

## Rating Ten Learning Techniques



### Practice Testing

Self-testing or taking practice tests over to-be-learned material.



### Distributed Practice

Implementing a schedule of practice that spreads out study activities over time.



### Interleaving

Implement a practice or study schedule that mixes different kinds of problems and material within a single study session.



### Elaborative Interrogation

Generating an explanation for why an explicitly stated fact or concept is true.



### Self-Explanation

Explaining how new information is related to known information or explaining steps taken during problem-solving.

### Highlighting

Marking potentially important portions of to-be-learned materials while reading

### Summarisation

Writing summaries (of various lengths) of to-be-learned texts

### Keyword Mnemonic

Using keywords and mental imagery to associate verbal materials

### Imagery

Attempting to form mental images of text materials while reading or listening

### Rereading

Restudying text material again after an initial reading

## Practice Testing (Retrieval)

- Taking a test requires actively retrieving the information from memory, strengthening the memory trace and making it more durable.
- Taking a test provides immediate feedback on what has been learned and what still needs to be learned, allowing learners to focus their study efforts.

## Distributed Practice

- Spacing helps keep the material in memory and less prone to decay. It also helps to make the material more easily accessible and retrievable in the long term.
- Spacing out study sessions over time allows more opportunities for the material to be retrieved from memory, strengthening the memory trace and the available cues.

## Interleaving

- Interleaving promotes deeper processing: When learners are exposed to a variety of related material in a single study session, they are forced to think more deeply about the material and how it relates to other concepts.
- Interleaving can also help to organise knowledge in long-term memory by promoting the formation of connections between different pieces of information.

## Elaborative Interrogation

- Elaborative Interrogation encourages students to generate explanations and connections between new information and their prior knowledge.
- Elaborative interrogation encourages students to actively process the information they are studying rather than passively reading or listening.

## Self-Explanation

- Self-explanation can also help activate prior knowledge and integrate existing knowledge with new knowledge.
- When learners generate their own explanations for the material they are studying, they are forced to think more deeply about the material and how it relates to other concepts.

# Revision Methods- Flashcards

## Summary: How to use flash cards



1.

### Identify knowledge

What are you creating flash cards on?

Do you have your knowledge organizer?

Use your book to look at previous misconceptions from whole class feedback.



2.

### Colour coding

Use different coloured flash cards for different topics. This helps with organization NOT recall



3.

### Designing

1 Question per flashcard.

Making them concise and clear.

Use a one word prompt, so that you can recall as much as you can.

No extended answer questions.



4.

### Using

Write your answers down, then check. Or say your answers out loud. This really clearly shows the gaps in your knowledge.

Do not just copy & re-read.

Shuffle the cards each time you use them.

Use the Leitner system to use flash cards everyday.



5.

### Feedback

How have you performed when you look back at your answers?

Is there anything you need to revisit in more detail?

Is your knowledge secure? If so, move onto applying knowledge in that area in specific extended exam questions.

Avoid answering the questions in your head: research shows that when you read a question and answer it in your head, you aren't actually testing your knowledge effectively. Say the answer out loud or write it down before checking it against the card, so you are truly testing if you can explain the answer properly

# Revision Methods- Flashcards

## Flash card top tips

- The most effective flashcards include one question followed by one answer (or one term followed by one definition).
- Don't force your brain to remember a complex and wordy answer. It's easier for your brain to process simpler information so split up your longer questions into smaller, simpler ones.
- You will end up with more flashcards this way but your learning will be a lot more effective.

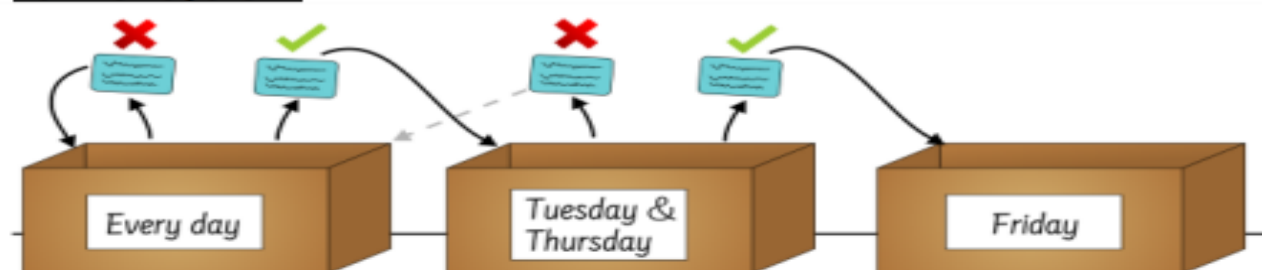


## Using flash cards

### Self Quizzing

1. **Read the question** on your flash card
2. **Write your answer** in your HL book
3. Put your flash card **down to one side**
4. Move onto the **next** card
5. **Repeat** steps 1-3
6. Keep your flash cards **in the order** you have quizzed them in.
7. **Mark** your answers – **highlight** any answers you got incorrect.

### Leitner System



1. Every card starts in Box 1.
2. If you get a card right, move it to the next Box.
3. If you get the card wrong, move it down a box — in the original version you move it all the way back to Box 1.



# Revision Methods- Mind maps

## Summary: How to create a mind map



1.

### Identify knowledge

Select a topic you wish to revise. Have your class notes/knowledge organisers ready.

2.

### Identify sub topics

Place the main topic in the centre of your page and identify sub topics that will branch off.

3.

### Branch off

Branch off your sub topics with further detail.  
Try not to fill the page with too much writing.

4.

### Use images & colour

Use images and colour to help topics stick into your memory.

5.

### Put it somewhere visible

Place completed mind maps in places where you can see them frequently.

Avoid using too much information: mind maps are designed to summarise key information and connect areas of a topic/subject. If you overcrowd the page, you lose the point of the mind map and will find it harder to visualise the information when trying to recall it

Follow the 5 step process to create a mind map for 3 different topics of your choice.

You can also colour code the information you are confident with in one colour and information that you are unsure about in another colour.

# Revision Methods- Brain Dumps

## Summary: Brain dumps



1.

### Identify knowledge

Identify the knowledge/topic area you want to cover.



2.

### Write it down

Take a blank piece of paper/white board and write down everything you can remember about that topic. (with no prompts)

Give yourself a timed limit (e.g. 10 minutes)



3.

### Organise information

Once complete and you cannot remember any more use different colours to highlight/underline words in groups.

This categories/links information.



4.

### Check understanding

Compare your brain dump to your K/O or book and check understanding.

Add any key information you have missed (key words) in a different colour.



5.

### Store and compare

Keep your brain dump safe and revisit it.

Next time you attempt the same topic try and complete the same amount of information in a shorter period of time or add more information.

Brain dumps are a way of getting information out of your brain.

Follow the 5 step process to complete 3 brain dumps for different topics of your choice.

You can also complete this in two colours. One colour for content you know and another colour for content you need to revise / that you added.

# Revision Methods- Interleaving

## Summary: Interleaving

*Interleaving is a theory that revising more than one topic in each session will help you make better links between them.*

A  $\Rightarrow$  B  $\Rightarrow$  C  $\Rightarrow$  D

B  $\Rightarrow$  D  $\Rightarrow$  A  $\Rightarrow$  C



1.

### Switch

Switch between topics during each session.

It allows you to think about what you are doing with your time when you are revising.

2.

### Review in different orders

When reviewing make sure you do it in a different order that you learnt them, or previously revised them.

By revisiting material from each topic several times, in short bursts, this **increases the amount of information you can recall in your exams.**

3.

### Make links to remember more.

Try to make links between ideas and review your revision notes.

This helps you make connections between topics and forces you to think harder about which strategies need to be applied to which problems.

## Applying interleaving to your revision

1. Break units down into small chunks and split these over a few days rather than revising one whole topic all at once.
2. Decide on the key topics you need to learn for each subject.
3. Create a revision timetable to organise your time and space your learning.

### Blocking



**Interleaving is for topics within one subject – not subjects themselves.**

### Interleaving



**You can apply this in your revision timetable.**

**When revising science, mix up the topics that you study in that session, don't just focus on one.**

# Revision Methods- Dual coding

## Summary: Dual Coding

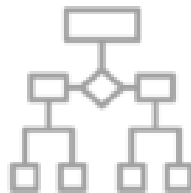
Dual coding is the process of blending both **words** and **pictures** while learning. Viewing those two formats gives us **two different representations** of the **same** piece of information.



1.

### Drawings

These boost learning by getting you to think deeply about information.



2.

### Diagrams

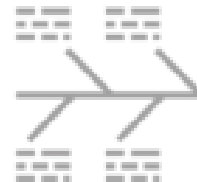
These are helpful for breaking down complex concepts or processes to make them easier to understand.



3.

### Posters

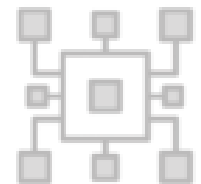
These are great for combining writing, pictures and diagrams all within one page of information.



4.

### Timelines

These can be used of information that happens in a particular order or sequence.



5.

### Graphic organisers

These organise verbal and visual information by the relationships between different concepts. Examples include tree diagrams, mind maps and Venn diagrams.

## 4 Key Principles for using dual coding



**Cut** - Reduce the amount of content, be selective and only use the most important information.



**Chunk** - Divide the content into groups of related information;



**Align** - Make sure that words and pictures are neatly ordered, making them easier to read;



**Restrain** - Avoid "overdoing" it. In other words, don't go crazy with different colours and fonts.

# Revision Methods- Spacing

## Summary: Spacing

- Spacing is regularly revisiting material so that you are doing little and often instead of all at once.
- Doing a little amount regularly is more effective than doing a lot all at once. We do this so that we don't get swamped and overwhelmed

***To commit something to memory, it takes time and repetition.***

WHY? This is because the time in between allows you to forget and re-learn the information, which cements it in your **long-term memory**

### Optimum Spacing

- Research suggests there is an 'optimal gap' between revision sessions so you can retain the information.
- If the test is in a month, you should review the information around once a week.  
If the test is in a week, create time once a day.

### Why use Spacing?

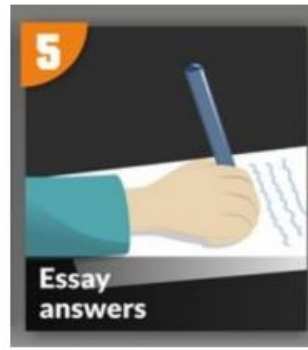
- Doing something little and often – spacing – beats doing it at once, or cramming
- The time in between revision allows you to forget and re-learn the information, which cements it in your long-term memory
- It cements information into your long-term memory
- We can learn more information over time than in one longer session
- It helps you revise more efficiently

Time to the test	Revision Gap
1 Week	1-2 days
1 Month	1 week
3 Months	2 weeks
6 Months	3 weeks
1 Year	1 month



# Retrieval

“ Retrieval practice is defined by **Mark Enser** as ‘retrieving something from our memories to make it easier to recall in future.’ If using it makes recall easier, surely this is a big win for learning and the progress of our students. ”



Retrieval practice is one of the most effective ways to revise. By answering questions rather than merely reading or highlighting information, you're putting yourself in the best position possible to succeed and remember as much of your subjects as possible.

Past papers, essays, multiple choice tests and flashcards are a great way of doing it.

# Revision ⌚ POWER HOUR



**STEP 01**  
**Choose a past paper question**  
Google your subject, level and exam board e.g. "Geography A-Level Past Papers AQA"

**STEP 02**  
**Revise**  
Spend 20 minutes revising what you need to know to answer your chosen question



**STEP 03**  
**Do the question**  
Set a timer for 20 minutes and answer the past paper question you chose



**STEP 04**  
**Get feedback**  
Show your teacher your work. Ask them whether your marking is accurate and how you could improve your answers

**Mark your answer**  
Using the mark scheme for the past paper mark your answer. This will help you to think like an examiner



## Revision ⌚ POWER HOUR

Get the most out of your revision with a power hour. Here's a step-by-step of how to do it.

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**STEP 05**  
**Get feedback**  
Show your teacher your work. Ask them whether your marking is accurate and how you could improve your answers



1. Speak to your teachers or use the school revision zone to access all the past papers you could need.
2. Take notes, create a mind-map/ flashcards. You have revision guides and resources provided by teachers.
3. Practising exam questions is hard but it is effective.
4. Again, ask your teacher for a mark scheme or check the revision zone.
5. Hand in your exam answer. Your teacher will be happy to check it and provide further feedback.



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STEP  
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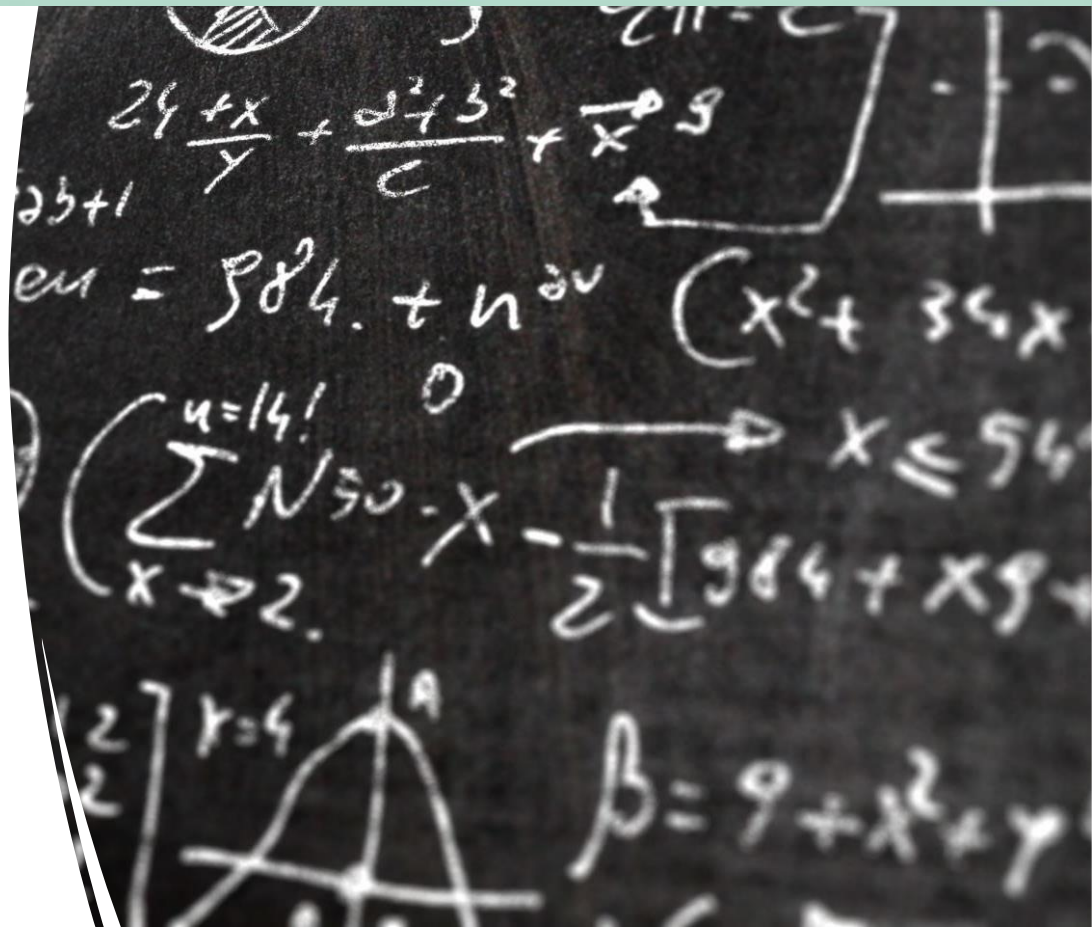


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STEP  
05

Power Hour- This is Mr Sayce's preferred method of revision which is crucial at this stage in the revision process. This covers all the most effective ways to revise. Retrieval Practice, exam skills, self—marking (understanding mark schemes) and teacher feedback



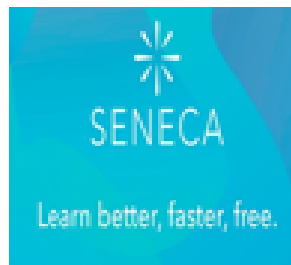
# Essential Tools



**GCSEPod**- You don't need me to tell you how important this resource is and the impact it can have on your GCSEs. Aim to watch 2-5 pods an evening and practice the Check and Challenge questions regularly to build up your comprehensive understanding of core knowledge. GCSEPod also has videos and other resources on how to revise and exam technique



**Acle Academy Revision Zone**- This can very easily found on the school website. You need to hover over the 'students' tab at the top and click 'revision zone'. From here, click on the 'revision zone Google Drive'. This will take you to a Google Drive with revision resources, revision guides and exam practice for all your GCSE subjects. This is made for Acle learners and has been updated for 2022.



**Seneca**- This revision app treats each student as an individual and uses an algorithm that adapts to suit the learner's progress and preferences. It's free to use and makes revision fun and engaging. Science, Tech and many other subjects recommend this as their app of choice.