

Year 11 Successful Learner Programme Handbook

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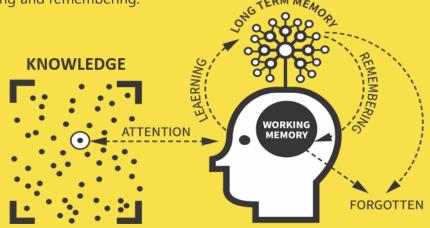
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What is learning?

To become a **successful learner** it is important to understand **what learning is** and **how we learn.** Learning can be defined as "a **change in the long-term memory.**" Willingham's **Model of Memory** below illustrates how we learn and the relationship between attention, working memory, long-term memory, forgetting and remembering.



- (1) Attention The first stage of learning is paying attention to new information and knowledge. Attention is like a spotlight, focusing on specific information while trying to reduce distractions concentration and motivation is vital. You are more likely to pay attention to new knowledge if it relates to something you already know. This 'prior knowledge' gives new information something to connect and 'stick' to. Once you pay attention to new information, it transfers through your eyes (visual) and ears (auditory) into your working memory.
- **(2) Working Memory** The second stage of learning is thinking about new knowledge in your 'working memory'. Working memory is where you process new information, it's like the brain's 'workspace', where you think about new knowledge. However, there is a limit to your working memory. Most people can only handle a few new pieces of information at a time; therefore, you should learn new material in chunks and small steps so that you are not overloaded at any one time.
- **(3) Long-Term Memory -** The third stage of the learning process is the transfer (encoding) of new information from working memory to long-term memory. Encoding is like saving a file to a computer; it converts information into a format that can be stored and retrieved later. You can practice using your new knowledge to strengthen its storage in your long-term memory and you are more likely to recall this information if it is connected to existing knowledge, building your schema of a topic. Think of your memory as a filing cabinet and your schema of topics are the different folders, storing your knowledge.
- **(4) Forgetting and Remembering -** The fourth stage of the learning process is forgetting and remembering. Forgetting information happens when memories are not accessed regularly. To combat forgetting, you need to use revision strategies such as spaced repetition, retrieval practice, and elaboration. Remembering involves retrieving information from long-term memory when needed. Retrieval practice activities are essential for improving your memory of new knowledge. Regularly recalling information strengthens your memory and makes it easier to retrieve that information in the future. Successful learners use quizzes, brain dumps, flash cards and other forms of retrieval practice to help them reinforce their learning and improve their long-term memory.

How to create an effective revision timetable

(1) Use revision lists to plan your revision

- Each of your subjects will provide you with a list of topics to revise for your exams to plan your revision.
- Prioritise topics to revise based on feedback from your mock exams, assessments and your own self-assessment and confidence.
- Use colours, smiley faces or numbers to rank your topics to revise.
- Make sure you record and track which topics you then revise.

(2) Use interleaving to space out your revision

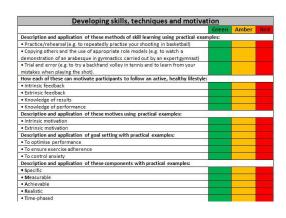
- Interleaving is spreading out your revision of the same topic over different days.
- Avoid revising one topic in a single 2-hour block but never returning to it again.
- It is more effective to revise a topic in three thirtyminute sessions, spread out over a few different days, instead of one 90-minute session of revision on the same topic.
- Leaving gaps of time (spacing) between sessions allow you to forget and then retrieve your knowledge. This allows you to check how much you can remember.

(3) Plan specific tasks to complete

 When planning your revision you should decide on the subject, topic and task to complete. For example, (i) Geography (ii) Paper 1 – Tropical Rainforests (iii) Complete 2018 and 2019 exam questions.

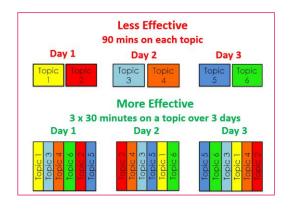
(4) Create a weekly planner

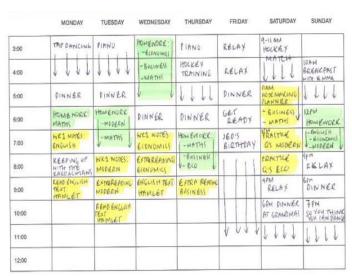
- It is usually more effective to plan your revision one week at a time using a weekly planner.
- Commit to specific times each day that you will revise for.
- Be realistic and include any personal hobbies, and responsibilities (white)
- Include your home learning tasks (green)
- Finally, include the revision tasks you want to complete for the week (yellow)



Self-assess your confidence and learning of each topic:











The Pomodoro Technique

The Pomodoro Technique was developed by a university student Francesco Cirillo. Cirillo was struggling to focus on his revision. Feeling overwhelmed, he committed to **25 minutes** of focused study time. Motivated by the challenge, he found a tomato (pomodoro in Italian) shaped kitchen timer, and the Pomodoro technique was born - its biggest strength is its simplicity.

The 'Pomodoro' is a single, indivisible unit of time, 25 minutes, that cannot be broken, especially not to check incoming emails, social media or text messages. Cirillo set a rule that once a 'Pomodoro' is committed to, it must be completed. Any distractions, requests or other tasks must be ignored or returned to later. Once a 'Pomodoro' is completed you are allowed a five-minute break.

In the event of an unavoidable disruption, take your five-minute break and start again. Cirillo recommends that you track interruptions as they occur and reflect on how to avoid them in your next session. The rule applies even if you finish your task before the timer goes off. Use the rest of your time for overlearning or depth of your knowledge.

Motivation

There is a variety of advice on motivation. Some top tips include:

- Set small targets with rewards.
- Make sure there are breaks in your revision.
- Remind yourself of your long-term goals.
- Plan a big treat for after your exams.
- Use effective revision timetables so that you can see the progress you are making.
- Schedule fun and relaxing activities during your revision timetable so that you can 'earn' the rest.
- Study or communicate with someone else revising for the same exams – peer support is useful for motivation and to discuss revision.

Avoiding procrastination

Procrastination means putting off a task that needs doing. The following advice is to help avoid procrastination - notice how it links to the 'Pomodoro Technique' and 'Effective Revision Timetables'

- Turn off your phone, TV and other distractions – give your phone to someone to look after.
- Give yourself regular breaks to help keep you focused.
- Break revision into small chunks that are more manageable to complete and not one endless, all day task.
- Build your revision around tasks to complete (past papers, revise from flash cards, read and summarise notes, answer quiz questions) with each task lasting 25-30 minutes.

Encoding – Active Reading

The following revision strategies focus on **encoding** your learning through **active reading** strategies. **Passive reading**, where you read without thinking about what you are reading is an ineffective revision technique. An example of this is reading your notes and just highlighting some key words and facts; highlighted words do not magically transfer into your long-term memory. When you are reading for revision you need to use **active encoding strategies**. The strategies below have a common theme, they all require you to **think** about what you are learning. The more you about what you are trying to learn, the more you will **remember**.

- (1) Explain it back Every few paragraphs you should explain back to yourself, aloud in your own words, what you have just learnt. When you say it in your own words it is more likely to become embedded into your memory. It is not enough to have a feeling that you have learnt what you have read, you need to prove it you could try explaining it to someone else.
- (2) Ask questions Every few paragraphs you should write down questions about what you have read. These might be questions that you need your teacher to help answer if you don't understand what you have read or they might be knowledge-recall questions that you answer later for retrieval practice. You should also always ask yourself two 'big questions': 'What is the main idea?' and 'How does it relate to what I already know?'.
- (3) Summarise Writing a summary of what you are reading and learning can be an effective revision strategy. If you are making summary revision notes you need to avoid just copying out what you are reading. You should aim to make brief notes based on what you have read. This is more effective if you try to do it from memory, then check what you remembered (and what you didn't) and explain your notes aloud.

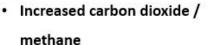
Impact of human activity

Human activities are contributing to increased levels of carbon dioxide and methane in the atmosphere.

- Carbon dioxide is released by the burning of fuels and biological materials including wood and peat.
 It also results from the decay of peat in damaged peatlands.
- Owing to deforestation, less carbon dioxide is being absorbed by plants in photosynthesis.
- Methane is released from cattle and from flooded fields used to grow rice.

Carbon dioxide and methane are greenhouse gases. They trap heat from the sun in the earth's atmosphere, increasing the mean air temperature

Impact 1



- CO2 > burning fuels (wood / peat)
- Deforestation > less CO2 absorbed plants
- Methane > cattle / rice fields
- CO₂ / CH₄ > greenhouse gases > trap heat in atmosphere

The example above shows how 94 words about the impacts of human activity can be reduced to 27 words. The next step could be to reduce this down to 10 words. It is important that you create these notes, they are personal to you using your own private code and language. An extension retrieval practice task would be to (i) write these notes out from memory and (ii) explain them aloud in full sentences.



Encoding – Visualise your Learning

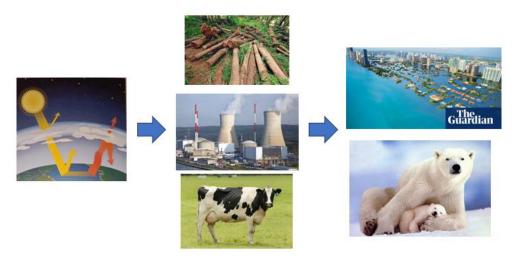
Memorising information is more than remembering words and sentences. Visualising new knowledge is essential for learning because it helps turn abstract information into something concrete and easier to understand and it will help your later retrieval of this knowledge. Information that is stored in your memory through both words and images is easier to remember. This is sometimes referred to as dual coding. This method is successful because it requires you to think about the new knowledge, translating it from words into images.

(4) Mental Images - As you study, try to form clear mental images of the concepts, facts or processes you are learning. For example, if you are studying the solar system, imagine the image of the planets orbiting the sun in their respective positions and not just a written list of the eight planets. If you are learning about deforestation imagine the chopped down trees and the damage to the environment.





(5) Storyboard- If you are learning a complicated, multi-step process or concept you can turn it into a visual story, like a storyboard. Stories have a privileged status in our memory – they are easy to understand and easy to remember. Turn long, chains of knowledge into a visual storyboard, making links between the different components. In this example the causes and effects of global warming are linked together visually to help tell a 'story'.



These images represent the greenhouse effect, the human causes such as deforestation, use of fossil fuels and farming leading to sea-level rise, flooding and extinction of species, such as polar bears.

Encoding – Visualising your Learning

(6) Analogies - An analogy is a comparison between two things that are similar, often used to explain a concept or idea. They make complex or abstract concepts easier to understand by comparing them to something familiar. Search your knowledge for analogies related to what you are learning; even more effective if it is related to your life.

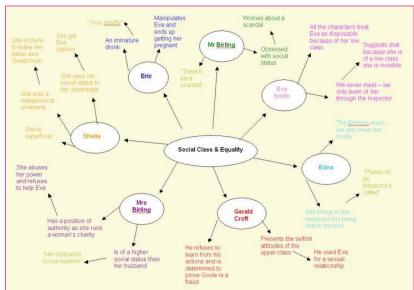


An example is the analogy of a gate, controlling what enters a property, to a cell membrane that selectively allows different substances to pass through it.

Another example is the greenhouse effect being compared to an actual greenhouse, both trapping heat from the sun. In this case the term 'greenhouse effect' is an analogy!



(7) Concept Maps - A visual method to summarise the information you are learning and revising is to use a concept map. You need to write down the concepts and knowledge you have learned and connect them using arrows and comments to describe how they relate to each other. Connecting different concepts together helps strengthen your understanding and memory of what you are learning. Effective concept maps need to be created by you and not copied – they are a visual representation of what you understand.





You can also present information learn in timelines, diagrams and mind maps. These can all be effective methods for making notes, to encode your learning. They can also be used for retrieval practice as you try to recreate the resources from memory

Retrieval - Brain Dumps and Revision Clocks

Retrieval practice is simply trying to recall information from memory, without the aid of notes or textbooks. This revision strategy is effective because it strengthens memory retention, enhances long-term learning, and improves your ability to then remember this knowledge during exams. By repeatedly retrieving information, you reinforce neural connections associated with that knowledge, making it easier to recall in the future. Retrieval practice also helps identify gaps in understanding and promotes deeper comprehension of the material through active engagement. The follow techniques allow you to use retrieval practice.

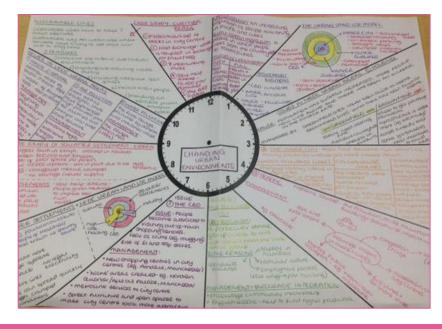
(8) Brain dumps involve recalling writing down all and the information you remember about a topic or subject on blank piece of paper without referring to any resources. This revision strategy is effective because it helps activate your memory, identify gaps in your reinforce key knowledge, and concepts. By forcing yourself to retrieve and write information from memory, brain dumps enhance memory retention and improve recall during exams. Additionally, reviewing your brain dump allows you to prioritise areas for further study.

Global Warming

Top tip: Write down everything you can remember in one colour, then check your revision notes and finish your brain dump in a different colour. You now have a visual record of what you could remember and what you now need to revise.

(9) Revision clocks

Revision clocks are essentially a structured brain dump. The sheet has a clock design, split into 12 segments, representing hour. You have five one minutes to complete each segment, or two Pomodoros to complete the whole clock. The 12 segments can have subtitles completed beforehand or for an advanced method you must memorise the names of the 12 sub-titles to complete.



Retrieval – Flash Cards and the Leitner Method

(10) Flash Cards

Flashcards are an effective revision technique because they promote active recall, enhancing memory retention and retrieval. By condensing key information onto small cards, you can quickly test your knowledge. Reviewing the flashcards at increasing intervals over time strengthens your memory and also informs about which questions you need to revise more.

Flash cards work best when there is a single question on one side and an answer on the other. Read the question and say aloud the answer to yourself or someone else who is testing you.

The questions don't just have to lead to short, factual answers. Questions can be included that require extended responses and explanations.



The Leitner Method

The Leitner method is a spaced repetition technique for effective learning using flashcards. In this method, flashcards are divided into three piles or boxes. You start by answering all flashcards and then sorting them based on how you answered each question:

- **Set 1** questions you answered incorrectly
- **Set 2** questions you answered partially correctly or a prompt was needed
- Set 3 questions you answered correctly without a prompt



After sorting the cards into three piles you then put all the cards together with Set 1 on the top and Set 3 on the bottom. The next time you test yourself start with Set 1, then Set 2 and finally Set 3. If you answer a question correctly you promote it from Set 1 to 2, or Set 2 to 3. If you get it wrong you drop it down from Set 3 to 2 and Set 2 to 1. This systematic approach ensures that you spend more time on challenging material while reviewing the content you already know less frequently,



Memory Techniques

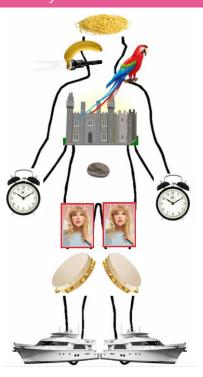
(11) The Body Peg Memory System

The Body Peg Memory System is a mnemonic technique that uses your body parts as 'pegs' to help remember lists of words, items or information. First, you assign specific body parts as 'pegs' to link knowledge to.

Next, you need to create strong, vivid mental images linking what you are trying to learn to a part of the body. In the example at the side, if you have to remember 'parrot', link it to 6. shoulder and imagine a parrot flying and landing on your shoulder, squawking at the same time. You can add sounds, colour and detail to make the imagery as strong as possible.

In this example ten words have been linked to ten parts of the body.

- 1. Feet
- 2. Knees
- 3. Thighs
- 4. Belly button
- 5. Stomach
- 6. Shoulders
- 7. Mouth
- 8. Nose
- 9. Hair
- 10. Hands
- 1. Yacht
- 2. Tambourine
- 3. Magazine
- 4. Pebble
- 5. Castle
- 6. Parrot
- 7. Torch
- 8. Banana
- 9. Spaghetti
- 10. Clock



Once you have made the ten links you need to practice them over and over again, but you will find you have a good retrieval strength (this means you will recall them quickly) and you have a strong storage strength (this means you will remember them for a long time).

(12) Chunking

Chunking is important when revising. Instead of trying to remember lots of small, individual bits of information separately, you should group related knowledge together into bigger 'chunks'. You need to think of how to link this information together to make it a single item of knowledge.

Putting information into 'chunks' of three is effective. For example, in Geography you might try to remember three impacts of climate change or in Biology four types of pathogens. You need to read through your revision notes and decide on what knowledge you want to chunk together.

(13) The Story Method

To use the Story Method you need to make the 10 words, items or information as memorable as possible. In this method you need creative thinking to make a story linking the words in order. The story can be imaginative and surreal.

"I was relaxing on a yacht, made of tambourines, reading a magazine, when all of a sudden a pebble hit me. It came from a castle in the sea. I looked up and saw a parrot laughing. It was dark so I shone a torch at the parrot and this time he dropped a banana on my head. I captured the parrot and tied it up with spaghetti to a large clock.

Revision Websites

The following websites can be used for revision. These websites offer excellent resources for quizzing and retrieval practice. It is important that you make sure you are revising content that is on the specification for your GCSE subjects.

Quizlet - https://quizlet.com/

Provides a platform for creating and sharing flashcards, quizzes, and study games across various subjects, helping you with memorisation and review.

BBC Bitesize - https://www.bbc.co.uk/bitesize/levels/z98jmp3

Provides educational resources, revision guides, and interactive activities for most GCSE courses – make sure to choose the correct exam board for your subject.

Quizizz - https://quizizz.com/

Offers customizable quizzes and learning activities – search for quizzes that match your GCSE specification

Seneca Learning - https://senecalearning.com/en-GB/

Provides interactive revision resources and quizzes for GCSE subjects, with adaptive learning features and progress tracking.

You also have access to the following subject-specific revision and learning websites

Maths

- On Maths www.onmaths.com
- Corbett Maths www.corbettmaths.com/100days
- Sparx Maths <u>www.sparxmaths.uk</u>

MFL

- Language Nut https://www.languagenut.com/en-gb/
- Language Gym https://www.language-gym.com/
- Active Learn <u>www.pearsonactivelearn.com</u>

Username: normal 5 log on digits with -AL on the end

Password: FHSGpupil20

Science - Educake - www.educake.co.uk

Geography - Seneca Learning (AQA Geography)

https://app.senecalearning.com/classroom/course/5a073d30-21f8-11e8-8c19-619061cc7240



B – Wellbeing for Exams

Coping with exam pressure – a guide for students

(1) How to feel more confident about exams

What are negative beliefs?

Many people with high exam anxiety can't stop worrying about failing or the consequences of failing. For instance, 'If I fail my GCSEs my whole life will be a failure'. These types of beliefs focus on what you can't do rather than what you can.

Replacing negative beliefs with positive beliefs

Find a positive, realistic belief that can replace the negative belief. For instance, if your negative belief is 'I am rubbish at maths' a positive, realistic alternative could be: 'Even if I will never be the best at maths, I will do better if I have a revision plan and stick to it'.

The key things to remember are that:

- if you suffer from anxiety, replacing negative beliefs can help
- some people find it helpful to keep a record of their beliefs
- you can become a more confident person with a 'can do' attitude



(2) How to plan your revision

For many students, starting revision is the biggest hurdle to overcome.

- **1. Create a plan:** break down everything you need to revise into small topics and just revise one topic at a time. By creating a plan you are taking control
- **2. Set targets:** identify when you are going to revise each topic. Give yourself a time limit for when to complete each topic
- **3. Check progress:** check your progress and set yourself a new time limit if necessary. Once you've met a target, set yourself a new one

The key things to remember are that:

- targets should be achievable and manageable
- targets must be short-term and include a time-limit
- review your targets, and when complete, set new ones
- it is important to test yourself to see if your revision is effective

(3) Stress is not necessarily a bad thing

People react to stress in different ways.

Stress can be a great motivator for some students, giving them the 'get up and go' that they need to succeed. Other students are indifferent to stress; they can float along without getting affected by stress in a good or bad way. Stress can be a bad thing for some students, when exam pressures become overwhelming.

The key things to remember are that:

- stress is nothing to be scared of
- anxiety is not inevitable
- you can learn how to cope more effectively

(4) The signs of high exam anxiety



Cognitive signs (thoughts)

- going blank in an exam
- difficulty concentrating
- negative thoughts about past performance or consequences of failure

Affective signs (emotions)

- feeling excessive tension
- feeling panic
- feeling overwhelmed
- feeling not in control

Physical signs

- dizzy or faint
- sweating
- fast heartbeat
- tight churning stomach
- jelly or wobbly legs

The key things to remember are that:

- most people experience some of these signs during an exam
- high exam anxiety is when you experience them most of the time
- you can learn to control your physical reactions to anxiety

(5) How to control physical reactions to anxiety

Deep breathing

When you become anxious your breathing becomes shallow and fast. Breathing slowly and deeply will help you calm down and feel in control.

How do I do it?

- 1. Sit comfortably with a straight back.
- Place your left hand on your chest, and right hand below it, on your diaphragm.
- 3. Inhale deeply through your nose for 5 seconds.
- 4. Hold your breath for 2 seconds.
- 5. Exhale slowly through your mouth.
- 6. Feel the expansion in your diaphragm.
- 7. Repeat for 1 or 2 minutes until you feel calm.

The key things to remember are that:

- you can learn to control anxiety with deep breathing
- many people find it easier to learn with an instructor
- yoga or mindfulness classes can also be helpful













Did you know that sleeping well is just as important for our health as eating a good diet and being active? We all have periods when we find it difficult to sleep, and when this happens occasionally we don't need to worry too much. But long-term sleep issues can have an effect on our mental and physical health. So let's make sure you're getting enough, and find out some easy ways to make the most of your snoozing...



Recover and prepare

Sleep helps our bodies and our minds to recover from the day and prepare for tomorrow. Too little sleep and those tomorrows will be tougher.



Sleep promotes a healthy mind

Scientists have found that there's a strong relationship between getting enough sleep and feeling well and happy. Not getting enough sleep can cause low mood and even make depression and anxiety worse.



Focus

Scientists have shown that having a good sleep will help you concentrate during the day and also helps your brain to organise and store the information you have learned during the day. Clever.

How much sleep do you need?

The amount of sleep you need changes as you get older. For example, The <u>Sleep</u> <u>Council</u> recommend 10-11 hours of sleep a night for 7-12 year olds and **8-9 hours of sleep for 12-18 year olds.**

But the amount of sleep we need is a very personal thing. Teenagers often find they feel tired and may need more sleep as they go through puberty and into adolescence. This is probably because of all the hormonal and physical changes to both the body and the brain.

They key question to ask yourself is 'how do I feel during the day?' If you feel well rested and alert then you're probably getting enough sleep. Or if you often feel tired, sleepy and lacking in energy it might be that too little sleep is to blame. If that's the case, it may be worth seeing if the tips below can help you improve your sleep and how you feel during the day.

Worried you're not getting enough sleep?

Everyone has the odd night here and there where they don't sleep well, or when they find themselves struggling to drift off. But if you're regularly not sleeping well (most nights) for a long period of time (more than two weeks), you're struggling to get up in the morning and feeling tired during the day as a result, then it's time to talk to someone about it. You should also think about seeing your GP to make sure that everything is OK and to see if they might be able to help put it right.

Sleep



Top tips for getting a better night's sleep

If you're struggling to make the most of your shuteye, these tips might be able to help:

Stick to a routine

Many of us like a lie-in at the weekend but your body likes routine. So try not to wake up too much later than normal and avoid staying up late at weekends where possible. Try not to nap during the day too, especially if you have trouble sleeping at night.



Watch what you eat and drink

Caffeine and sugary snacks can lead to restless nights. Avoid eating and drinking these troublesome treats later on in the day. P.S. Did you know that getting a good night's sleep can also help you keep your weight healthy?



Try to relax...

If you're worried about something it can make getting to sleep tricky. Try talking through any worries you have with somebody close to you. Or even write them down. It might help to do something relaxing in the evening. Mindfulness can also really help with sleep, or you could see if our MindMate relaxation recordings help you.



Sleep



Get active during the day

Being active during the day will help you be ready for a good night's sleep. However, avoid exercise in the two hours before bed as it can leave you wired and make it harder to fall asleep.



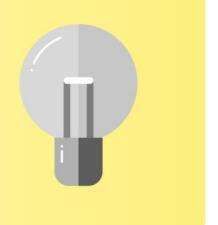
Make yourself a sleepy space

Make sure your bedroom is as dark and comfortable as possible. Let your parents/carers know if you are too hot/cold/uncomfortable.
Blackout blinds or an eye mask can help if you get woken by the light nights and mornings.



Turn it off

The light from your phone and other devices can make it hard for your brain to switch off at night. Try putting your phone into 'night mode' or avoiding it altogether for an hour leading up to bedtime.



101 Ways To Achieve Success



Healthy Habits for the Brain

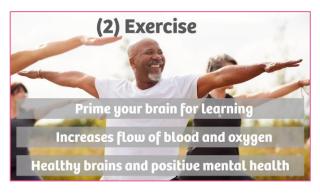
Neuroscientists have made the following recommendations to ensure our brains are healthy and in the best possible condition to become a successful learner.



To maximise our neuroplasticity, we need to keep using our brain, just like we need to keep exercising to stay fit. You need to keep challenging your brain - learning new knowledge - developing new skills - recalling information. The more you think the more you will learn, the more you learn the easier it is to think.



Our brains need the right fuel to function at their best. Omega-3 fatty acids, found in fish, nuts and seeds help in building and repairing brain cells. Fruits, vegetables and nuts, rich in antioxidants such as vitamin C and E and essential nutrients like B vitamins, zinc and magnesium, support us to have healthy brains. A well-balanced diet can provide the essential building blocks for our brains.



Exercise is fantastic for your physical health and studies show that exercise can prime your brain for learning. Physical activity increases the flow of blood and oxygen to the brain, promotes the growth of new neurons and strengthens neural connections. Aerobic exercise benefits cognitive function, how well the brain works, and your memory.



The most important activity that has a positive impact on our brains, mental health and ability to learn is sleep! Good quality sleep is crucial for a healthy brain and to be a successful learner. During sleep, the brain continues to strengthen neural connections - new neurons are created and damaged ones are repaired. Sleep helps us store newly acquired information and builds memories.

Four questions for further reflection

How can you 'use it or lose it' to keep your brain in the best possible condition?

What improvements could be made to your diet?

How can you increase the amount of exercise that you complete?

How much sleep do you typically get and what improvements can be made?



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