Peebles High School

STUDY STRATEGIES

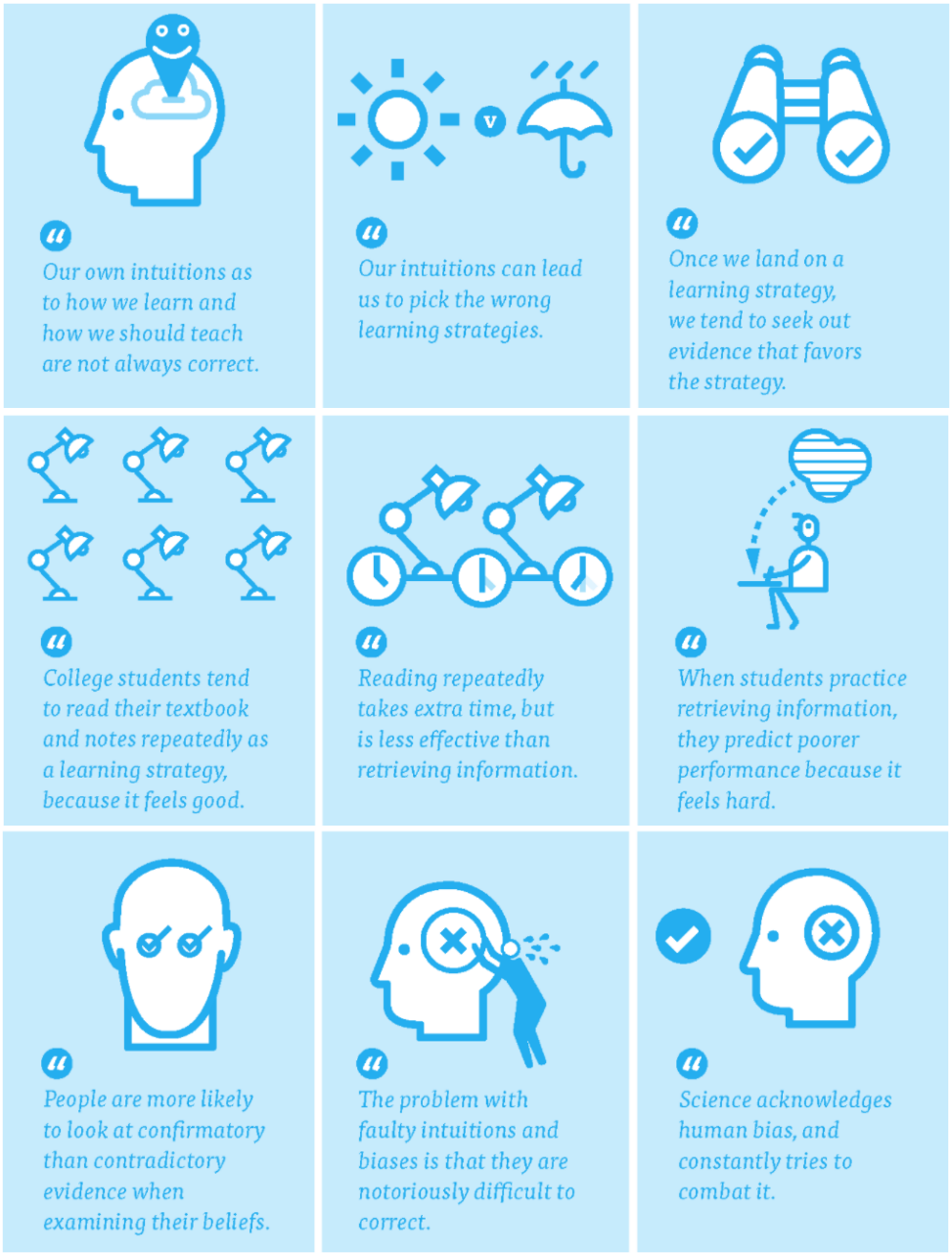
Effective Study Strategies - A guide for students and parents

A guide to this guide

This guide has been made using resources from the Learning Scientists website.

It explains how to study using six strategies that are grounded in cognitive psychological research. It aims to equip students and parents with an understanding of how we learn and to establish a culture of effective study at school and at home to maximise the potential of our young people.

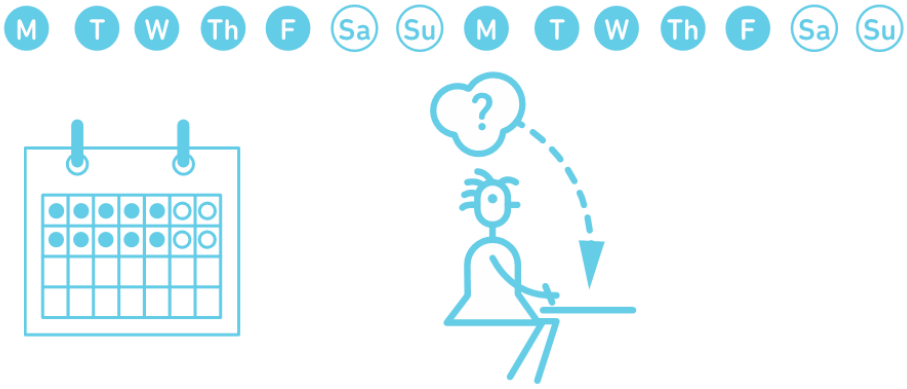
It also gives general advice on wellbeing, motivation, how to avoid distractions, the importance of sleep and getting ready overall for the exam.



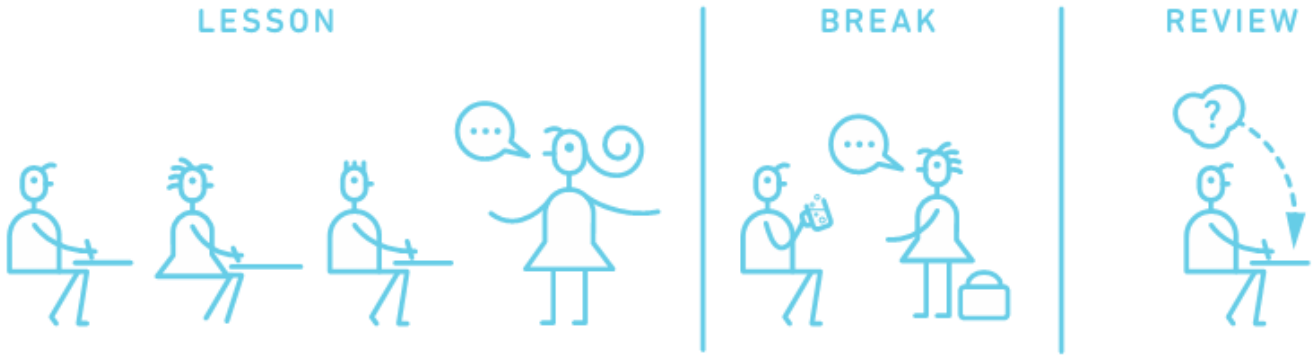
SPACED PRACTICE 1

How to do it

Start planning early for exams, and set aside a little bit of time every day. Five hours spread 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 you go back and study important older information to keep it fresh.

SPACED PRACTICE 2

Hold on...

When you sit down to study, make sure you are using effective study strategies rather than just re-reading your class notes.

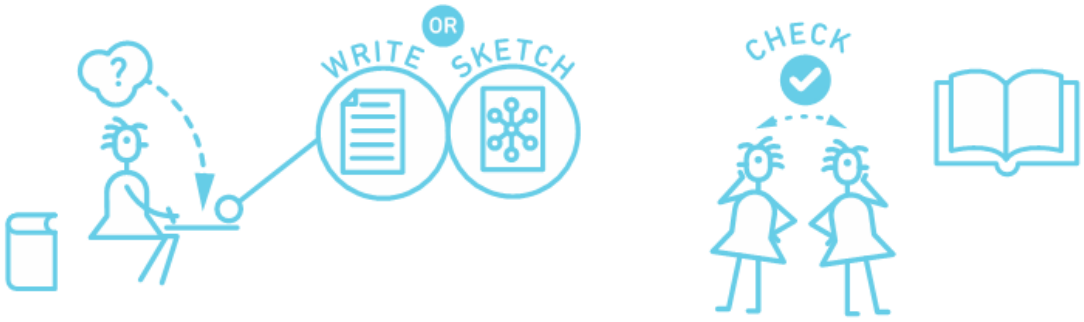
This may seem difficult and you may forget some information from day to day, but this is actually a good thing. This forces you to retrieve information from memory.

Create small spaces (a few days) and do a little bit over time, so that it adds up.

RETRIEVAL PRACTICE 1

How to do it

Put away your class materials and write or sketch everything you know about the topic. 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 based on your Learning Intentions and trading them with a friend who has done the same.

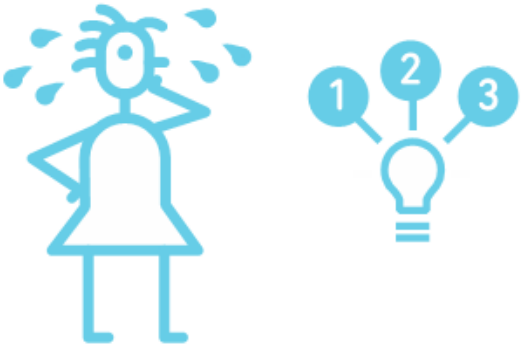
You can also make flashcards. Just make sure you practice recalling the information on them, and go beyond definitions by thinking of links between ideas.

RETRIEVAL PRACTICE 2

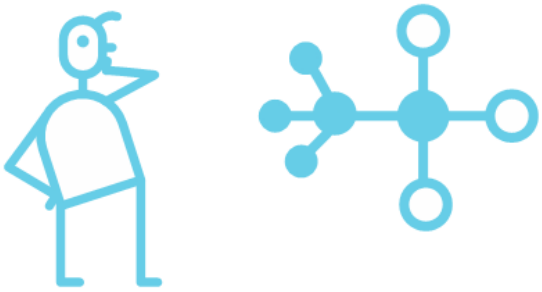
Hold on...

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

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



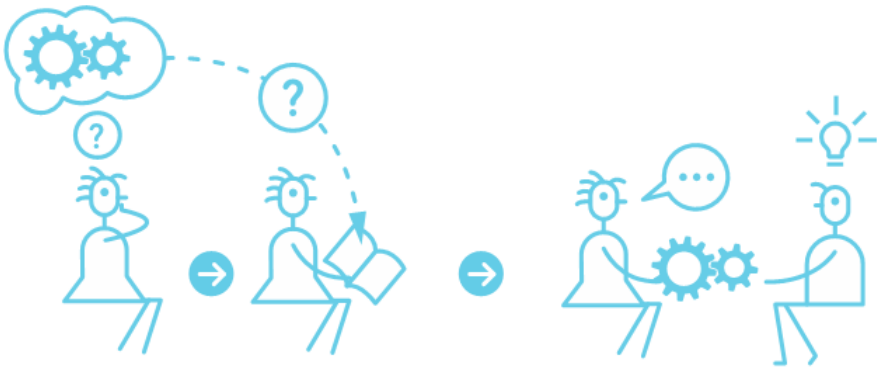
Don't only recall words and definitions. Make sure to recall main ideas, how things are related or different from one another, and new examples.



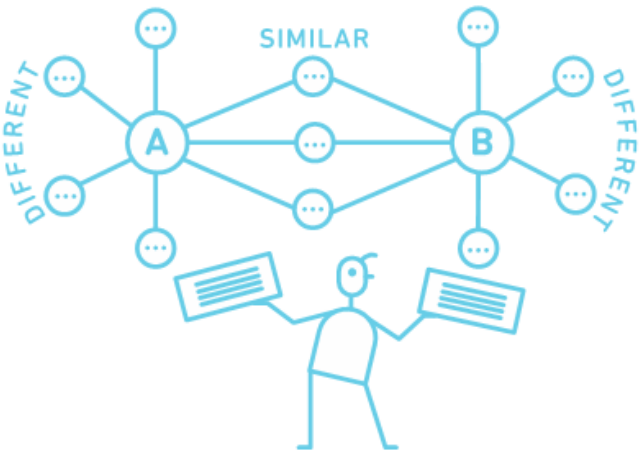
ELABORATION 1

How to do it

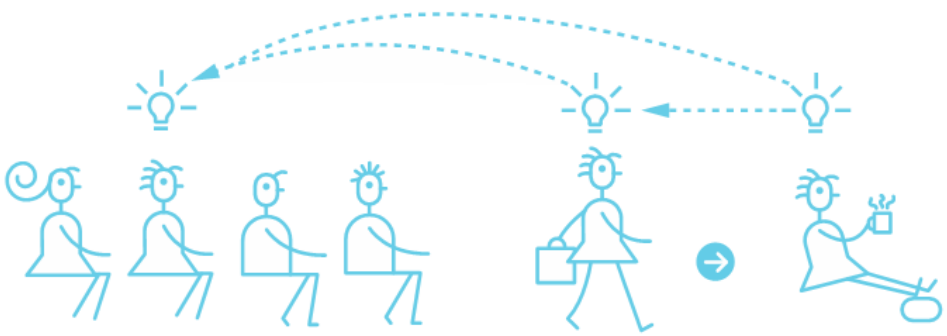
Ask yourself questions while you are studying about how things work and why, and then find the answers in your class materials and discuss them with you classmates.



As you elaborate, make connections between different ideas to explain how they work together. Take two ideas and think of ways in which they are similar and different.



Describe how the ideas you are studying apply to your own experiences or memories. As you go through the day, make connections to the ideas you are learning in class.



ELABORATION 2

Hold on...

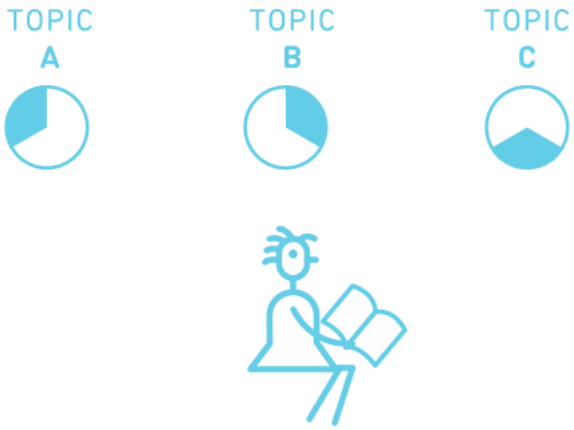
Make sure the way you are explaining and describing an idea is accurate. Don't overextend the elaborations, and always check your class materials or ask your teacher.

Work your way up so that you can describe and explain without looking at your class materials.

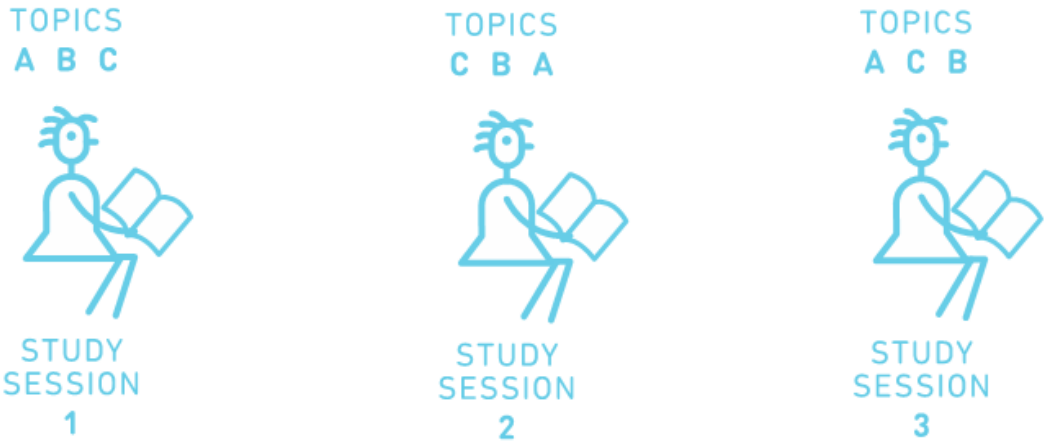
INTERLEAVING 1

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.

INTERLEAVING 2

Hold on...

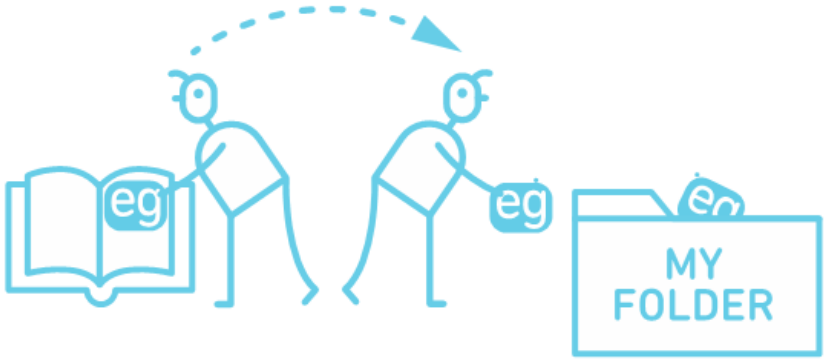
While it's good to switch between ideas, don't switch too often, or spend too little time on any one idea; you need to make sure you understand them.

Interleaving will feel harder than studying the same thing for a long time. But don't worry as this is actually helpful to your learning.

CONCRETE EXAMPLES 1

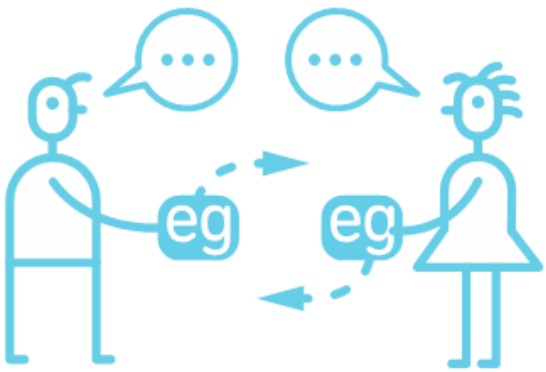
How to do it

Collect examples your teacher has used, and look in your class materials for as many examples as you can find.



Make the link between the idea you are studying and each example, so that you understand how the example applies to the idea.

Share examples with friends, and explain them to each other for added benefits.



CONCRETE EXAMPLES 2

Hold on...

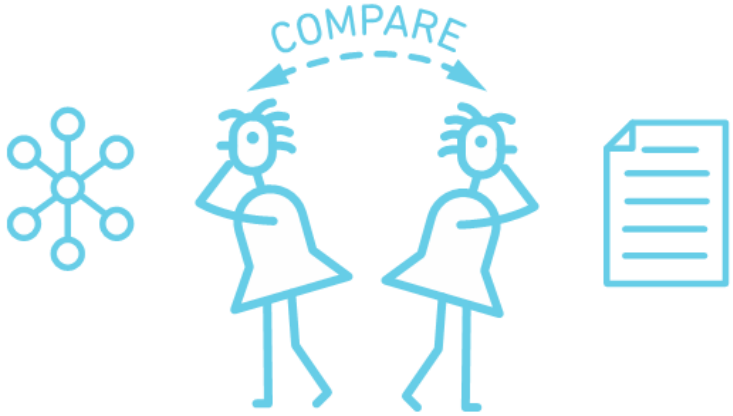
You may find examples on the internet that are not used appropriately. Make sure your examples are correct - check with your teacher.

Ultimately, creating your own relevant examples will be the most helpful for learning.

DUAL CODING 1

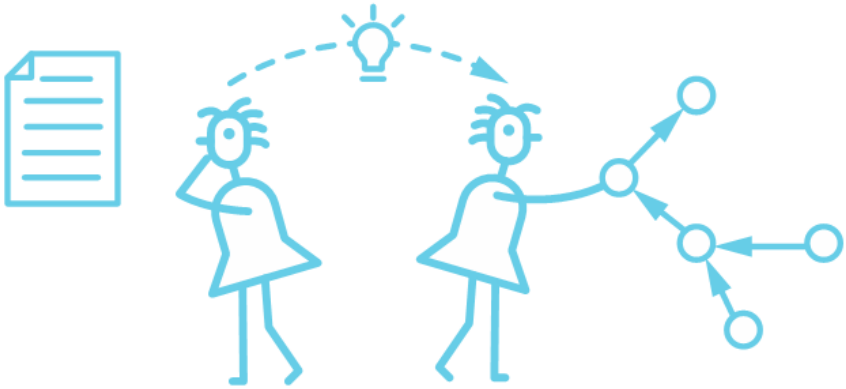
How to do it

Look at your class materials and find visuals. Look over the visuals and compare the words.



Look at the visuals and explain in your own words what they mean.

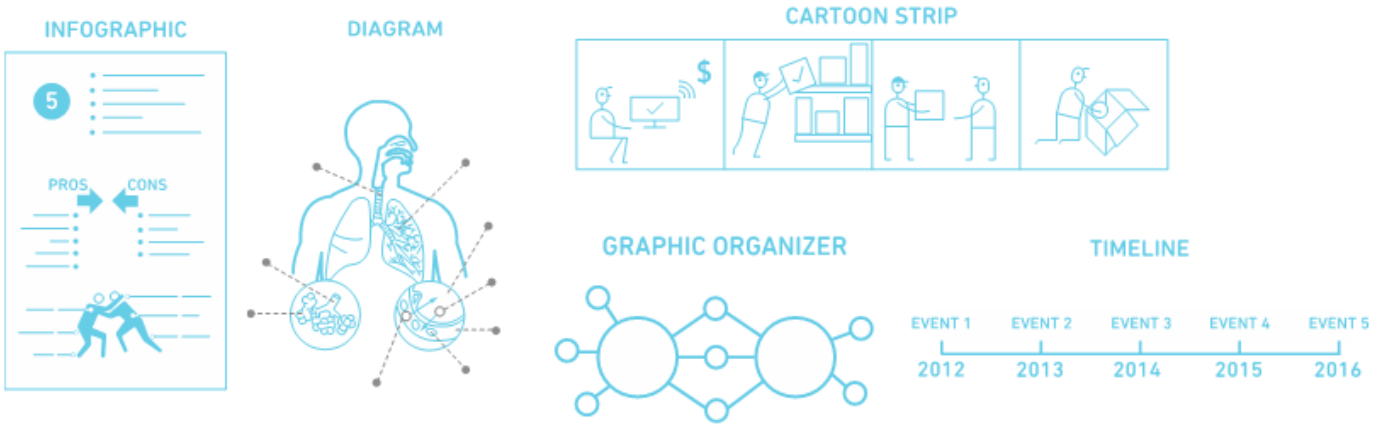
Take information that you are trying to learn and draw visuals to go along with it.



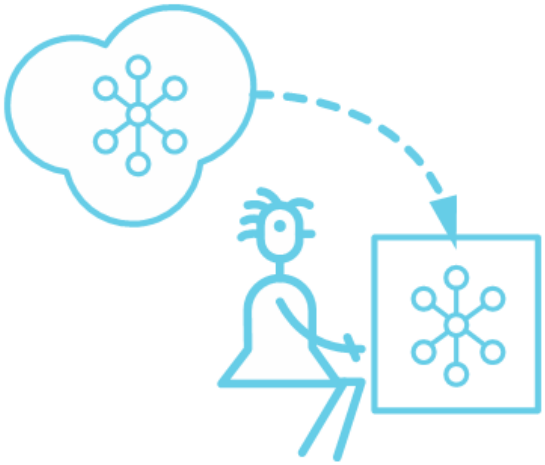
DUAL CODING 2

Hold on...

Try to come up with different ways to represent the information visually, for example an infographic, a timeline, a cartoon strip, a graphic organiser or a diagram of parts that work together.



Work your way up to drawing what you know from memory.



WELLBEING

PHYSICAL HEALTH

SOCIAL HEALTH

EMOTIONAL HEALTH

Exams can be stressful. You want to do well; you want to make yourself and your family proud; you need these qualifications for the next stage of your life.

To perform at your best, you need to look after all aspects of your health.

Exercising, eating well and getting enough sleep will help with your physical health.

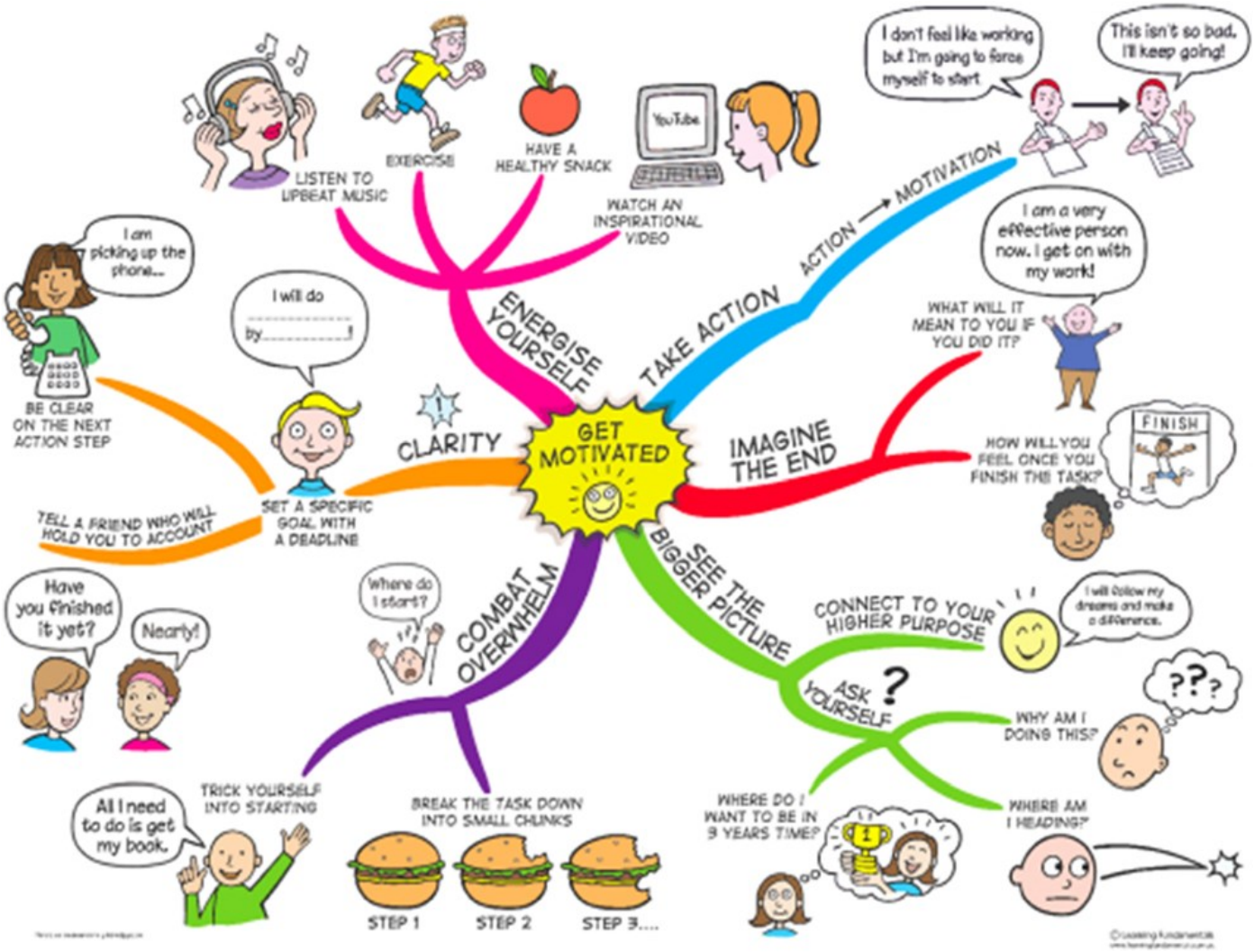
Building in time to your study plan to do the things you enjoy and spend time with friends and family will help with your social health.

Striking a balance between work and play, sharing your concerns if you have any and keeping the big picture in mind will help with your emotional health. Being as well prepared as you can be for your exams is the best way to avoid stress and anxiety, and gives you the best chance of getting the grades you need.

MOTIVATION

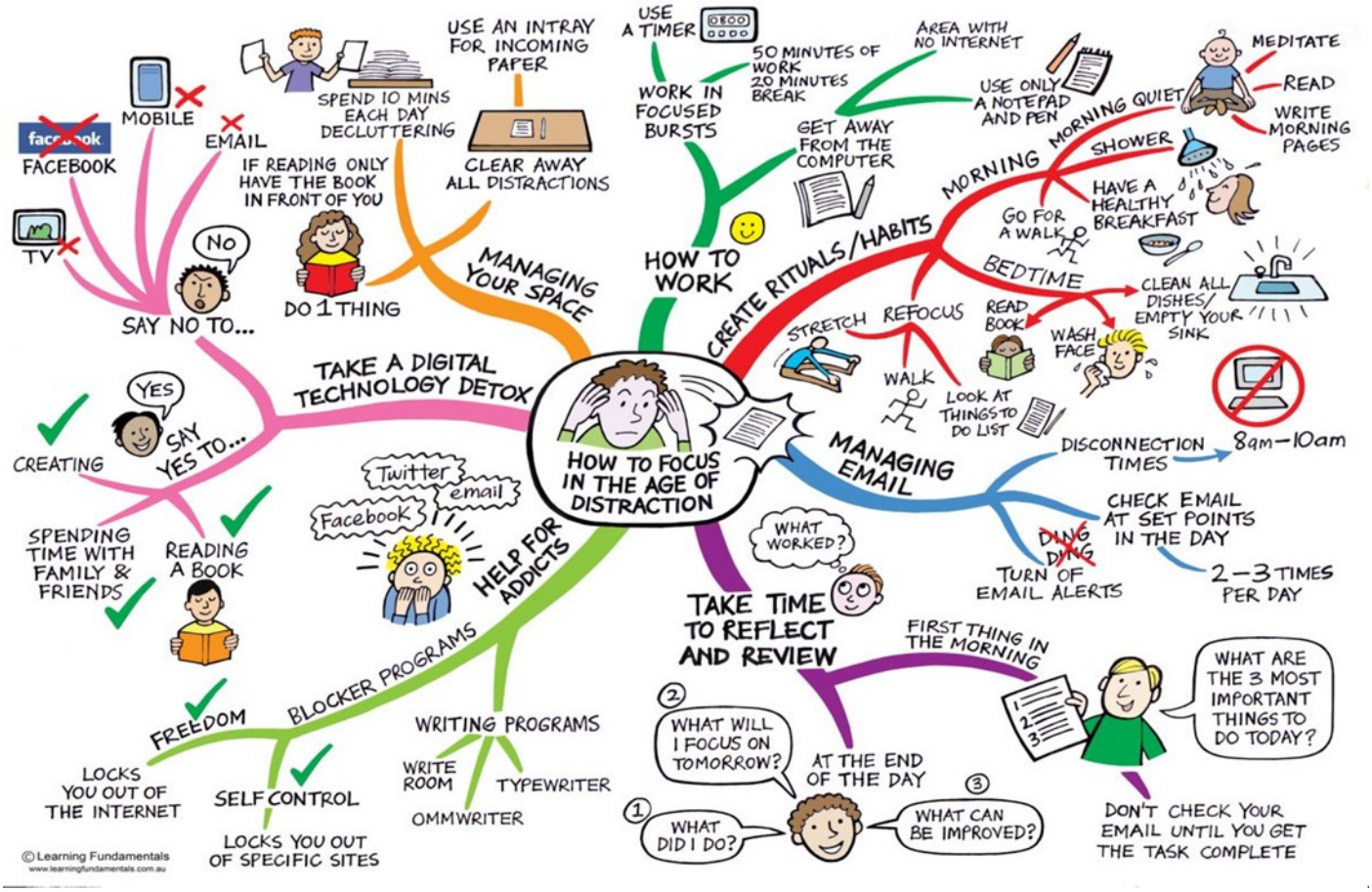
Procrastination is the avoidance of doing a task which needs to be accomplished. This can lead to feelings of guilt, inadequacy, depression and self-doubt among students. Motivating yourself to study is sometimes really difficult, especially when there are so many more fun things to do!

It can be really helpful to your motivation levels if you can keep in mind what it is you want to achieve. For example, I need 2As and a B to get into my course at Uni. Or I must pass four National 4s to start my plumbing apprenticeship. So, what do you want to achieve from your exams? Use the questions in the green branch of the following "Get Motivated" mind map to help you.



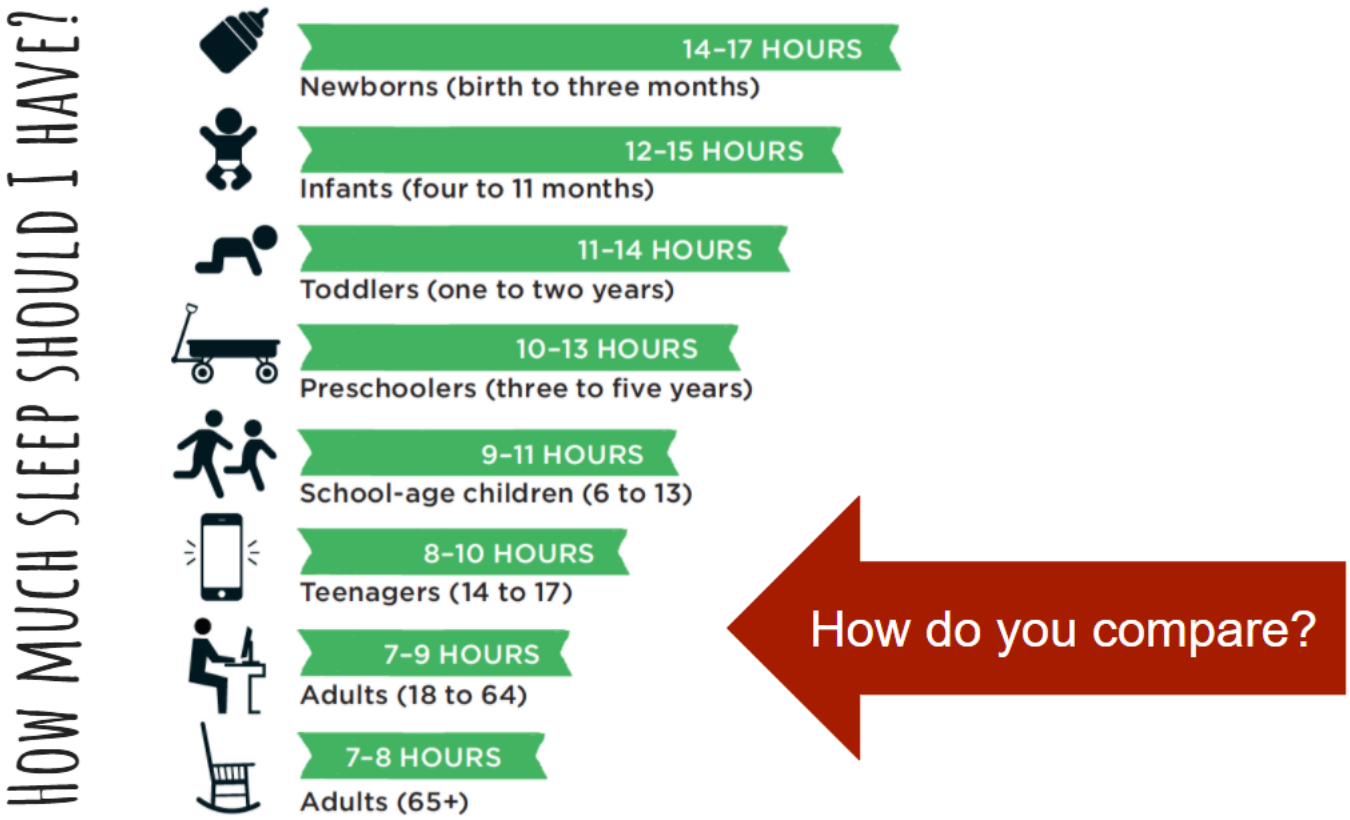
AVOID DISTRACTIONS

Once you have set aside time to do some work, you need to make sure you're not distracted in any way. Your phone, television and your tablet/computer are the main ways in which you can be distracted. GET RID OF THEM! Looking at your phone for 5-10 minutes can be your reward for doing 45 minutes of revision.



GET ENOUGH SLEEP

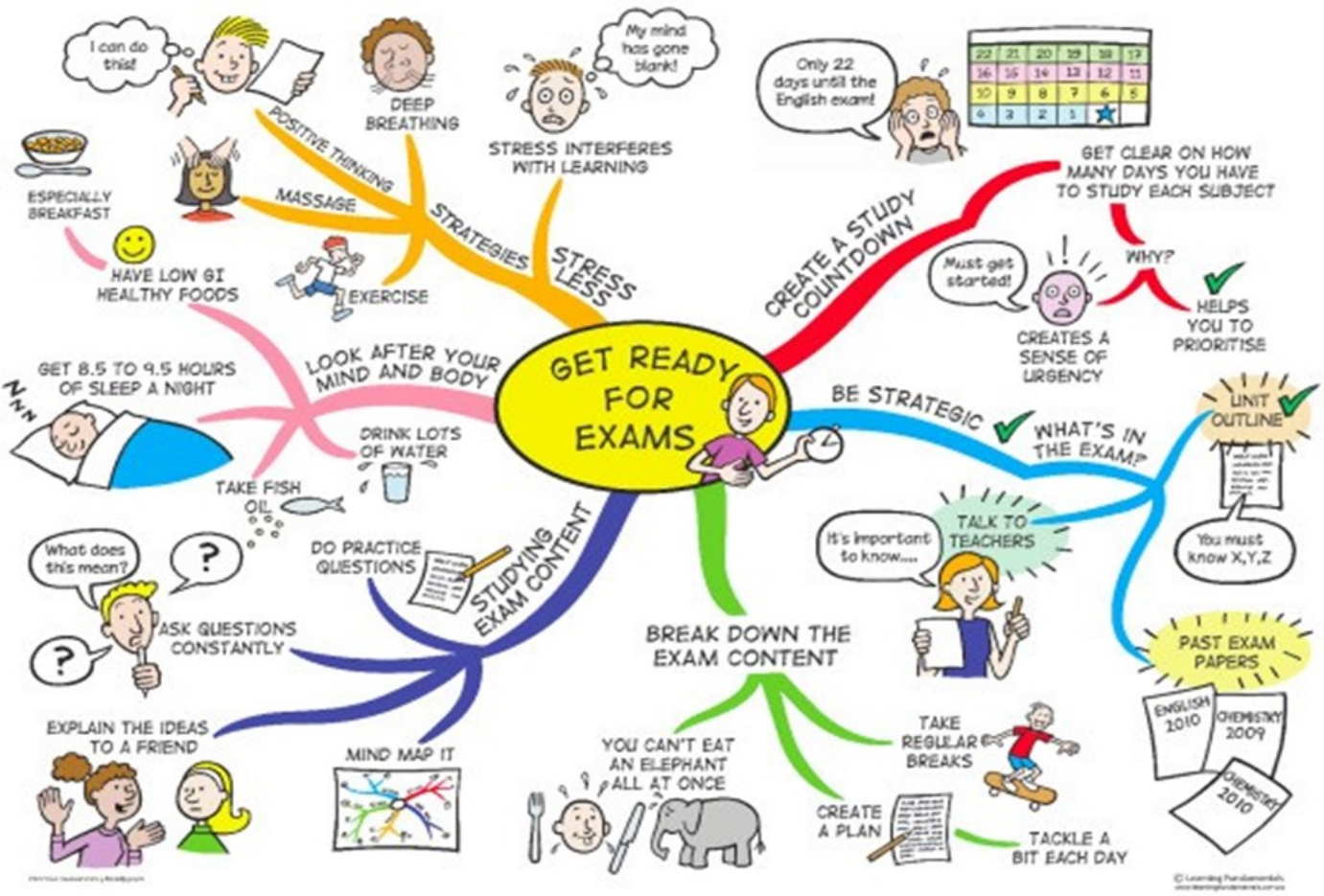
A good night's sleep is essential for learning new information and for remembering it later, so sleeping well should be part of your preparation for success.



Sleep is your life-support system and Mother Nature's best effort yet at immortality, says sleep scientist Matt Walker. In this deep dive into the science of slumber, Walker shares the wonderfully good things that happen when you get sleep -- and the alarmingly bad things that happen when you don't, for both your brain and body. Learn more about sleep's impact on your learning, memory, immune system and even your genetic code -- as well as some helpful tips for getting some shut-eye.

TED2019 Sleep is your Superpower

IN SUMMARY...


GET READY FOR EXAMS
STRESS LESS
STRATEGIES
POSITIVE THINKING
DEEP BREATHING
MASSAGE
EXERCISE
STRESS INTERFERES WITH LEARNING
I can do this!
My mind has gone blank!
LOOK AFTER YOUR MIND AND BODY
ESPECIALLY BREAKFAST
HAVE LOW GI HEALTHY FOODS
GET 8.5 TO 9.5 HOURS OF SLEEP A NIGHT
DRINK LOTS OF WATER
TAKE FISH OIL
STUDYING EXAM CONTENT
DO PRACTICE QUESTIONS
ASK QUESTIONS CONSTANTLY
What does this mean?
EXPLAIN THE IDEAS TO A FRIEND
MIND MAP IT
CREATE A STUDY COUNTDOWN
Only 22 days until the English exam!
GET CLEAR ON HOW MANY DAYS YOU HAVE TO STUDY EACH SUBJECT
Must get started!
WHY?
CREATES A SENSE OF URGENCY
HELPS YOU TO PRIORITISE
BE STRATEGIC
WHAT'S IN THE EXAM?
UNIT OUTLINE
You must know X,Y,Z
TALK TO TEACHERS
It's important to know....
PAST EXAM PAPERS
ENGLISH 2010
CHEMISTRY 2009
CHEMISTRY 2010
BREAK DOWN THE EXAM CONTENT
YOU CAN'T EAT AN ELEPHANT ALL AT ONCE
TAKE REGULAR BREAKS
CREATE A PLAN
TACKLE A BIT EACH DAY

Further resources

Spaced Practice

Spacing your study - http://www.learningscientists.org/blog/2016/7/21-1

Benjamin, A. S. & Tullis, J. (2010) What makes distributed practice effective? *Cognitive Psychology*, 61, 228-274

Retrieval Practice

Learning how to Learn: Practicing Retrieval - http://www.learningscientists.org/blog/2016/6/23-1

Concept Map: What does Retrieval Practice Do? - http://www.learningscientists.org/blog/2016/4/1-1

How to Study with Flashcards - http://www.learningscientists.org/blog/2016/2/20-1

Roediger, H.L., Putnam, A. L., & Smith, M. A. (2011) Ten benefits of testing and their applications to educational practice. In J. Mestre & B. Ross (Eds), *Psychology of learning and motivation: Cognition in Education* (pp. 1-36). Oxford: Elsevier.

Elaboration

Use elaborative interrogation -http://www.learningscientists.org/blog/2016/7/7-1

Elaborative and Active Learning - http://www.learningscientists.org/blog/2016/9/8-1

McDaniel, M. A. & Donnelly, C. M. (1996). Learning with anology and elaborative interrogation. *Journal of Educational Psychology*, 88, 508-519.

Wong, B. Y. L. (1985). Self-questioning instructional research: A review. *Review of Educational Research*, 55, 227-268.

Interleaving

Use interleaving - http://www.learningscientists.org/blog/2016/8/11-1

Interleaving in practice - http://www.learningscientists.org/blog/2016/3/28/weekly-digest-3

Rohrer, D. (2012). Interleaving helps students distinguish among similar concepts. *Educational Psychology Review*, 24, 355-367

Concrete Examples

Use concrete examples - http://www.learningscientists.org/blog/2016/8/25-1

Rawson, K. A., Thomas, R. C. & Jacoby, L. L. (2014). The power of examples: Illustrative examples enhance conceptual learning of declarative concepts. *Educational Psychology Review*, 27, 483-504

Dual Coding

Use dual coding - http://www.learningscientists.org/blog/2016/9/1-1 and http://www.learningscientists.org/blog/2016/5/12-1

Mayer, R. E. & Anderson, R. B. (1992). The instructive animation: Helping students build connections between words and pictures in multimedia learning. *Journal of Educational Psychology*, 4, 444-452.