Revision Techniques



Using time to memorise

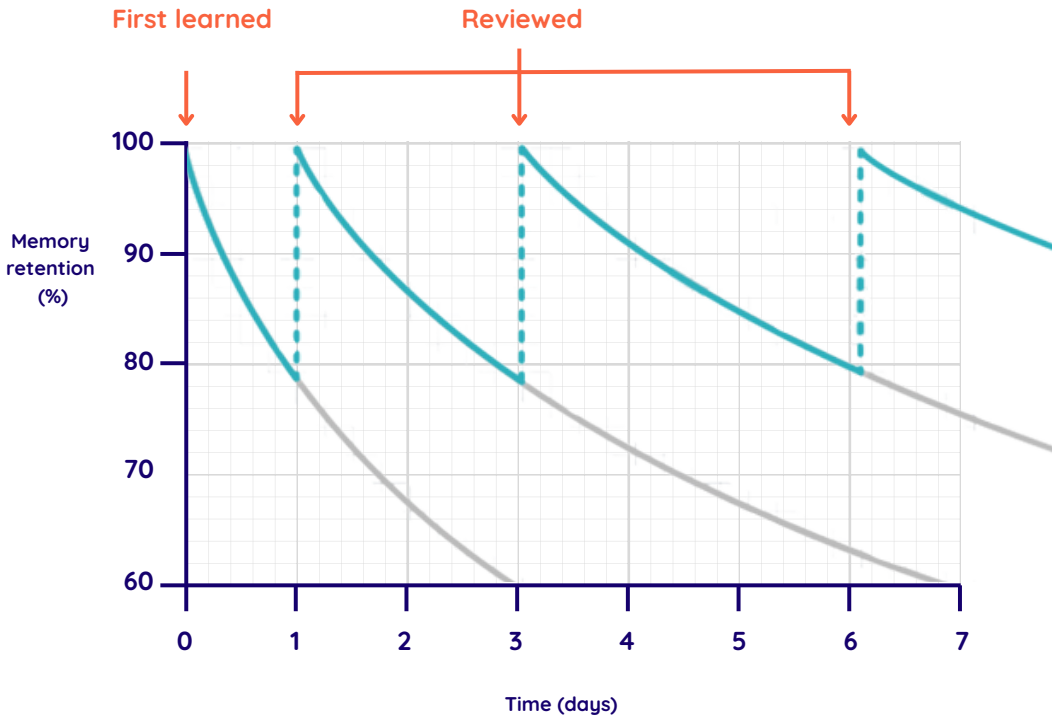
Distributed learning, also known as *the spacing effect* - studying a little every day is better than trying to cram everything in just before the test. Cramming leads to faster forgetting.



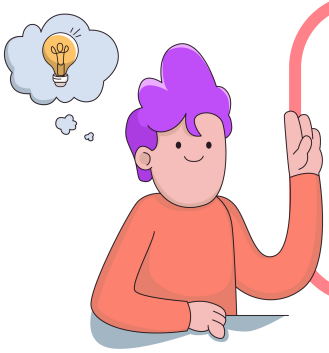
Think about...

- the importance of learning material in more than one way
- little and often is better than all at once (analogy - watering the garden ...?)
- the forgetting curve (see below) - do a plan for specific topics as a trial.

Typical Forgetting Curve For Newly Learned Information



Testing is best



The Fluency Illusion
The fluency illusion is the term used to describe the fact that we often have a false sense of confidence about what we know. You may read through something and think “oh I know that”.

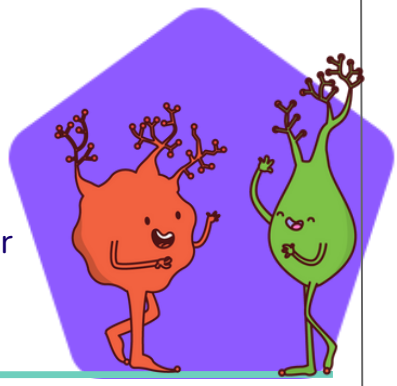
Research shows that the best way to learn something is to test yourself on it. Testing is much more effective than other types of ‘studying’ techniques (e.g. re-reading, underlining, copying out notes, highlighting, making a list).



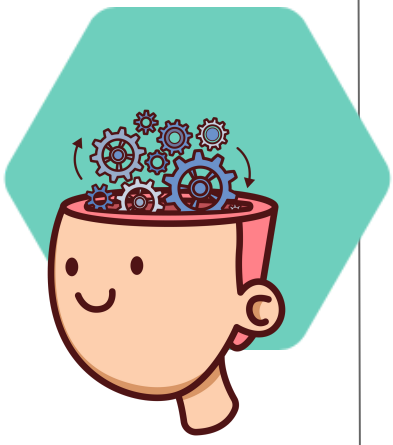
Unfortunately, testing is a loaded word with lots of negative connotations thanks to our education system and the meaning we give about ‘passing’ and ‘failing’. But it doesn’t seem to matter so much if the you get it wrong. The process of trying to retrieve information triggers neural changes that mean the information is more likely to be retained (though if incorrect obviously needs to be corrected straight away). It also exposes the false impression that the you know the information.

Some research suggests pretest questions are beneficial (i.e. before you’ve been taught the material) as it is thought to prime the brain, predisposing it to absorb new information.
Try to:

1. Have a short ‘testing’ session at the end of every block of revision
2. Make sure you test yourselves in a spaced interval way (as above) e.g. straight away, tomorrow, leave 3 days, leave 7 days etc.
3. Be creative about ways to test (e.g. flash cards, with another person, etc.)



Mixed drill practice



Mixed practice is better than focusing on the same material or skill for an extended period. Particularly in subjects like maths, you're often given many problems of the same kind to do in sequence. The problem is you don't have to make any effort to determine the necessary strategy and so may not be able to remember the strategy or apply it in another context later.



The term to describe this is ***interleaving*** which simply means mixing related but distinct material during study. This is partly why doing past exam papers is so effective. It prepares your brain for the unexpected and encourages you to recall the strategy or technique independently. Evidence is particularly strong for this effect in the subject of maths.

Remember to...

- ☐ **Mix up content** when practising, particularly for maths. For example, when learning something first it might be good to do a whole sheet of equations, next time mix up an equation with questions from the weeks before.
- ☐ **Don't worry** if this means you are less successful. We would expect this but it is a better way to use time and better for their learning.
- ☐ **Do past exam papers** - and then make sure you go over the exam paper and re-do the ones you got wrong. This is where the best learning takes place.



Sleeping is crucial!



Our brain consolidates memory while it sleeps. This seems to be one of the main functions of sleep, strangely! Think of sleep as learning with your eyes closed.

Effectiveness of study techniques

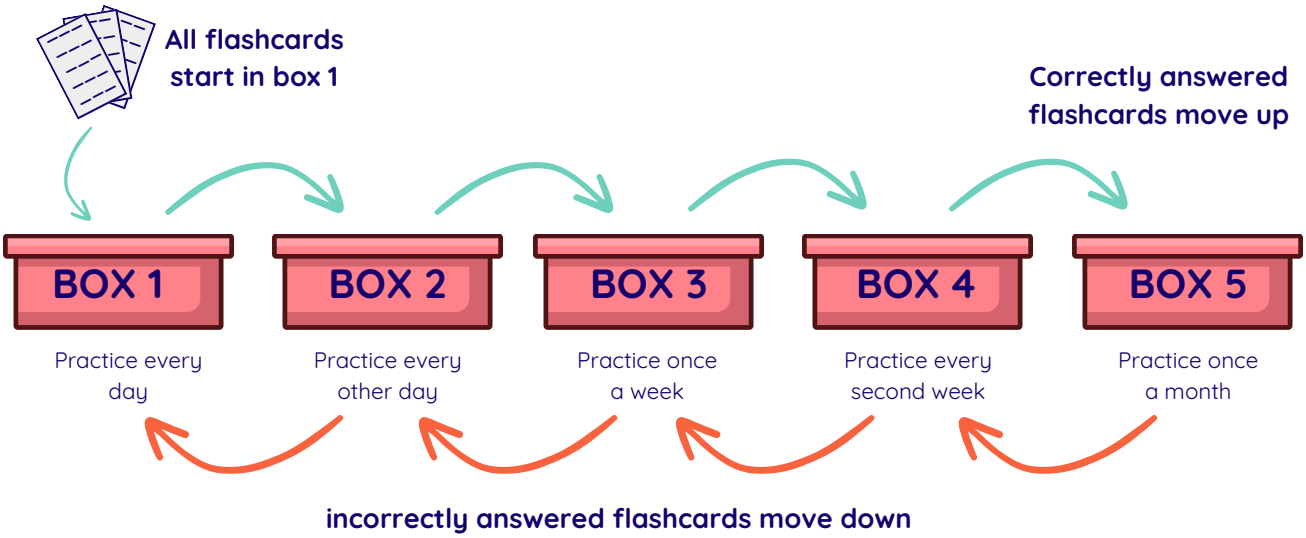
Key findings from Dunlosky (2013)'s **Strengthening The Student Toolbox**

Technique	Extent and Conditions of Effectiveness
Practice testing	Very effective in many situations
Distributed practice	Very effective in many situations
Elaborative interrogation	Promising for maths and concept learning, but needs more research
Self-explanation	Promising, but needs more research
Rereading	Promising, but needs more research
Highlighting and underlining	Can be helpful, but time could be better spent using other strategies
Summarisation	Not very helpful, but can be used as a first step towards more studying
Keyword mnemonic	Somewhat helpful for language learning, but short-lived benefits
Imagery for text	Limited to imagery-friendly study material, and more research needed



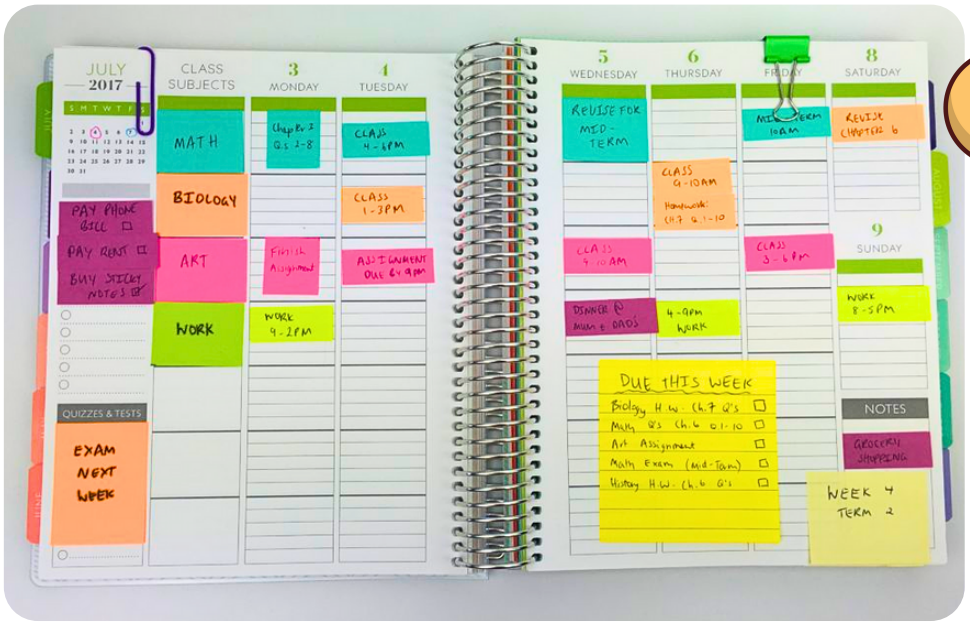
The Leitner Method

The Leitner method is a study technique using flashcards. You organise your flashcards into 5 boxes. When you successfully recall a card, it moves up a box; if you get it wrong, it goes back a box. This way, you focus more on the challenging cards, helping you remember information. See below.



Post-It Note Scheduling

Write each task on a separate Post-it note, assign each type of task a colour, prioritise them, and stick them on a calendar or board. As you complete tasks, you can remove these notes, making it a visual and satisfying way to track and accomplish your to-dos.



Here's how Post-It note scheduling can look in your weekly planner

The Social Encoding Advantage

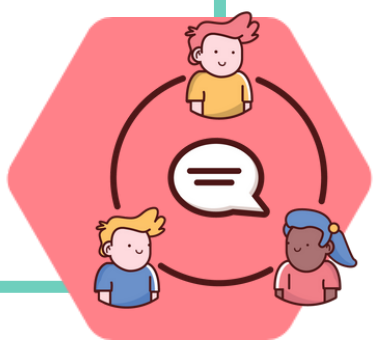
Social encoding is when things happening around us, like what people say or do, are stored in our minds. How well we remember these things depends on what grabs our attention in social situations. This encoding takes place in our mentalising brain network.





Research indicates a social encoding advantage in memory. In a study, two groups were given statements about ordinary behaviours. Group 1 was asked to memorise the details of these behaviours for a later test, while Group 2 was told to form an overall impression of a person doing these behaviours without memorising them. Group 2 activated the mentalising network in the brain using social encoding, while Group 1 relied on traditional memory systems in the brain. Group 2 outperformed Group 1 in the memory test. Recent brain scans suggest that this mentalising network is a more effective learning strategy compared to traditional memory systems.

What does this mean us? Brainstorm ideas to share together.



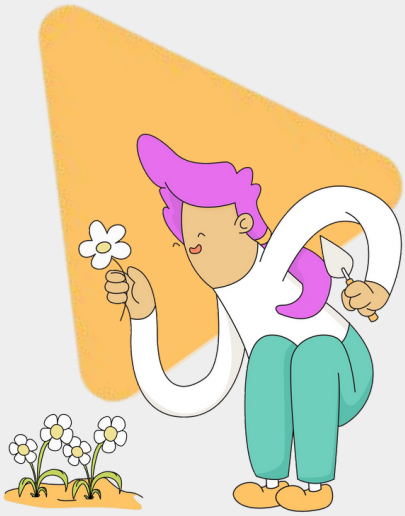
Executive Function Skills Explained

Skill	Definition
Response inhibition 	The capacity to think before you act; this ability to resist the urge to say or do something allows your child the time to evaluate a situation and how his or her behaviour might impact it.
Working memory 	The ability to hold information in memory while performing complex tasks. It incorporates the ability to draw on past learning or experience to apply to the situation at hand or to project into the future.
Emotional control 	The ability to manage emotions to achieve goals, complete tasks, or control and direct behaviour.
Sustained attention 	The capacity to keep paying attention to a situation or task in spite of distractibility, fatigue, or boredom.
Task initiation 	The ability to begin projects without undue procrastination, in an efficient or timely fashion.
Planning/ prioritisation 	The ability to create a roadmap to reach a goal or to complete a task. It also involves being able to make decisions about what's important to focus on and what's not important.
Organisation 	The ability to create and maintain systems to keep track of information or materials.
Time management 	The capacity to estimate how much time one has, how to allocate it and how to stay within time limits and deadlines. It also involves a sense that time is important.
Goal-directed persistence 	The capacity to have a goal, follow through to the completion of the goal, and not be put off by or distracted by competing interests.
Flexibility 	The ability to revise plans in the face of obstacles, setbacks, new information, or mistakes. It related to an adaptability to changing conditions
Metacognition 	The ability to stand back and take a bird's-eye view of yourself in a situation, to observe how you problem solve. It also includes self mentoring and self evaluative skills (e.g., asking yourself, "How am I doing?" or "How did I do?"

Would you like more support?

"At first I thought coaching was really expensive, but now I see that it's the best investment I have ever made in myself."

Coaching Client



We are dedicated to supporting you! Let us know how we can help you on your journey.

Click the links below to take a look!

Want to learn more about brain development?

Learn more about brain development with our Neuro-insight module

Want to learn more about executive functioning?

Attend our Free Intro To Executive Functions Webinar

Looking for a supportive community in our group sessions?

Learn more about our Weekly Support Group

Discover our fortnightly Strategy Group



References

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- Lieberman, M (2013) Social: Why our brains are wired to connect

- Dunlosky (2013) Strengthening the student toolbox: Study strategies to boost learning. American Educator. http://www.drdouggreen.com/2014/how-we-learn-the-surprising-truth-about-when-where-and-why-it-happens-by-benedict-carey/4/

- UCLA pretest study - reference Elizabeth Ligon Bjork - found that pretesting raised performance on finals by an average of 10% http://www.drdouggreen.com/2014/exams-measure-what-we-know-but-theyre-also-the-best-way-to-learn-article-summary/

