
Strategies for effective independent study



Introduction

As you make your way through your time at St Michael's, it is essential that you consider how and when you do your independent study.

You will spend thousands of hours over your time at school revising, learning new information and trying to make sense of all this knowledge and skills!

Unfortunately we often prefer strategies that can create illusions of knowing.

A lot of research and evidence tells us how best to use this time and which strategies to use.

Following are three key effective study strategies.

The words seem complicated but you will see it is not as complex as it seems and you maybe already use some of them!

- Retrieval Practice
- Spaced Practice
- Interleaving

In this document you will find:

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 3. Expert subject tips to learn better on key subjects p.5--7
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The theories behind great independent learning

Retrieval practice

Retrieval practice is a strategy in which bringing information to mind enhances and boosts learning.

Deliberately recalling information forces us to pull our knowledge “out” and examine what we know.



Often, we think we've learned some piece of information, but we come to realize we struggle when we try to recall the answer. It's precisely this “struggle” or challenge that improves our memory and learning – by trying to recall information, we exercise or strengthen our memory, and we can also identify gaps in our learning.

For instance:

Recalling an answer to a science question improves learning to a greater extent than looking up the answer in a Textbook having to actually recall and write down an answer to a flashcard improves learning more than thinking that you know the answer and flipping the card over prematurely.

Research examined the fascinating finding that tests (or short quizzes) dramatically improve learning. Flashcards, practice problems, writing prompts, etc. are also powerful tools for improving learning.

The act of pulling information “out” from our minds dramatically improves learning, not the tests themselves. In other words retrieval is the active process we engage in to boost learning; tests and quizzes are merely methods to promote retrieval.

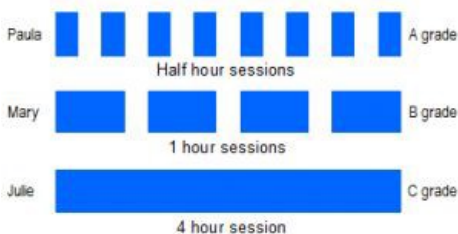
Spaced practice

Spaced practice is the opposite of our much used massed practice. Massed practice is when you study one subject for a long time.

Spaced practice is studying information more than once but leaving considerable time between Practice sessions.

Why is spaced practice better than massed practice?

It's a common but mistaken belief that you can burn something into memory through sheer repetition. Lots of practice works, but only if it's spaced. Massed practice feels more productive than spaced practice, but it is not.



Spaced practice feels more difficult, because you have gotten a little rusty and the material is harder to recall. It feels like you're not really getting on top of it, whereas in fact, quite the opposite is happening: As you reconstruct learning from long-term memory, as awkward as it feels, you are strengthening your mastery as well as the memory.

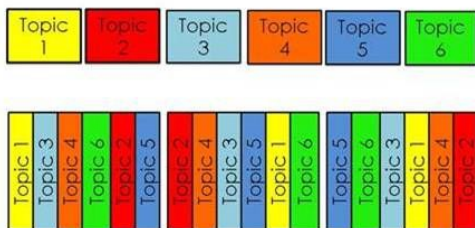
Space out your study sessions so that a little forgetting has happened since your last practice, you will have to work harder to reconstruct what you already studied. In effect, you're "reloading" it from long-term memory!

This effort to reconstruct the learning makes the important ideas more memorable and connects them more securely to other knowledge and to more recent learning. It's a powerful learning strategy.

Interleaving (mix it up)

Interleaving is a process where you mix, or interleave, multiple subjects or topics while you study in order to improve your learning. Mixing up problem types improves your ability to discriminate between types, identifying the unifying characteristics within a type, and improves your success in a later exam or in real-world settings, where you must work out the kind of problem you're trying to solve in order to apply the correct solution.

Blocking vs interleaving



Blocked practice, on the other hand, involves studying one topic very thoroughly before moving to another topic. Even when learners achieve better mastery from interleaved practice, they persist in feeling that blocked practice serves them better. You may also experience this feeling, but you now have the advantage of knowing that studies show that this feeling is an illusion!

What does it mean? If you are studying biology specimens, Dutch painters, or the principles of macroeconomics, mix up the Examples.

Let's put this into practice!

Retrieval practice

Use it on day to day:

When you read a text or study class notes, pause every so often to ask yourself questions like these, without looking in the text:

- What are the key ideas?
- What terms or ideas are new to me?
- How would I define them?
- How do the ideas relate to what I already know?

Many textbooks have study questions at the ends of the chapters, and these are useful for self-quizzing. Generating questions for yourself and writing down the answers is also a good way to study.

Set aside a little time every week throughout the term to quiz yourself on the material in a course, both the current week's work and material covered in prior weeks.

When you quiz yourself, check your answers to make sure that your judgments of what you know and don't know are accurate.

HOW TO DO IT

Put away your class materials, and write or sketch everything you know. Be as thorough as possible. Then, check your class materials for accuracy and important points you missed.



Take as many practice tests as you can get your hands on. If you don't have ready-made tests, try making your own and trading with a friend who has done the same.



You can also make flashcards. Just make sure you practice recalling the information on them, and go beyond definitions by thinking of links between ideas.



HOLD ON!



Retrieval practice works best when you go back to check your class materials for accuracy afterward.



Retrieval is hard! If you're struggling, identify the things you've missed from your class materials, and work your way up to recalling it on your own with the class materials closed.



Don't only recall words and definitions. Make sure to recall main ideas, how things are related or different from one another, and new examples.

Spaced practice

Establish a schedule of self-quizzing that allows time to elapse between study sessions.

HOW TO DO IT

Start planning early for exams, and set aside a little bit of time every day. Five hours spread out over two weeks is better than the same five hours all at once.

Review information from each class, but not immediately after class.

After you review information from the most recent class, make sure to go back and study important older information to keep it fresh.

Interleaved practice

HOW TO DO IT

Switch between ideas during a study session. Don't study one idea for too long.

Go back over the ideas again in different orders to strengthen your understanding.

Make links between different ideas as you switch between them.

HOLD ON!

While it's good to switch between ideas, don't switch too often, or spend too little time on any one idea; you need to make sure you understand them.

Expert subject tips

Music - Tips for Music Practice and Performing

1. Practise little and often - do 10/15 minutes every day, rather than 2 hours at the weekend and none during the week! Build practising into your daily routine.
2. Don't start at the beginning of a piece each time - work back from the end, or focus on a tricky section/bar first.
3. Play really slowly at first, particularly when working on harder sections/bars. Gradually increase the tempo (speed) over time as you get more confident.
4. Try repeating a difficult bar slowly 4 or 5 times to make sure you can get it right.
5. Use a pencil to make notes on your music e.g. fingerings or dynamics.
6. Practise performing to an audience regularly so that you get used to it. This will help you to build your confidence. Perhaps try playing one of your pieces to your family or friends each week. It doesn't need to be really formal.
7. Try recording yourself playing/singing on a voice note on your phone, then listen back to hear what you could improve. You might find this strange at first, but it will be really helpful.
8. Breathe before starting to play/sing. Take a breath in and out, slowly. Only start when you are ready, then enjoy your performance. If you're a singer, smile!



MFL - How to learn new vocabulary

How to spell a word:

Look. Look carefully at the word for at least 10 seconds and notice the gender if it is a noun or the verb ending.

Say. Say the word out loud at least 6 times to practice the pronunciation. Cover up the word when you feel you have learned it.

Write the word from memory

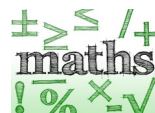
Check. Check your word against the original. Did you get it right? If not, what did you get wrong? Spend time learning that bit of the word. Go through the steps until you get it right

- Some people find it easier to learn by heart with rhythms i.e. clapping or simple melodies.
- Pay more attention to longer, more complicated words by breaking them up into syllables. Learn the word by slowly saying the syllables until you can say them at normal speed.
- Make a list of words that you find harder to remember, hang them up in your bedroom or around the house and practise them daily. Learning new words every day for about 10 minutes is ideal.



Maths-How can I practise independently my mathematical skills & knowledge?

To progress in mathematics, regular work and consolidation are a must. For this, answer questions! Doctor Frost (OF) is the perfect platform. You will know how to use OF as your teacher is already setting some homework for you to complete.. For your independent practice:



- Use "Clean Up" which gives you a task consisting of 4 questions you've recently got wrong.
- Use "Key Skills". Key Skills are fine grained question types where you can practise randomly generated questions with accompanying short worked example videos. Select your topics, answer the questions and reflect on your learning.
- If you struggle, come with the specific questions to your maths teacher.

English - Independent reading



Independent reading is the single, most helpful activity you can do to improve all aspects of your English skills, many of which are cross-curricular skills; therefore by reading you are, in fact, improving all aspects of your learning across all subjects.

Reading regularly is key. How do I develop the reading habit?

- If you are not a daily reader already, try the following plan:
- Set a daily 10 minute reading time: 4.30-4.40pm; 7.00-7.10am; 8.40-8.50pm. It doesn't matter when, choose whatever suits your routine.
- Stick to this time slot everyday, or use a Monday to Friday schedule, you decide.
- Tell your family so they can remind you it's reading time; maybe get them involved too!
- Everyone can find 10 minutes in their day to read - no excuses.

Happy independent reading!

Food and Nutrition—How to get ahead ready for Food and Nutrition lessons



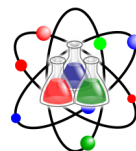
Preparing food, cooking, and clearing up after cooking, may be unfamiliar to you. The best preparation for the practical aspects of your Food lessons is to get involved with cooking at home. Try these challenges but make sure that you wash your hands first, get permission and have supervision for tasks where an oven or knife is needed: salad dressing ☐ make an interesting sandwich or roll for your lunch ☐ Practise clearing the table and stacking plates, wipe

☐ use a small sharp knife to chop vegetables and fruit ☐ use a peeler to peel a carrot and a potato ☐ use a masher to mash potato ☐ boil an egg ☐ cook pasta according to the instructions on the packet but do not drain it, ask an adult to do that. ☐ make a simple salad and a down work surfaces. ☐ make a simple snack for your lunch, eg beans on toast, pitta and hummus ☐ offer to help someone for your family make a meal ☐ make a batch of fairy cakes or biscuits.

Any of these challenges will help you to build up the practical skills you will need for your Food lessons. The more you practise the better you will get.

If you keep a record of the challenges you attempt, with photos, your Food teacher will reward you with a sticker when you attend your first Food lesson. It is not compulsory but the more you do the more your confidence will grow.

SCIENCE



- Learn key word spellings and definitions using techniques such as Look-Cover-Write-Check
- Taking part in School Science Clubs e.g "Physics Club", "Veterinary Science Club"
- Reading the science pages of the BBC News website for topics linked to what is being studied in class
- Research a scientist – who are they, what did/do they do, how has their work changed what we think today?
- You can encourage your parents to visit: The Science Museum, The RAF Museum in Hendon, The Natural History Museum, Greenwich Royal Observatory, The Wellcome Trust, The Royal Institution, Kew Gardens, London Zoo, The British Library

When revising the following strategies are recommended:

- Writing out practicals - the method (including equipment) ensuring correct use of language and terminology
- Making mind maps of each subject to show the 'big picture'. How does each subject link with every other subject.

Useful Websites

- **Educake** (create & answer your own tests)- www.educake.co.uk. Use your school login to access this website.
- **Senecalearning.com** - www.senecalearning.com. (Science: KS3) A free revision website, which presents information in easy bitesized chunks.
- **BBC Bitesize** (KS3 Science) - www.bbc.com/bitesize. The BBC website is popular for homework support and revision.
- **Free Science Lessons** - www.freesciencelessons.co.uk (Lots of videos on every topic. You can reinforce ideas and you can further your knowledge in any topic that interests).
- **Primrose Kitten** - www.primrosekitten.com. Lots of free videos on lots of different topics, this will be good at extending knowledge.www.zooniverse.org.
- **Citizen Science Projects** www.earthsky.org/space/exoplanets-nasas-planet-patrol-citizen-science/ Help NASA search for exoplanets!

Geography - Mapskills



Mapskills

Watch these film clips on You tube if you need reminding about how to use an Ordnance survey map, they are only few minutes long.

Understanding contour lines with Steve Backshall and Ordnance Survey https://youtu.be/4i_6eToM3X8

Understanding contour lines and gradients| Geography - Get Lost

<https://youtu.be/P0a4KGqJOfg>

Understanding map symbols with Steve Backshall and Ordnance Survey

<https://youtu.be/olNFYkezys>

How to take a 4-figure grid reference with Steve Backshall and Ordnance Survey

https://youtu.be/c0du8v4EE_Y

How to take a 6-figure grid reference with Steve Backshall and Ordnance Survey

https://youtu.be/FXuo_ocVMVU?list=PLJp4yCtYcXprknSY_FAUpWG5ZbDwHmfY7

Activity

Go to the Ordnance survey website <https://footpathmaps.com>

1. Use the scale bar to change the scale and size of the maps

2. Zoom in on where you live in London. Go to the 1:50,000 scale map.

3. Find and locate the grid square you live in.

4. Practice doing 4 & 6 figure grid references to locate other symbols.

(Remember - go to the bottom left hand corner of the square you want, then, "along the corridor and up the stairs.")

History



- Read texts carefully in lessons and think carefully about what you can learn from the text.
- Be attentive and ask questions in lessons, be engaged in the lessons.
- Be guided by the teacher about a historical source, they can seem hard to understand, and be prepared to find your own understanding of the historical source
- Think about how the topics you have studied in a series of lessons link together, review what you have done.
- Sometimes a homework (the teacher will guide you) will ask you to make connections between topics you have studied and try to see and explain how events form a pattern of history.
- There is a Y7 History project, the History of St Michael's, and you should aim to make a judgement about how the school has changed and also stayed the same over the decades. You will be given material to read, research, to help make these conclusions.