apply it in various contexts. Here are some methods you can use to incorporate elaboration into your learning:

1. **Self-Explanation**
   - Try explaining concepts in your own words. This helps you integrate new information with your prior knowledge and can improve your understanding and retention by actively engaging with the material.
   - Consider recording yourself explaining ideas and listening back to identify areas for improvement.

2. **Elaborative Interrogation**
   - Ask yourself "why" and "how" questions about the material. By interrogating the content, you can create connections between new and existing knowledge, which enhances memory retention.

3. **Mnemonics**
   - Use mnemonics, such as acronyms or rhymes, to help remember information. These memory aids provide alternative pathways for retrieving information from your memory.

4. **Generate Examples**
   - Come up with your own examples or scenarios that illustrate the concept.

5. **Comparisons**
   - Use metaphors, analogies, and similes to relate new concepts to familiar ones. This helps you bridge prior knowledge with new information, making it easier to understand and remember.

6. **Self-Questioning**
   - Generate your own questions about the material. This active engagement promotes critical thinking and helps you internalise the content.

7. **Use Visual Aids**
   - Create mind maps, diagrams, or sketches that illustrate relationships between ideas.
   - This can help you see connections that might not be apparent in text form.

8. **Write Reflective Summaries**
   - After studying, write a summary that includes your thoughts, questions, and potential applications of the material.

# Questions That Self-Regulated Learners Ask Themselves

| | Thinking about your thinking | Thinking about your emotions | Thinking about your environment |
|---|---|---|---|
| **Planning before learning or performance task** | • What kind of a task is this?<br>• What is my goal? How will I know I have reached it?<br>• What do I already know about the topic?<br>• What additional information, if any, will I need?<br>• What strategies should I use? (actively listening, taking notes, outlining, visually representing the material, occasionally self-quizzing, reviewing, or writing a summary)<br>• What strengths can I bring to the task?<br>• What are my weaknesses, and how can I make up for them? | • How interested and motivated am I to do the task, and how can I increase my interest and motivation if they are low?<br>• What's the value or relevance of what I'll be doing this task?<br>• How confident am I in my ability to learn this material? If not very, how can I increase my belief in my ability to learn it, without becoming over-confident? What similar tasks can I recall doing well in the past? | • What is the best environment that I can create for the task?<br>• Am I in a good physical place and position to do this task?<br>• Is the temperature right for me? How about the background sounds?<br>• Have I had enough sleep?<br>• How much time and what resources will I need? Are these resources handy? |
| **Monitoring during a learning or performance task** | • Am I sure I know what I am doing?<br>• Does my approach to the task make sense?<br>• Am I making good progress toward my goal?<br>• How focused am I? Am I getting tired? If so, how can I keep myself focused and alert?<br>• What material is the most important?<br>• What material am I having trouble understanding?<br>• How does what I am learning relate to what I already know?<br>• How is my thinking on the topic changing?<br>• How well are my strategies working?<br>• What changes in approach or strategies should I make, if any? | • If my interest and motivation are sagging, how is what I'm learning relevant to my experience or my future?<br>• What material is challenging what I've thought about the subject? Am I resisting it?<br>• Am I starting to get discouraged or give up? Am I thinking I'm just no good at this subject? How can I change this negative thinking? What similar tasks can I recall doing well in the past? | • How are the temperature and background sounds working out? Am I staying away from distractions? If not, I have to get further away from them.<br>• How about another physical position?<br>• Should I try another environment to see if it works better?<br>• Do I need a short break to refresh my mind and body? |
| | | • How am I reacting emotionally to my evaluation of my learning?<br>  ○ Being pleased reinforces your motivation and other positive emotions you generated about the material and your ability to learn it.<br>  ○ Being disappointed may lead either to you improving your learning strategies or defensively withdrawing your energy from the next learning or performance task.<br>  ○ This last reaction can undermine the positive emotions needed to begin the next learning or performance task. | • How well did I avoid distractions and stay on task?<br>• If not that well, how can I avoid distractions more effectively in the future?<br>• Do I need to experiment more with different physical factors to find the best working environment and break schedule for myself? |
| **Evaluating after a learning or performance task** | • How well did I achieve my goal or master what I set out to learn?<br>• What can I recall and what do I need to review?<br>• What were the most important points I learned? Can I see and organize the interrelationships among them?<br>• What am I still having trouble understanding? What questions do I have to ask my teacher?<br>• How does what I learned relate to other things I've been learning or have experienced?<br>• How has my thinking on the topic changed?<br>• Which approaches and strategies worked well? Which didn't?<br>• What do I need to do differently next time I take on a similar task? | | |