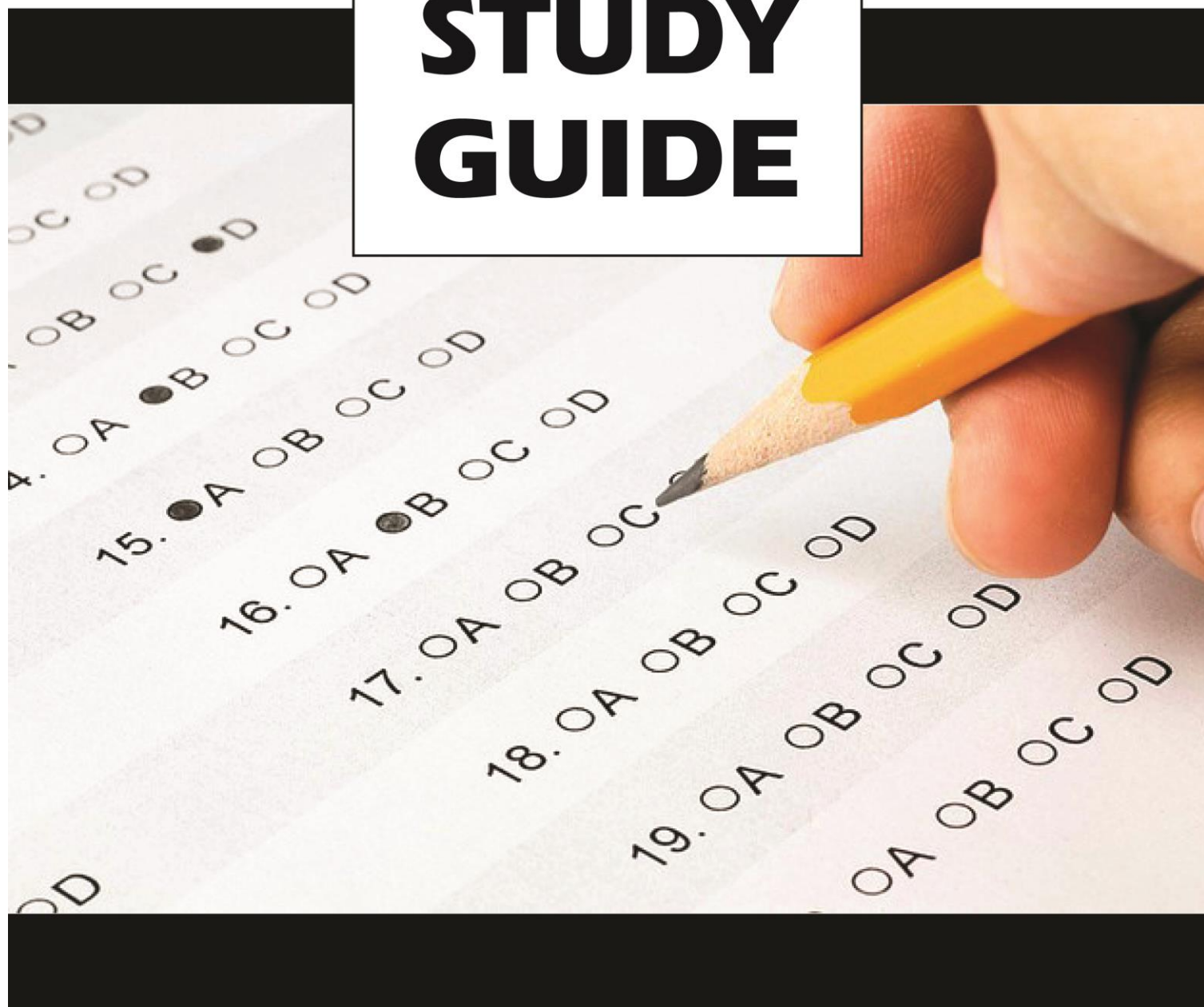




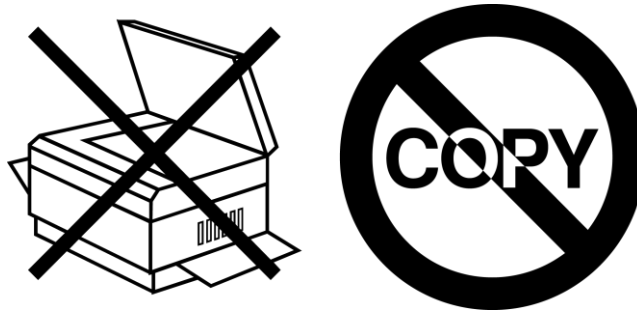
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EXA⁺M STUDY GUIDE



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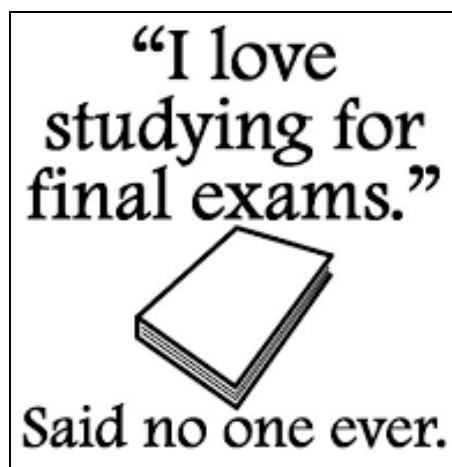
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THE HSC EXAM STUDY GUIDE



Examinations are a great source of stress for most students, but it doesn't need to be this way! With the right advice, a comprehensive set of notes and a solid revision program, students can significantly decrease stress levels, cut back on study time and maximise examination marks!

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Section 1: The Key Ingredients Required for Examination Success

Section 2: The Fastest and Most Effective Learning Technique

Section 3: Exam Revision Strategies

Section 4: How Should I Approach My Exam Study Sessions?

Section 5: Time-Saving Strategies

Section 6: Motivation and Procrastination

Section 7: Stress Management

Section 8: Brain Food

SECTION 1: THE KEY INGREDIENTS REQUIRED FOR EXAMINATION SUCCESS

Be the Best you can Be!

SUFFICIENT TIME



Students usually commence their exam preparations too late and run out of time to learn materials to examination standard, and to work through a sufficient number of examination papers before their exams.

Students aiming for the higher marks need to invest the appropriate time and effort into their exam preparations. How much time is ultimately required depends upon how frequently reviews have been undertaken, the difficulty of each subject and whether students possess a comprehensive set of notes from which to learn.

Those students who have regularly revised previously learned materials and have a comprehensive set of notes from which to learn should allocate:

- About **15 hours per term per subject** when preparing for their trial examinations. Those students who **do not** have a comprehensive set of notes from which to learn should allocate about **30 hours per term per subject**.
- An additional **40 hours per subject** when preparing for their HSC examinations.



Those students who **do not** have a comprehensive set of notes from which to learn **and/or** did not put in a solid study effort when preparing for their trial exams **and/or** obtained a score of less than 75% in any trial examination should allocate an additional **50 – 60 hours per subject** when preparing for their HSC examinations.

A CONSISTENT STUDY EFFORT

How much time should I commit to homework/personal study each night?

HSC students should be dedicating at least four weeknights and one day over the weekend for study purposes.

Weekday study periods should be in the order of 3-4 hours (2.5 hours for Year 11 students) and approximately 8 hours over the weekend (6 hours for Year 11 students).

i.e. Schedule between 20 and 24 hours per week for outside classroom study (Year 12) and at least 16 hours per week if you are in Year 11. Note that students may need to invest additional study hours in the weeks leading up to the exams.

What is considered as study?

- | | | |
|----------------------|-----------------------------------|--------------------------|
| ✓ Homework | ✓ Working through exam questions | ✓ Weekly tuition classes |
| ✓ Essays/assignments | ✓ Preparing for tests and exams | ✓ Lectures |
| ✓ Getting ahead | ✓ Learning materials off by heart | ✓ Private tuition |

A note to Year 12 students:

- Start exam preparations sooner rather than later.
- Put aside at least 25 hours per week for exam preparations once the majority of school based assessments have been completed.

A REALISTIC STUDY PLAN



- What is your ATAR goal?
- What will be required to achieve this ATAR goal?
- What tools and resources will I need?
- Are there any shortcuts I can take to help free up my time?

Step 1: Start exam preparations as soon as you can.

Step 2: Compile a comprehensive set of notes from which to learn.

Step 3: Commit knowledge to memory in a fast and effective manner.

Step 4: Engrain information into long-term memory.

Step 5: Design and implement an effective exam study timetable.

Step 6: Extend on and refine examination skills.

Step 7: Look for other ways to develop a further advantage over your state-wide peers.



THE CORRECT KNOWLEDGE



Although not regularly highlighted, it is not unusual to find questions in examination papers that have not been addressed to examination standard in many of the text books used by schools. The text books used at schools are not prescribed by the BOSTES; they simply form one of a series of recommended texts that students could employ/peruse in preparation for their examinations.

It is ultimately each student's and teacher's responsibility to ensure that every dot point listed in the study syllabus is addressed to examination standard – whether this information is present in a recommended text or not.

Suggestions:

- Carefully read through each study syllabus.
- Read the major text books being used across the state.
- Attend quality revision lectures that have been prepared and delivered by experienced HSC teachers and HSC exam markers.
- Work through as many past examinations papers as possible.

Those students aiming for the higher ATAR scores need to find the time to work through **AT LEAST** 15 examination papers and assessment reports per subject across the year.

A FAST AND EFFECTIVE LEARNING TECHNIQUE

Students need to use learning techniques that will not only save time, but enable them to learn materials in such a way, that they can answer all the different types of questions in the exams. The most effective techniques have been detailed in Section 2 of this booklet.

AN EFFECTIVE REVISION SCHEDULE

It is less time consuming to spend short periods reviewing materials while they are fresh in mind, rather than re-learning materials “from scratch” before examinations.

Those students wanting to achieve the **higher ATAR scores** should be aiming to work through materials at least twice before their examinations.

Please refer to Section 3 of this booklet to discover the most effective revision strategies.

EXAMINATION TRICKS & TRAPS

Students often sit their examinations **unaware** of **marker expectations** and do not provide well-structured answers that can be awarded maximum scores.

Many students also **lack sufficient knowledge** of the **common errors** made in examinations, as well as the various **tricks and traps** that are used to differentiate between the various academic abilities of students. And in light of the competition in this last stage of the HSC, even the smallest mistakes in the examinations can significantly reduce your ATAR scores.

Suggestions:

- Attend quality revision lectures that have been prepared and delivered by experienced HSC teachers and HSC exam markers.
- Work through as many past examinations papers as possible.

EXAMINATION STRATEGIES

Students aiming for the higher HSC marks need to implement strategies that will give them a strong advantage over their HSC peers.

Each year, the majority of students **DO NOT** approach their exam preparations in the correct manner and waste huge amounts of time on activities that have little impact on their examination marks.

As an example:

Learning by reading, highlighting, writing or rewriting notes are the most ineffective and time-consuming techniques to use when preparing for tests and exams. The fastest way to learn materials is via "elaborative rehearsal" – a technique that is at least 5 times faster and 5 times more effective than reading/highlighting/writing or rewriting notes. There are also other strategies that can be implemented to further decrease the time it takes to learn by a further 500%!

Contrary to popular belief, students should not work through examination papers by dividing the amount of time available by the number of marks for each paper. Students who adopt this approach run the huge risk of obtaining lower marks than otherwise possible. There are safer and more effective strategies that have been used by past students to improve examination results by more than 10%!

There are many other important strategies that many students are not aware of, and that could make a significant impact on their examination marks. We invite those students who are interested in learning how to "minimise study time and maximise scores", as well as discovering other strategies that will give them a strong edge in the exams to attend our "Mastering the Exams" lectures that are being held in the forthcoming weeks.



DIFFERENT PERSPECTIVES

THE DIFFERENT
NEW



Many students **incorrectly believe** that tutors or school teachers will meet all their examination preparation needs.

Students aiming for the higher scores need to gain exposure to more than one or two different perspectives, as is the case when students solely rely on their school teachers and/or tutors.

Hearing information from a **different perspective** is always beneficial, as each new explanation offers some new learning or a deeper understanding of examinable materials.

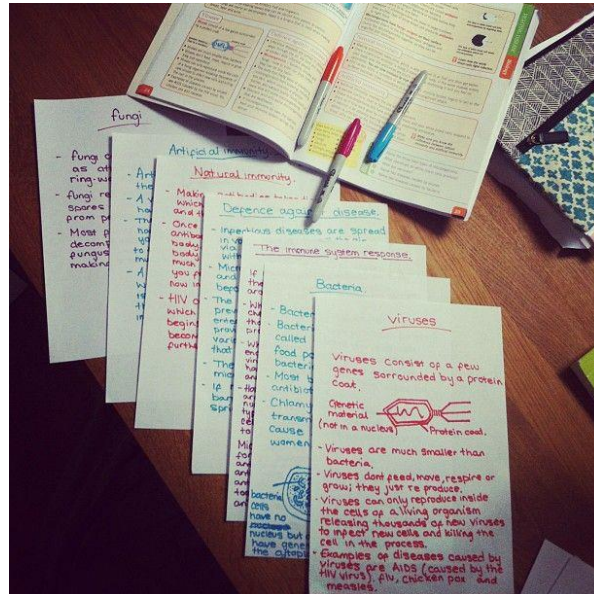
In many cases, hearing the information from a different source could be all that it takes to understand a difficult concept or topic!

Having materials presented again further ingrains knowledge into long-term memory, improving the quality of exam responses and how well information can be applied in unfamiliar applications.

Therefore, seek advice and different perspectives from as many sources as possible, **especially from official HSC exam markers.**

These individuals hold critical information that many classroom teachers are not aware of, and which can make a difference when aiming for the higher scores.

A COMPREHENSIVE SET OF NOTES FROM WHICH TO LEARN



The majority of students will commence their exam preparations by preparing a solid set of notes. They spend **countless hours** condensing information from all of the resources available to them, and as their learning progresses, spend considerable amounts of time re-writing materials to produce summaries, and even summaries of summaries!

Although it is important to have a comprehensive set of notes from which to learn, spending large amounts of time preparing such materials in the weeks leading up to the examinations is a **detrimental waste of time**.

The writing and reading process does not engage many parts of the brain, which means that it is easy to stray or think about unrelated matters – impairing how much information can be input into the brain.

The writing process is also quite time consuming, **cannibalising** how much time is available to commit knowledge to memory and to work through examination papers.

Note: It is the actual learning and practising of questions that has the biggest impact on examination marks – not writing and/or re-writing notes and summaries.

Furthermore, leaving tasks such as writing up notes/summaries until the weeks immediately before the exams commence will take much more time than if you had written these materials as you learned them i.e. when the knowledge was fresh in mind.

Note:

- Those students who feel strongly compelled to write notes should do so in **their own words**.
- Write notes progressively across the year and whilst materials are fresh in mind so as to save valuable study time (the better you know your work, the less time it will take to write up notes and summaries).

ACQUIRE DETAILED A+ STUDY NOTES AND SAVE 100'S OF HOURS OF STUDY TIME



At **TSFX**, every student who attends our lectures receives a **complete** and **generous** set of notes that covers all relevant theory in easy to follow, student friendly language. Our notes also include an **abundance of worked examples** with step-by-step instructions, as well as additional questions to work through at home.

As an example, students who attended our "Trial Exam Revision" lectures last year received the following materials:

Biology:	314 pages of notes and questions.
Chemistry:	387 pages of notes and questions.
Legal Studies:	211 pages of notes and questions (core topics)
Mathematics:	277 pages of notes and questions.
Maths Ext 1:	291 pages of notes and questions.

We issue **fully comprehensive notes** so that students can listen and learn during our lectures, rather than miss vital concepts whilst simultaneously attempting to write notes. Our comprehensive materials further **eliminate** the need for students to **waste valuable time** preparing notes, significantly **reducing** the levels of **stress and anxiety** in the lead up to the examinations.

Note:

To date, **NO OTHER** seminar/lecture provider has been able to match the quality and depth of materials that are issued to students who attend TSFX programs.

Those students who have not previously benefited from or are not aware of the quality of programs available across NSW are encouraged to contact lecture program providers **and view their program materials before enrolling** into any lecture programs. Extracts from our lecture programs may be viewed at **www.tsfx.com.au**.

TRIAL EXAM REVISION LECTURES

***SERIOUS* PROGRAMS FOR STUDENTS SEEKING *SERIOUS* RESULTS**

Well-structured revision programs, such as those offered by TSFX, can save you huge amounts of study time. During the course of our “Trial Exam Revision Lectures” we will:

- Take you through the exam preparation process in a simple step-by-step manner.
- Revise with official HSC exam markers.
- Extend on the materials covered at school to HSC examination standard.
- Work through key HSC exam questions & refine examination skills.
- Teach students how to set out answers so as to maximise examination marks.
- Detail the tricks and traps that could appear in the exams.
- Clarify common misconceptions that result in the loss of valuable marks in the exams.
- Expose students to the concepts and applications that are used to determine who will be awarded the higher marks.

Students seeking a time-efficient and powerful means of preparing for their end of year examinations can learn more about our “HSC Exam Revision Lectures” at www.tsfx.com.au.

Dates: Monday 8 July to Friday 19 July 2019
Venue: The University of Technology, Sydney

These programs will particularly benefit those students who wish to:

- Make a huge impact on exam preparations with **official HSC exam markers**.
- Commit knowledge to memory in the **shortest** amount of time.
- Cover the more **difficult concepts** within a subject (and not simply revise basic principles).
- Clarify **vital misconceptions** which result in the **loss of valuable marks** in the exams.
- Learn **effective** techniques that can be used to solve any problem, even those that students have never been exposed to.
- Gain additional exposure to **highly probable** examination questions.
- Develop and **extend** on problem-solving and application skills.
- Learn how to set out answers in accordance with the **marking schemes** used by **HSC** exam markers.
- Master examination **tricks/skills**, and learn how to avoid potential sources of errors.
- Obtain a **comprehensive set of A+ notes** that detail every key concept that may be examined.

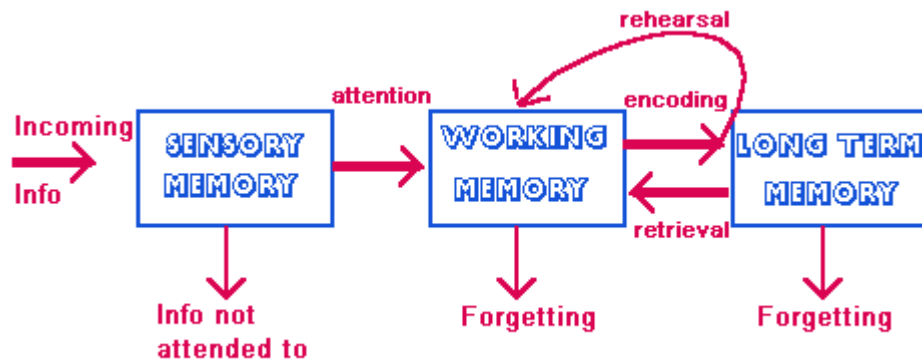


SECTION 2: THE FASTEST AND MOST EFFECTIVE LEARNING TECHNIQUE

MEMORY AND LEARNING

There are three main levels of memory in humans:

- Sensory memory
- Short-term (working) memory
- Long-term memory



SENSORY MEMORY

- Sensory memory is the first level of memory.
- This memory is a high capacity form of memory registration of visual data which fades away in less than a second. Sensory memory therefore allows us to take a 'snapshot' of our environment, and to store this information for a short period – just enough time for us to decide what the data is and whether it is important enough to be retained.
- Information in the sensory memory is easily and quickly forgotten.
- Unless an individual pays attention to the incoming information for about eight uninterrupted seconds to encode the stimulus into short-term memory, it will be lost.

SHORT-TERM MEMORY

- Information can be stored in short-term memory for up to 1 minute – the time it takes you to dial a phone number you just looked up or to compare the prices of several items in a store.
- Short-term memory acts as a scratch-pad for the temporary recall of the information being processed.

As an example, in order to understand this sentence you need to hold in your mind the beginning of the sentence as you read the rest of the words. This ability to retain such information arises due to the functioning of the short-term memory.

- Short-term memory has a limited capacity and can only hold a small amount of information (seven plus or minus two chunks or items of information) at one time.

This means that if we observe the sequence b-t-k-l-g-f-t-d-s-r, we would probably not remember all the characters, but only 7 or less.

- Unless information in the short-term memory is correctly encoded and rehearsed, it is easily and quickly forgotten.

LEARNING IMPLICATIONS

- Keep the number of points you are trying to commit to memory to 4 or 5 at a time.
- Use “chunking” when learning larger numbers of items or points.

“Chunking” is the process where we decrease the number of items we are holding in memory by increasing the size of each item, making it possible to remember long lists or items.

For example, by chunking the letters b-t-k-l-g-f-t-d-s-r to b-t, k-l, g-f-t, and d-s-r and representing these chunks with the words “*boat-keel-gift-desire*”, we would most likely have no difficulty in remembering them all.

By grouping or chunking the 10 letters into 4 words or pieces of information, we were able to retain the letters in our short-term memory.

LONG-TERM MEMORY

Provided that the right actions are implemented, information stored in short-term memory can be transferred to long-term memory after a few seconds.

Long-term memory is intended for storage of information over a long time and its capacity is very large.

Unlike the other memory types:

- Information stored in long-term memory is more resistant to decay and/or forgetting.
- Items in the long-term memory are richly interconnected. When new information is added to the long-term memory, it is associated with existing information that bears a relationship with it.

LEARNING IMPLICATIONS

- Read through all the major headings and subheadings so that information can be subconsciously linked as it is being committed to memory.
- Use a learning technique that forces you to link what you are learning with what you already know. This requires a process called “elaborative rehearsal”.

COMMITTING KNOWLEDGE TO MEMORY

The commitment of information to memory involves four key steps:

- Attention
- Encoding
- Storage
- Retrieval

STEP 1: ATTENTION

The first step in memory is attention, which selectively determines what information will get through for further processing and learning. This process requires that you remove distracting stimuli and focus on the task at hand. Distractions impair the learning process and reduces how much information can be input into memory per unit time.

SUGGESTIONS

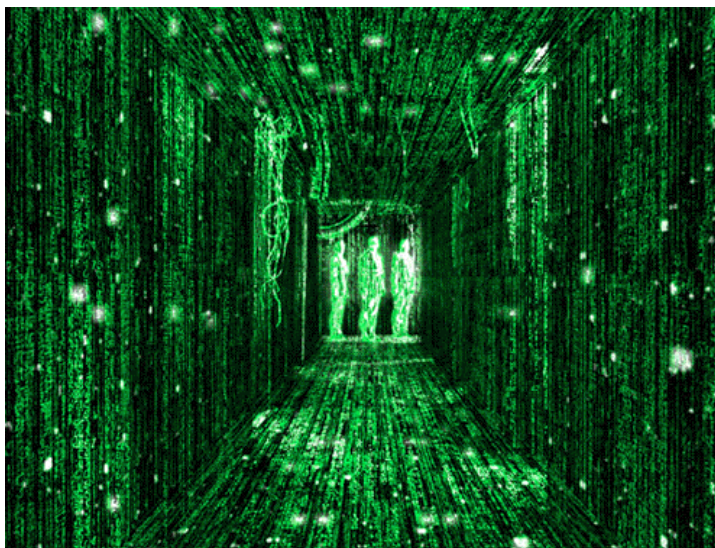
- Allocate one particular room to study related activities. Do not use this room to relax, engage in conversations or sleep. This will help you associate this location with studying, and assist with concentration.

If you must study in your bedroom, arrange your desk so that the bed and any items associated with relaxation are not in your direct view.

- Ensure that you have created a comfortable and effective work environment that includes:
 - Good lighting.
 - Good ventilation.
 - A comfortable chair.
 - An area to spread your work out.
 - No distractions such as TV's, music, phones.
 - Sufficient stationery and study tools.
 - Enough snacks to ensure that you get through the allocated study time.
- Organise your desk before commencing a study session.
- Allocate a set amount of time to your task, and stick to the time allotment before taking a break.



ENCODING



Information must be encoded to be remembered. This means that information must be translated into a mental representation that can be stored in memory. Information can be encoded according to sound (acoustic code), what it looks like (visual code) or what it means (semantic code).

The way that information is encoded plays an important role in determining how it is recalled later on and how much you actually remember.

- If you encode information visually, you will find it easiest to recall facts by drawing or by placing yourself in “that picture”.
- If you encode information visually and acoustically, you may be able to recall facts as lists, but will have difficulty and waste time in explaining what the facts mean.

It is therefore important to identify how knowledge will need to be recalled so that the most appropriate encoding technique is employed during learning sessions. For example: Oral examinations are best prepared for by acoustic encoding.

The most powerful learning technique for most subjects utilises all three codes simultaneously. By using such a technique, you will be able to recall information in any manner.

Note:

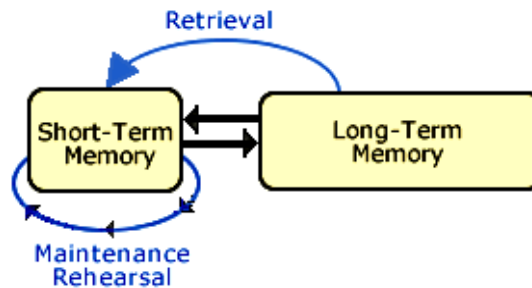
Encoding efficiency can be improved by adopting the following techniques:

- Elaboration (associating what you are learning with other information).
- Visual imagery. This adds richness and interest to the materials being committed to memory and doubles your chances of recalling information (both visually and semantically/verbally).
- Making the materials personally relevant.

STORAGE

Encoded information then needs to be stored in your memory.

The transfer of information from short-term to long-term memory requires **elaborative rehearsal** (repeating information in some new meaningful way), and drawing connections between what you are trying to remember and what you already know.



Note:

- Simple repetition (maintenance rehearsal) may help keep information in short-term memory, but it does not work especially well at getting things into long-term memory.
- The more elaborative rehearsal we engage in, the more effectively materials will be committed to long-term memory.
- Learning occurs when information stored in your short-term memory connects with information that is currently stored in your long-term memory. This connection occurs naturally, and only when you stop inputting large amounts of information into the brain (usually overnight).

Implications for Learning Sessions (Not General Study/Homework):

- Take a 10 minute break every hour whilst you are committing knowledge to memory.
- Ensure that you get sufficient sleep each night.

IMPORTANT DEFINITIONS

“Learning Sessions”

The act of committing knowledge to memory (learning materials off by heart).

“General Study/Homework”

Less intensive activities such as general homework, writing essays or notes under stress free conditions, reading, internet research etc.

RETRIEVAL

Retrieval is the process of remembering facts when you need them. This process depends on how the information was first encoded. If you encoded information visually, you may have difficulty retrieving information acoustically. Retrieving information may therefore sometimes require that you link codes together.

How quickly and how effectively information is recalled/retrieved also depends upon the following:

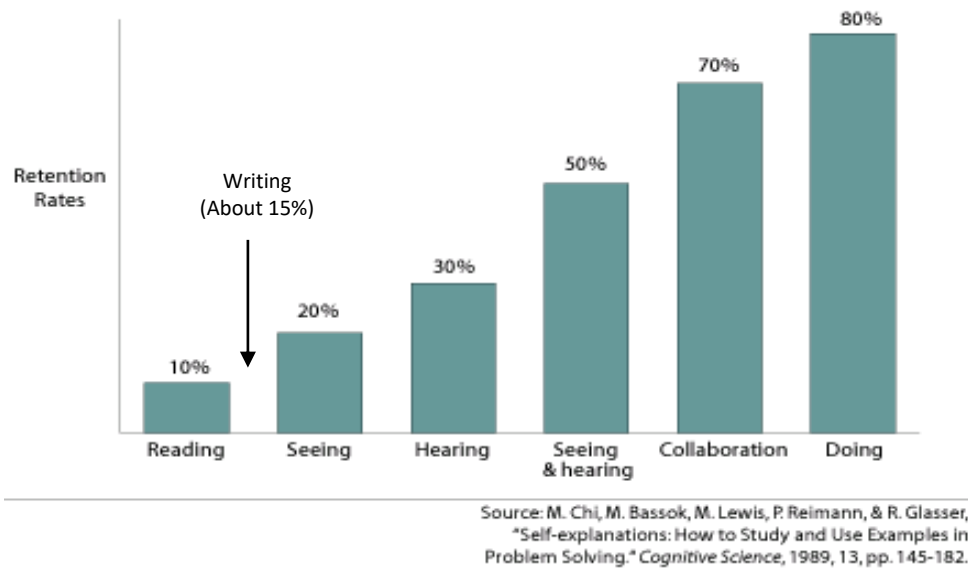
- How long since we last used the information.
- How well we practised the information.
- How deeply the information was processed.
- The order and context under which information was “learned”.

To maximise your chances of retrieving information:

- Engage in solid and efficient learning techniques that engrain information deeply into long-term memory.
- Revise information on a regular basis.
- Think about related ideas. Accessing one concept/idea can often lead to the retrieval of information that is linked to it. For example:

If given a question targeting experimental error and which was not actually committed to memory before the exams, you may retrieve the required information by “placing yourself in that picture” i.e. Think back to your experiences when doing the related practical in class.

THE EFFECTIVENESS OF DIFFERENT LEARNING TECHNIQUES



In general, people can recall the following amounts of information after 24 hours:

- 10 percent of what they read (handouts).
- 20 percent of what they see (flip-charts).
- 30 percent of what they hear (audiotapes).
- 50 percent of what they hear and see (videos, classrooms using AV and lectures).
- 70 percent of what they say and discuss (study groups).
- 80 percent of what they say and do (role-play).

Note:

- Percentages vary depending on the source. They will also vary with interest levels, conditions under which learning is conducted and stress levels.
- Learning via seeing and hearing (as in the case of **revision lecture**) is a very fast and effective way to revise large amounts of materials before examinations. You will **cover at least 5 times** more theory and absorb 5 times more information in a lecture or classroom than if you were to work through the materials on your own!

THE MOST EFFECTIVE LEARNING TECHNIQUE KNOWN TO MAN

Irrespective of which subject you are studying, the most effective means of learning involves “doing”, be that working through exam-style questions (which will provide a retention rate of between 80 – 85%) or verbal recitation i.e. the process of explaining materials in our own words and out loud. This powerful technique has a 90 – 95% retention rate, and is the most effective means of learning.

Learning in this manner will decrease study time up to 8 fold!

This also means that you will commit up to 8 times more information to memory in any set period of time!

Not only does this technique improve how much you commit to memory and decrease study time, it assists in the development of better writing and communication skills. This is a great way of preparing for essay writing without concentrating on the actual task! You will also find that this technique will improve how effectively you are able to apply and extend your knowledge; which is highly important in answering analysis style questions, worded applications as well as those questions that you have never seen before.

By teaching or vocalising what you are learning in your own words (elaborative rehearsal), you will very quickly realise what you do and do not know, giving you the opportunity to correct problem areas before tests and examinations.

METHOD:

1. Read through a small section of your notes **slowly** and **out loud**.

If the materials you are re-learning/revising are difficult – address materials one sentence at a time. If the materials you are re-learning/revising are easy, address materials one paragraph at a time.

Take the time to **understand** the materials you will be committing to memory. In this way, you will gain an appreciation as to how each section/concept links up to the others – which assists in knowledge retention and in the development of application skills.

2. Vocalise what you have learned in your own words i.e. Relay what you have just read to your dog, cat or imaginary friend!

If the materials are difficult – address materials one sentence at a time. i.e. Read the first sentence out loud, then re-phrase what you have just read in your own words, and out loud. Then tackle the next sentence etc.

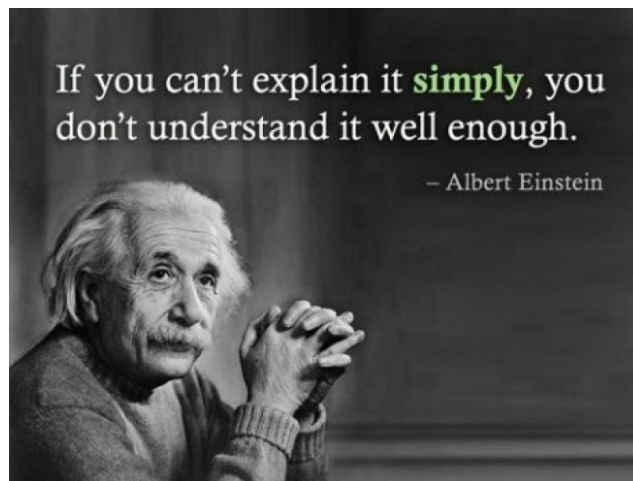
3. Highlight key words, important concepts and those sections that require additional attention.

SUBJECTS/TOPICS THAT INVOLVE CALCULATIONS

If you are studying a subject that involves calculations, you will obviously need to spend considerable amounts of time putting pen to paper. To make learning more effective, vocalise what you are doing and why you are doing it at all times. This will ensure that you commit methodologies to memory and develop clearer thinking processes, which will be a great asset when addressing the analysis-style questions in the exams.

Note: Mathematics can only be learned well by doing questions.

Learn formulae off by heart – you will develop a much better understanding of your subject and be in a better position to apply your skills in problem solving/analysis questions.

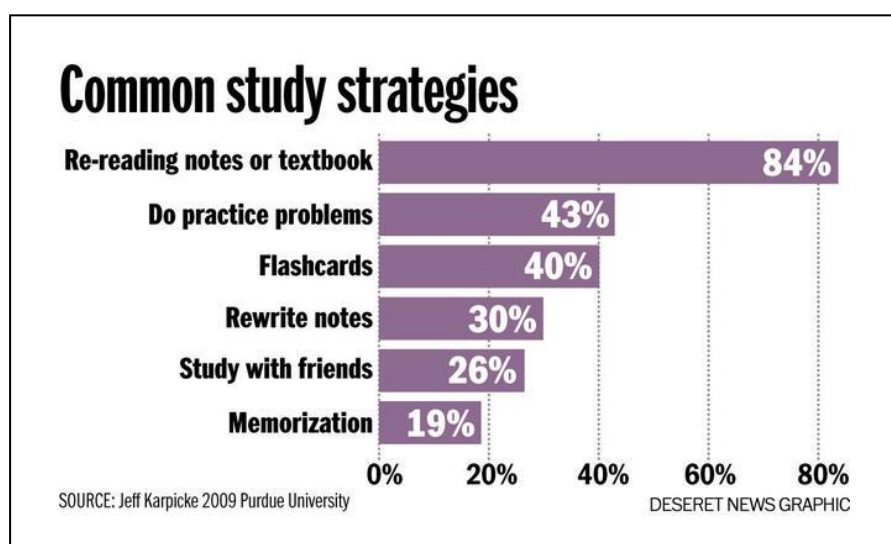


LEARNING FACTS AND FORMULAE

Commit definitions, facts and formulae to memory by “blind repetition”. Flash cards are very useful for these types of materials.



Always learn/re-learn materials by reading out loud and then rephrasing materials out loud and in your own words. You may use other techniques such as writing or concept/mind maps when revising.



SECTION 3: EXAM REVISION STRATEGIES



**"I forgot to make a back-up copy of my brain,
so everything I learned last semester was lost."**

In order to retain information in long-term memory, we must practice, think about and revise materials on a regular basis.

In addition, the more you revise materials, the more effectively you will be able to apply information when addressing analysis/application-style questions, as well as those questions that you have not been previously exposed to.

To save time but maximise learning, it is important to engage in strategically timed reviews rather than re-learning in the weeks leading up to the examinations. It is less time consuming to spend short periods reviewing materials while they are fresh in mind, rather than re-learning materials "from scratch" before examinations.

Note:

Those students wanting to achieve the **higher ATAR scores** should be aiming to work through materials at least twice before their examinations. Students should therefore be commencing their exam preparations sooner rather than later.

THE CURVE OF FORGETTING

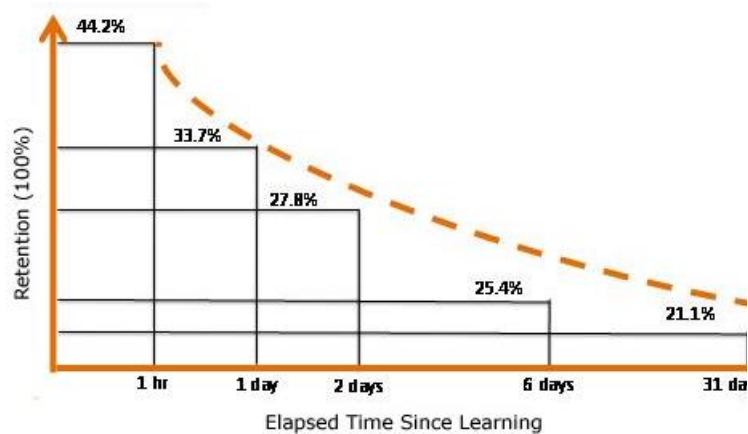
The **Curve of Forgetting** describes how we retain and forget information that we learn or commit to memory.

Consider the learning curve below, which is based on how much knowledge is retained from a one-hour lecture that is based on new materials. This curve shows that amount we remember decreases the longer we take to recall the information. It also shows that more material is forgotten early in the retention interval, and that the rate of forgetting slows as time passes – with more than half of the memory loss happening within the first hour after learning.

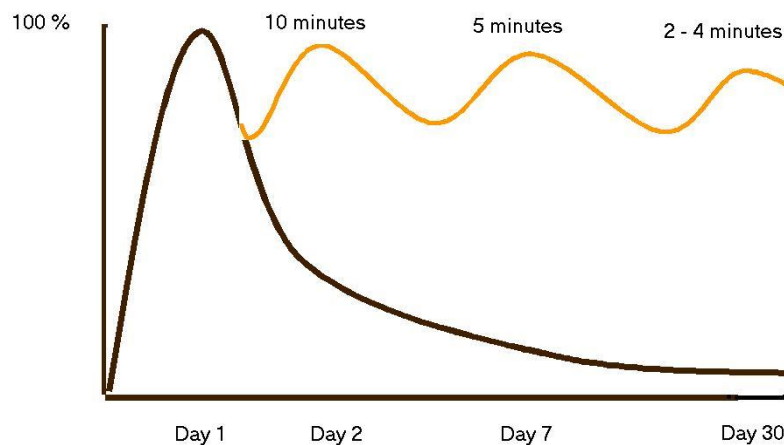
Note:

These values are based on new information (not information that has been previously well learned).

Knowledge Retention vs Time



A series of simple, well-structured reviews can keep information stored in long-term memory for extended periods of time.



REVISION SCHEDULE TO USE WHEN PREPARING FOR THE EXAMS

Step 1: Revise new/challenging materials with 24 hours and simple materials with 3 days.

Step 2: Revise materials once in the following week.

Step 3: Revise materials one last time, one to two weeks before the exam.

IMPORTANT NOTES

- Frequent reviews are critical in ensuring that information remains in long-term memory.
- If you don't revise materials on a regular basis (eg. by completing homework and working through exam-style questions), you will need to spend 40-50 minutes re-learning each hour of previously learned materials before the exams. Do you really have that kind of time?
- Aim to spend about 30 minutes each weekday and 1½ to 2 hours every weekend revising materials. If this is not possible, dedicate as much time as you can for reviews. It is better to maintain the curve at 50% than letting it drop to 5%, which is what will happen if you engage in no reviews at all.
- When you are exposed to the same information repeatedly, it takes less and less time to "activate" the information in your long-term memory and it becomes easier for you to retrieve the information when you need it.

What is the most effective way to revise materials?

By recitation and by reading materials OUT LOUD.

OTHER REVISION TECHNIQUES THAT CAN BE EMPLOYED WHEN MATERIALS ARE WELL UNDERSTOOD

Technique	Effectiveness	Description of Technique
Practice Testing	High	Self-testing or using past-exam questions while learning.
Distributed practice	High	Developing a schedule of revisions / learning activities over time.
Elaborative Interrogation	Moderate	Thinking about 'why' you have answered a question or creating an explanation for a response.
Self-explanation	Moderate	Linking new information to known information or using applied questions (problem based learning).
Interleaved Practice	Moderate	Developing a schedule that mixes different techniques during a period of study.
Summarisation	Low	Writing summaries of concepts / area of study.
Highlighting	Low	The use of highlighters or underlining while read / rereading.
Keyword Mnemonic	Low	Use of key terms / acronyms / images to associate with concepts to be learned.
Imagery	Low	Attempting to form mental images of materials while reading.
Rereading	Low	Revisiting text that has already been read.

Technique	Effectiveness
Teaching	High
Role-play	High
Flash cards	High
Mind/concept maps	Low
Flow diagrams	Low

SECTION 4: HOW SHOULD I APPROACH MY EXAM STUDY SESSIONS?

Step 1: Read the headings and sub-headings in the chosen topic or sub-topic out loud.

Step 2: Look at all the pictures and captions.

Step 3: Read the first and last paragraphs (out loud).

Step 4: Read the first sentence of each paragraph (out loud).

Step 5: Read the whole text, out loud, and rephrase what you have read in your own words and out loud.

If the materials are difficult – address materials one sentence at a time. i.e. Read the first sentence out loud, then re-phrase what you have just read in your own words, and out loud. Then tackle the next sentence etc.

Step 6: Highlight key words, important concepts and those sections that require additional attention using a yellow highlighter.

Step 7: Use the remaining time to work through examination-style questions in an open-book fashion i.e. Attempt each question before referring to the worked solutions.

Step 8: Implement the next review. Read through the yellow highlighted sections out loud, and then rephrase what you have read out loud and in your own words.

Step 9: Highlight the key words, important concepts and those sections that still require additional attention using a darker highlighter, such as orange.

Step 10: Use the remaining time to work through examination-style questions. If you are feeling confident with that particular topic, work through questions in a closed book style. Otherwise, continue using the open book system.

Step 11: Implement the next review. Read through the orange highlighted sections out loud, and then rephrase what you have read out loud and in your own words.

Step 12: Highlight the key words, important concepts and those sections that still require additional attention using a darker highlighter, such as green.

Step 13: Use the remaining time to work through examination-style questions in a closed book fashion.

Step 14: Take advantage of every opportunity to work through as many examination-style questions as possible.

Step 15: In the week before a subject exam, sit two official HSC papers under examination conditions so you can determine how fast you need to work through questions on the day of each exam.

ADDITIONAL SUGGESTIONS

- Complete assigned homework before starting exam preparations each day.
- If your workload is light and you are feeling psychologically strong – choose a topic that you find difficult or you dislike.

Why?

Topics that you do not like or regularly put off are typically the topics that you do not understand and that require the greatest amount of attention. These sections of work should be addressed first so that you have plenty of time to absorb, understand and commit information to memory.

- If you have a lot of homework to do, are feeling tired or de-motivated, choose an easy or small topic to learn
- If you are struggling with time, work through the topics that carry the greatest weighting in the exams.
- Students often get anxious and develop panic attacks when they solely concentrate on 1 subject, then move onto the next subject once all the materials relating to the first subject have been learned. Although students who adopt this approach are still learning the same volume of materials as other students, many feel that they are not making sufficient progress as they are not attending to other subjects. We therefore recommend that students work on 2 to 3 subjects at a time.
- Allocate sufficient time to read through practical work.
- Spend at least 15 minutes each night reading your English texts **OUT LOUD**. This will help commit knowledge to memory and will make a marked impact on your vocabulary and essay writing skills.
- Read as many A/A+ English essays as possible (and out loud). Visit Edge Online at **www.tsfx.com.au** to access our large collection of A/A+ essays at no charge!
- Compile a list of all topics to be studied. Cross off each topic as it has been committed to memory.
- Each Sunday, analyse the timetable for the forthcoming week. Do not be concerned if you find that you need to revise the timetable on a daily basis.

SECTION 5: TIME-SAVING STRATEGIES

- Do not waste valuable study time in the weeks leading up to the examinations writing up study notes and summaries. Study notes should be written up progressively throughout the year so that you have more time to commit knowledge to memory and to work through as many past examination papers before your exams.



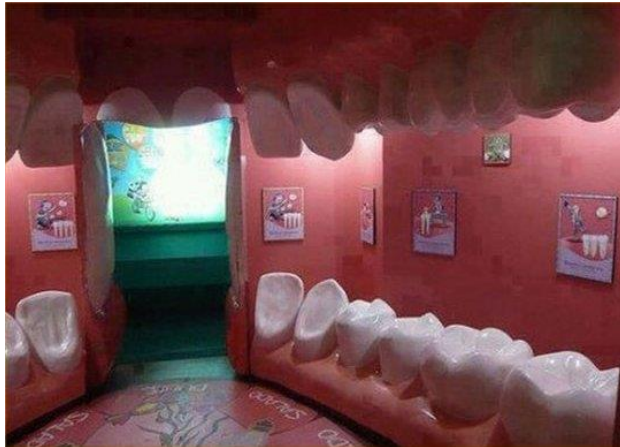
- Save considerable amounts of time by writing up study notes and summaries within 24 hours of addressing materials at school, reviewing or revising for a test. Do not leave this task to the weeks preceding the examinations as it will take significantly longer than if you were to complete this task when your recall ability was higher, and under less stressful conditions.
- Learn your theory progressively throughout the year rather than cramming before exams. This will allow time for revision and repetition as well as greatly improve marks.
- Regularly revise materials throughout the year rather than re-learning in the weeks leading up to the examinations. It is less time consuming to spend short periods reviewing materials while they are fresh in your mind, rather than re-learning materials “from scratch” before the examinations.
- Studying/learning too long depletes the brain of the neurotransmitters that transfer information from one nerve cell to another.

Research also shows that the average student cannot engage in intense study, and in particular, commit knowledge to memory effectively on the same subject for more than 4 consecutive hours – even with 10 minute breaks every hour.

Implications for Learning Sessions:

- To derive the most from learning sessions (and cut down on study time), spread learning across a longer time frame rather than cramming before the examinations. You will learn more in ten 2 hour sessions than in two 10 hour sessions.
- Learn in 20 – 50 minute chunks with breaks totalling 10 minutes each hour. Longer sessions can be employed for general homework without loss of efficiency.

- Learn the hardest /newest materials first whilst neurotransmitters are at their peak levels.
- Change subjects or tasks every few hours and try not to study/commit knowledge to memory for more than 4 hours at a time.
- During each 10 minute break, relax or engage in something physical and/or fun. These crucial breaks will give your mind a chance to rest from learning and doing something different will actually stimulate it.
- Use waiting times eg. travel times, the dentist's waiting room, lunch times to complete smaller tasks or revise materials.

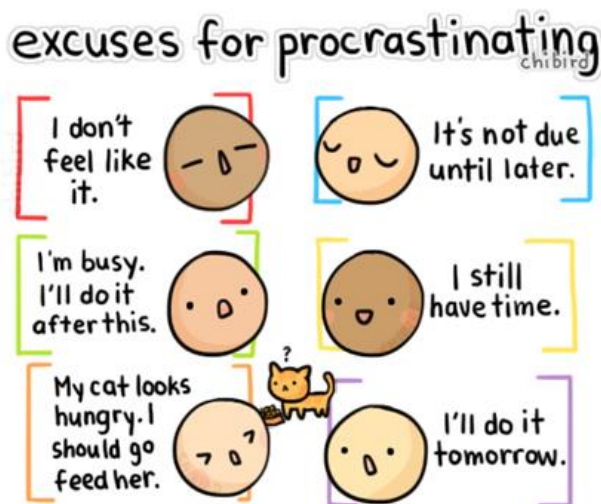


- Do not leave the task of working through past examination papers to the last minute. Students often gain access to large volumes of material in the few weeks before their examinations, and rarely find the time to take full advantage of these resources. Start working through past examination questions from the beginning of the year.
- Circle difficult, challenging or tricky questions as you come across them and highlight sections of work that you found difficult as you come across them. This will save you valuable time when trying to prioritise which materials need to be addressed in the lead up to the exams.

SECTION 6: MOTIVATION AND PROCRASTINATION



It can be very difficult to maintain motivation across the year and commit to the expected 20 – 24 hour personal study regime, particularly during school holidays. These periods, are, however, the **ideal time** to get ahead and make a significant difference to stress levels and study loads later in the year.



Students often make up **clever excuses** to justify why they should put off their studies, resulting in feelings of **guilt and regret** when they do not obtain the results they need. By taking control of procrastination, not only will your marks improve:

- You will **complete tasks faster**. The longer you put off your studies, the more knowledge you forget, and therefore, the greater the time and effort that will be required to complete a task.
- You will create **more free time** to do the things you enjoy.
- You will feel better about the quality of your work as well as your overall abilities.
- You will feel **more confident** about forthcoming tests and exams.

BEATING PROCRASTINATION

Combating procrastination requires a little “reverse psychology” as well as a technique called “Nike”.

Step 1: Ask yourself the following questions:

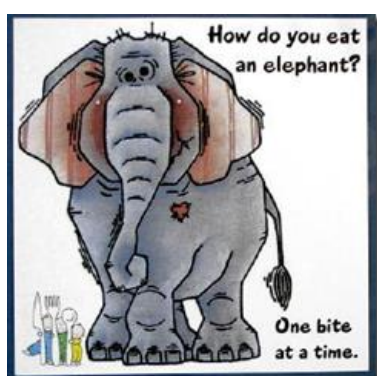
Why am I procrastinating?

What are the benefits of putting this task off until later?

*What benefits will be derived by **NOT** putting this task off until later?*

These questions are usually enough to propel most students into action, however, if you do need a little more encouragement, proceed to Step 2.

Step 2:



One of the most important neurotransmitters (chemicals that transmit impulses from one nerve cell to another) involved in motivation and ability to complete tasks is called **dopamine**.

Dopamine also plays a **key role** in concentration, learning speed, memory formation and regulating reward and pleasure. When we complete a task, no matter how small, dopamine is released, improving motivation and brain function!

Therefore, divide large tasks into smaller more achievable milestones and/or start with the smallest or most pleasant task.

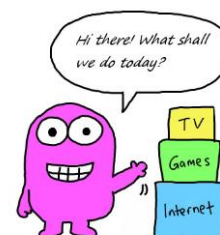
Step 3: Employ the relevant strategies from the suggestions below.

Trick your brain. Rather than telling yourself that you need to work for three hours straight (which might put you off starting) tell yourself that you will only study for 30 minutes. Pick something relatively easy – you will be surprised at how easy it is to continue working once the momentum starts.

Think about what you want to achieve before you sit down to study. This will help prepare your unconscious mind for the tasks ahead, reducing the chances of procrastination.

Bite the bullet and just start! Don't wait for inspiration to hit or for the perfect time, just start working.

Try using **rewards** to motivate you to study. This could be a break or relaxing activity for every hour of study or for every task completed. Use things that are typically classified as distractions as rewards (such as TV or Facebook), rather than punishing yourself when you use technology to procrastinate.



Step 3: Continued.

Tell yourself how **great you will feel** once you have completed each task.

Visualise how you would feel if you didn't get the marks you were aiming for. Now pick up something easy and get on with the task at hand.



After a productive study session, **record a message** to yourself. Explain how you didn't want to study and looked for any opportunity to procrastinate. No matter how difficult it was, you then decided to spend a short time studying, only to find out that it wasn't as bad as you thought. Describe how good you felt after completing your studies and why you shouldn't procrastinate next time. Play this message when you are struggling to get started – there is nothing more powerful than a personalised message that directly targets your logic and thought processes.

Turn tasks into **challenges** or games.

Find purpose in the tasks you need to complete. It is always easier to commit to tasks when they have meaning.

If all of the given suggestions fail – just accept the fact that you have to complete the task and get on with it.

ADDITIONAL SUGGESTIONS

- Compile all tasks that need to be completed into a list. Then ask yourself:
“What is the best use of my time right now?”
- Set **realistic and manageable goals** so that you know what you want to achieve and you can see clear evidence of your progress towards your final goals. It may help to visualise what you want to achieve and put up posters around your house that remind you of your goals.
- **Set early deadlines for tasks.** Rather than leaving things to the last minute, ‘fake’ deadlines will compel you to complete tasks earlier than required, leaving you with sufficient time to go over your work before you hand it in.
- Find a place to work that is quiet and free of distractions. Your surroundings can affect productivity as well as the quality of your work.

- Use **reminders and prompts** around your room and house. These will serve as a great source of motivation when you are distracted or avoiding your studies. Examples include:

“Procrastination wastes time. Do it now and get it over and done with.”

“Procrastination adds time to tasks”.

“Don’t like studying? Don’t procrastinate and save huge amounts of time!”

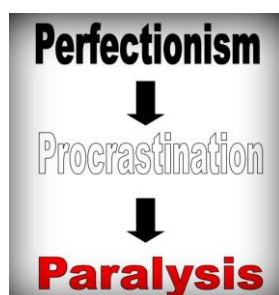
“Procrastination makes easy things hard, hard things harder.”

“How will I feel when I get my results and I haven’t achieved the ATAR I need? Don’t risk it. Get studying”.

- Keep specific to-do lists or calendars with your tasks and goals clearly documented. This will help you track your success and recognise your achievements.
- Engage in a regular study timetable.

Study every day – **NO EXCEPTIONS**. This will ensure that you develop a regular study habit and render you less susceptible to procrastination! Established routines will:

- Minimise effectiveness of procrastination attempts.
- Ensure that work is completed on time and that it does not accumulate.
- Create time to do other things.
- Reduce stress and workloads before tests and examinations.
- Do not over commit yourself to any one particular activity including study. Set aside time to do the things that you enjoy.
- **Perfectionism** often leads to many students avoiding their studies.



If you are a perfectionist, it may be beneficial to learn about the “The Pareto Principle”. This principle states that for many events, roughly 80% of the effects come from 20% of the causes.

Many natural phenomena have been shown to exhibit the 80 – 20 rule, including spending, distribution of wealth, customer complaints, land ownership, company profits, staff productivity and even essay marks!

So rather than spending significant amounts of time trying to perfect essays and assignments, aim for a slightly lower standard, saving considerable time as well as reducing the chances of future procrastination.

As hard as it may be, **make every effort to manage procrastination** on a daily basis. You will be very glad you did in the weeks leading up to the exams!

WHAT YOU DO
TODAY
CAN IMPROVE ALL
YOUR TOMORROWS

SECTION 7: STRESS MANAGEMENT



1. Use effective and time-saving study/learning techniques.
2. Do things that you enjoy and set aside time for yourself.
3. Exercise on a regular basis.

Our sedentary lifestyles do not allow us to work out stress.

Exercise produces chemicals known as endorphins – drugs that have a tranquilising effect – which is good for you in small doses.

Exercise also produces chemicals that are needed for effective brain function (neurotransmitter production).

4. Get plenty of sleep.

In general, insufficient sleep results in:

- Lower grades
- Slower learning rates
- More mistakes
- More day time sleepiness
- Mood imbalances

Your brain consolidates and processes the information you've learned during the day during the REM stages of sleep.

Adequate sleep is therefore crucial for the memory storage/building process. The more REM stages per night, the greater the amount of information that is stored in long-term memory.

Note:

Most teenagers require 9.25 hours of sleep each day (which gives 5 complete REM cycles) to meet the demands of development and learning. If students are unable to get this amount of sleep each day:

- Get at least 7.5 hours when stress levels and study loads are manageable.
- Aim for at least 9 hours of sleep when stress levels and study loads are high.

5. Adopt a well-balanced diet.

6. Complete assessment tasks and assignments **AS YOU GET THEM**. Do not leave tasks to the last minute as there are probably more around the corner!

As assessments often come at once, the procrastinator will end up with little sleep and completing work to a lower standard than otherwise possible.

7. Commence preparations for the exams well in advance so that you can complete the bulk of your learning under low stress conditions. Note that stress impairs how much information can be input into the brain, which means that it will take you longer to commit knowledge to memory.

8. Take regular breaks while you study.

9. Talk out your concerns and work out anger.

10. Have a set of well-defined and realistic goals.

11. Think positively and embrace set-backs and failures as opportunities.

12. Accept the fact that you will have to do things that you do not enjoy.

13. Accept the fact that life will present many unexpected incidents and that you will need to change plans and approaches throughout your entire life!

14. Laugh and have some fun. HSC is **NOT** the end of the world.

DEALING WITH PANIC ATTACKS AND MIND BLANKS



Step 1: Distract yourself from the perceived threat.

Step 2: Take a few deep breaths and relax.

Step 3: Employ some rational self-talk and reverse psychology.

- (a) Identify what is happening in your brain i.e. that thought blocking agents are scrambling your brain. Accept that this is a normal response when exposed to stress, and that the response can be controlled and modified.
- (b) Acknowledge your personal situation as it stands.
- (c) Acknowledge the fact that panicking is only going to make you perform to a lower standard than otherwise possible, and stop panicking.

Step 4: Complete an easy question/task. Once your confidence has improved, tackle the larger/challenging tasks.

SECTION 8: BRAIN FOOD



Like a car, your brain works best when you feed it a **high quality fuel**. Those that compromise on fuel quality will require more revving to get going, they will chug more slowly when driving up hills and will run out of fuel faster than those who use a high grade fuel!

The type of foods we eat have a direct bearing on how we feel and how fast and effectively we learn.

Foods rich in **choline** have been shown to be instrumental in forming circuits between brain cells whilst we learn. Its derivative, **acetylcholine**, has also been shown to protect brain cells and preserve memory. Students wanting to maximise memory and learning should therefore be eating a diet rich in choline, such as almonds, beef, cauliflower, egg yolk, liver, navy beans and tofu.

Tyrosine is an amino acid that is found in high concentrations in chicken, dairy, fish and oats. The body converts this amino acid to a brain chemical (neurotransmitter) called **dopamine**, which plays a crucial role in concentration and motivation. Deficiencies in this neurotransmitter result in many concentration disorders, including ADD.

The amino acid **L-phenylalanine** is converted in the body to dopamine, as well as another important neurotransmitter called **norepinephrine** – both of which are important for memory and motivation. Foods that are rich in L-phenylalanine include chicken, dairy, lima beans, peanuts and sesame seeds.



B vitamins, especially B6, B12 and folic acid protect neurons (brain cells) by breaking down homocysteine, an amino acid that is toxic to nerve cells. They are also involved in making red blood cells, which carry oxygen. Best sources of Vitamin B include spinach and other dark leafy greens, broccoli, asparagus, strawberries, melons, citrus fruits, soybeans black beans and other legumes.

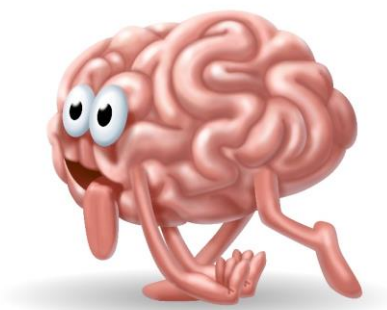
form when oxygen interacts with certain molecules. Free radicals are highly reactive and can damage cells, but antioxidants can interact with them safely and neutralise them. Antioxidants also improve the flow of oxygen through the body and brain. Best sources of antioxidants includes blueberries and other berries, sweet potatoes, red tomatoes, spinach, broccoli, green tea, nuts and seeds, citrus fruits, liver.

Omega-3 fatty acids are concentrated in the brain and are heavily associated with cognitive function, including concentration, speed and effectiveness of learning, as well as recall of information. These healthy fats also protect against inflammation and high cholesterol! Food sources rich in omega 3's include cold-water fish such as salmon, herring, tuna, halibut, and mackerel; walnuts and walnut oil; flaxseed and flaxseed oil.



Water is also required for healthy brain function as it is needed to move neurological signals throughout the brain. Low water concentrations in the blood diminish the rate and efficiency of these signals, and hence learning and retrieval. In fact, it has been shown that partial dehydration (which is characterised by a dry mouth and dry lips) can reduce test scores by up to 10%!

OPTIMISING BRAIN FUNCTION DURING HIGH STRESS PERIODS



To optimise brain function during high stress periods, we strongly suggest that students supplement their diet with the below nutrients. These nutrients are stripped from the body at a very fast rate when we are under higher levels of stress.

Nutrient	Source	Frequency
Essential amino acids	Protein powders that contain all 8 of the essential amino acids. Examples include "International Protein – Amino Recovery" and "Aminoxl".	3 – 7 times per week
Essential fatty acids	Fish oil (eg. Eye q or Ethical Nutrients), walnut oil or flaxseed oil.	Daily
Multivitamin	See your local health food store.	Daily
Vitamin B	See your local health food store.	2 – 3 times per week

On a final note, brains need a **good quality breakfast** on a daily basis.

People who eat breakfast perform to a higher standard in tests and exams (up to 40% in one study!), they are twice as likely **not** to suffer from depression and are four times more likely **not** to suffer from anxiety! Eating a high protein, low simple carbohydrate breakfast has also been shown to enhance concentration and memory, so avoid lots of sugary cereals, juices, white flour/sugar products and substitute these for whole-meal bread, eggs, dairy, porridge, bacon or baked beans!



