Year 13 Exam Success Evening

Purpose

“Am I doing everything I possibly can to ensure that I have the best possible chances of success?”

Programme

The Secret to Exam Success - *Dave Brentnall, Head of Chemistry and Principal Examiner for Edexcel IAL*

Revision strategies - what works? *Chris Bugh*, *Assistant Head Teacher*

A-levels, University and Beyond,

The final push, *Chris Bugh*, *Assistant Head Teacher*

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Original Title - ‘Get inside the mind of an examiner’!

Mrs Brentnall, the one human I’m always driving around and the other human I’m contstantly paying exorbitant rent on their behalf

What is the secret to exam success?

Don’t tread on cracks in pavements

Salute single magpies

Wear lucky socks on the day of the exam

Being nice to elderly relatives (or teachers) in the hope that karma works in your favour

Using your favourite equipment in the exam, including the meerkat-shaped rubber you bought from Twycross Zoo in 2008

Rearranging revision guides into alphabetical order

There is no secret - you know the answer already

OCR
Oxford Cambridge and RSA

GCE

Mathematics

Advanced GCE A2 7890 – 2

Advanced Subsidiary GCE AS 3890 – 2

OCR Report to Centres June 2017

AQA
Realising potential

A-LEVEL
GEOGRAPHY
(7037)

A-LEVEL
EXAMPLE
RESPONSES

Exam Papers

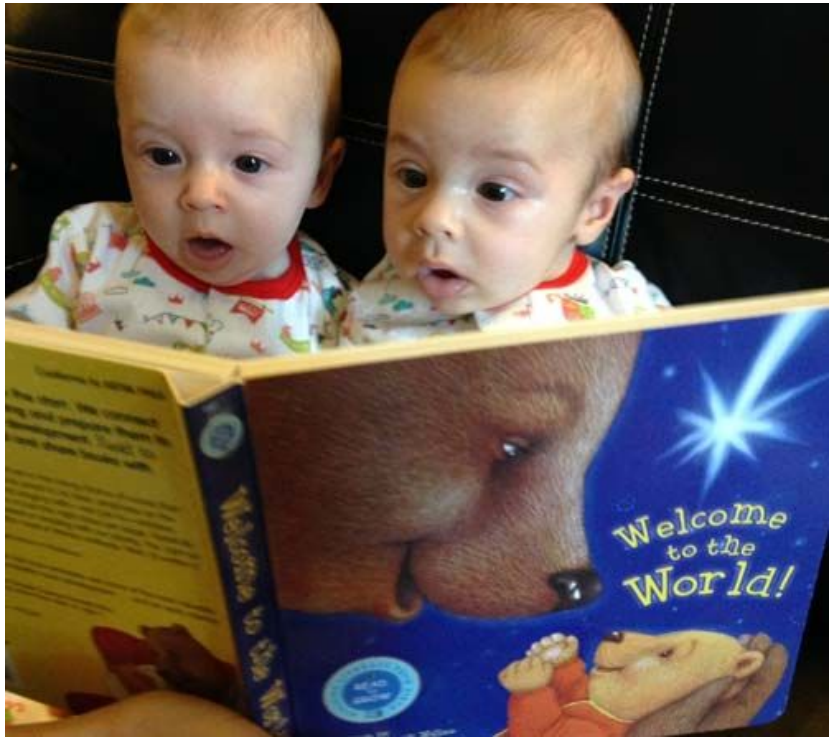
- Get hold of the specification - this is the content you will be assessed on
- Make sure you know the structure of each paper
- Command words
- Practice a range of papers
- Cross reference your answers against the mark schemes
- Mark schemes give an insight into level of answer needed
- Lucky dip to avoid only doing easier questions
- ‘Peer Group’ papers

Don’t forget the Stem

Command words

Compare and contrast	Looking for the similarities **and** differences of two (or more) things. Should not require the drawing of a conclusion. Answer must relate to both (or all) things mentioned in the question. The answer must include at least one similarity and one difference.
Complete	Requires the completion of a table/diagram.
Criticise	Inspect a set of data, an experimental plan or a scientific statement and consider the elements. Look at the merits and faults of the information presented and back judgements made by giving evidence.

RTQ^2



Examiner’s Reports

- Feedback on performance in an exam across the whole country
- Helps you see strengths and weaknesses, including examples of good and less good answers
- Some boards include ‘live’ examples with a commentary from the Principal
- Some reports finish with a student focused summary

This was a new paper, with a greater emphasis on AO2 'Application of knowledge and understanding of scientific ideas, processes, techniques and procedures' and AO3 'Analysis, interpretation and evaluation of scientific information, ideas, and evidence', rather than AO1 'Demonstrate knowledge and understanding of scientific ideas, processes, techniques and procedures'. This, together with the fact it relies on learning and applying knowledge from two years of work, has proved a difficult test for some candidates. However, all questions were accessible to candidates, and there seemed to be no time issues with completing the paper. The paper produced a good spread of marks.

Most candidates attempted all the questions but there has been an increase seen in the number of NR (no response), particularly to practical based and mathematical based questions (e.g. Q1(b)(i), Q2(b)(iii), Q4(c)(ii)) and this was more clearly seen amongst middle and lower scoring candidates. There was evidence that many of the lower scoring candidates struggled to get to grips with the increase in the number of AO2 and AO3 based questions, scoring most of their marks on the questions involving AO1 (recall and understanding). Equally it was pleasing to see a number of higher scoring scripts at the top end of the range, and these candidates tended to have well developed mathematical skills and a good practical knowledge, with the ability to understand and apply the information given to the questions being asked.

Centres are advised to encourage candidates to spend a little time reading the question and ensuring that they supply information that relates to, and answers, the question. Even if the science is correct, if it does not answer the question then it will not be awarded marks.

Lack of breadth

Maths-based problems

Questions in practical context

Question 13 (a)

The great majority knew this definition, although there were some variations, such as 'an astral body of known luminosity'. Some referred to 'constant luminosity' which was not accepted.

(a) State what is meant by a standard candle.

(1)

a star that is stationary so that we can compare it to the stars that are moving.

ResultsPlus
Examiner Comments

This candidate seems to have read the introductory line, about trigonometric parallax, and answered a different question about that rather than the question on the paper. **0**

ResultsPlus
Examiner Tip

If a question seems like one you remember from revision, do not just write that answer. Read the whole question carefully first.

Paper Summary

Based on their performance on this paper, candidates are offered the following advice:

- Read the stem of each question carefully to ensure you focus your response more precisely on what the question is asking.
- Take care to revise all the reactions of transition metals highlighted in the specification.
- Make sure you write full descriptions of observations and equations when you carry out practical work on transition metals.
- Practise applying organic mechanisms to a wider variety of compounds than just the examples covered in your lessons.
- When revising, work together with peers to check for clarity in your written explanations, especially when justifying how changes in procedure or conditions might influence a practical outcome.
- Label each step clearly, when you practice unstructured calculations.
  This will help embed approaches that you can then try to apply to unfamiliar questions.

Don’t forget you’ve got translators

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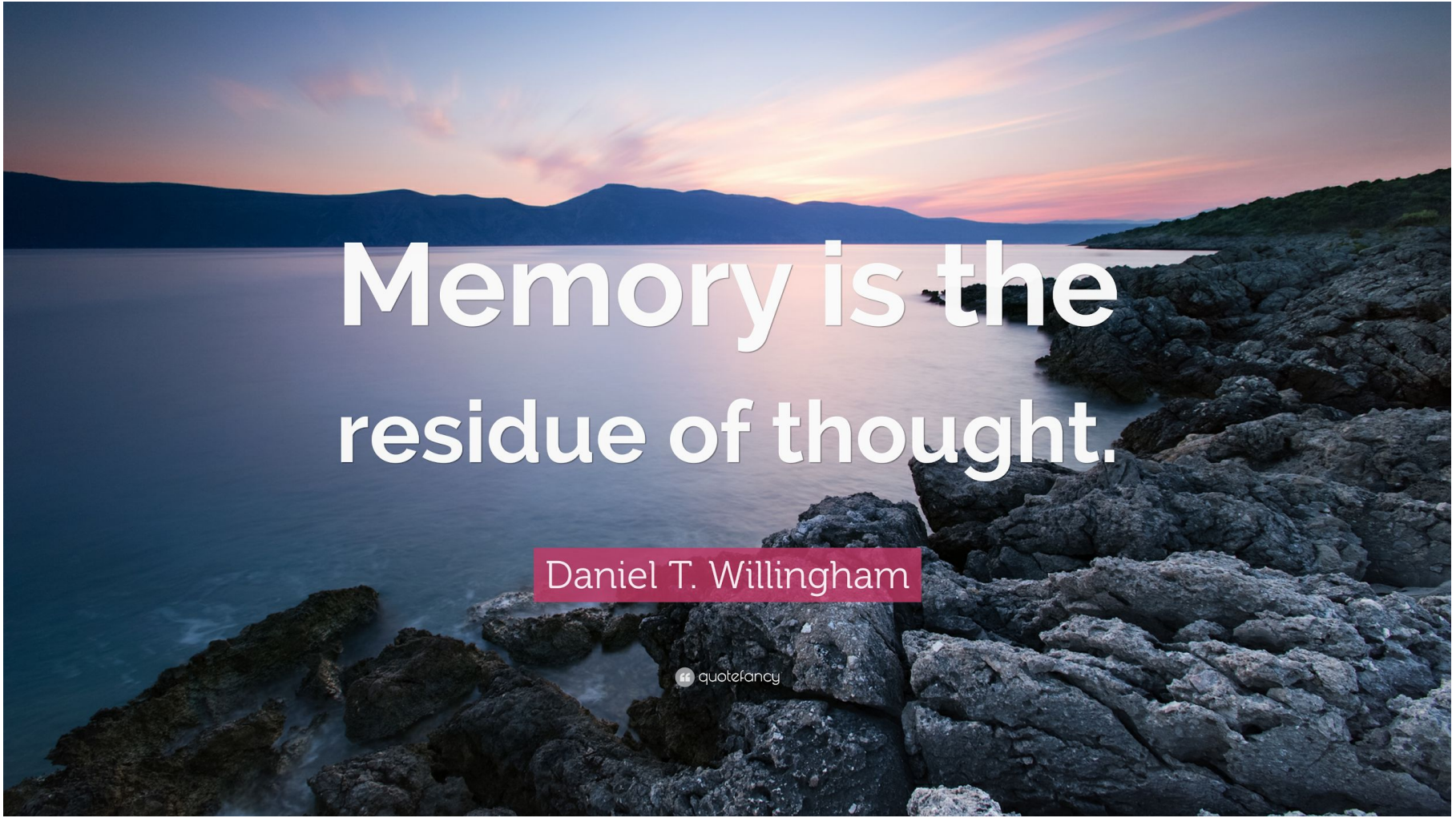

Memory is the
residue of thought.
Daniel T. Willingham
quotefancy

Could you draw what is on the reverse?


Bank of England
AA33 548031
Five Pounds
I have nothing to offer but blood, toil, tears and sweat
£5
AA33 548031

Revision Strategies - what works?

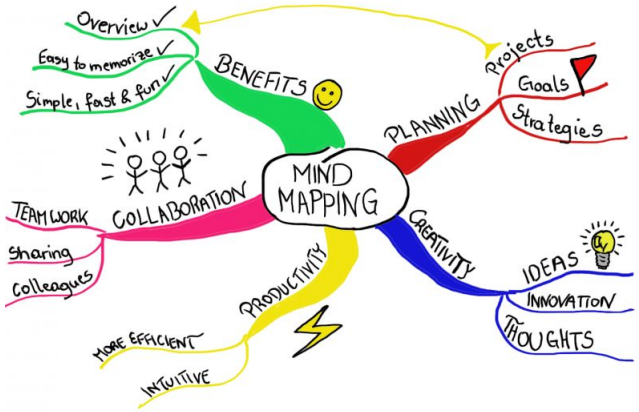
Active not passive

5 key revision strategies

Revision Strategies - what works?

Retrieval Practice

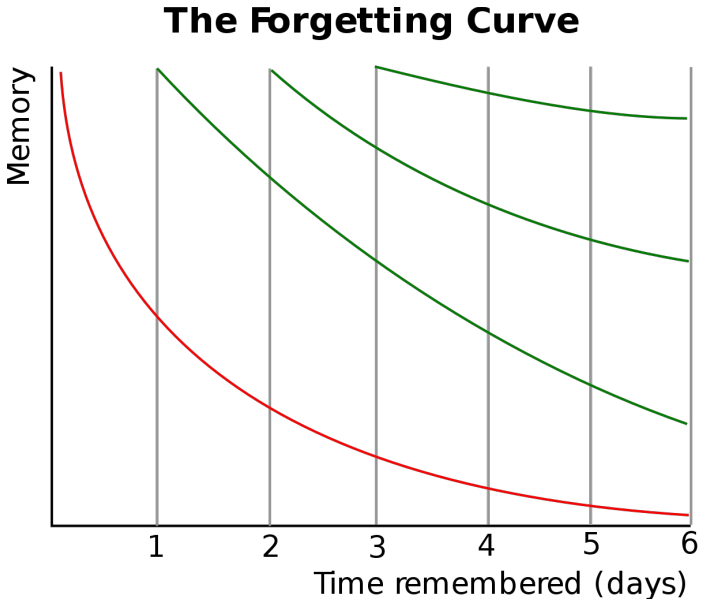
- Mind map from memory
- Quick quizzes
- Use cues to trigger answers
- Group discussions
- Essays



Revision Strategies - what works?

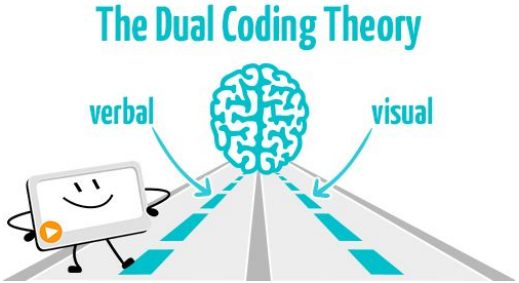
Spaced practice

Have some time to forget

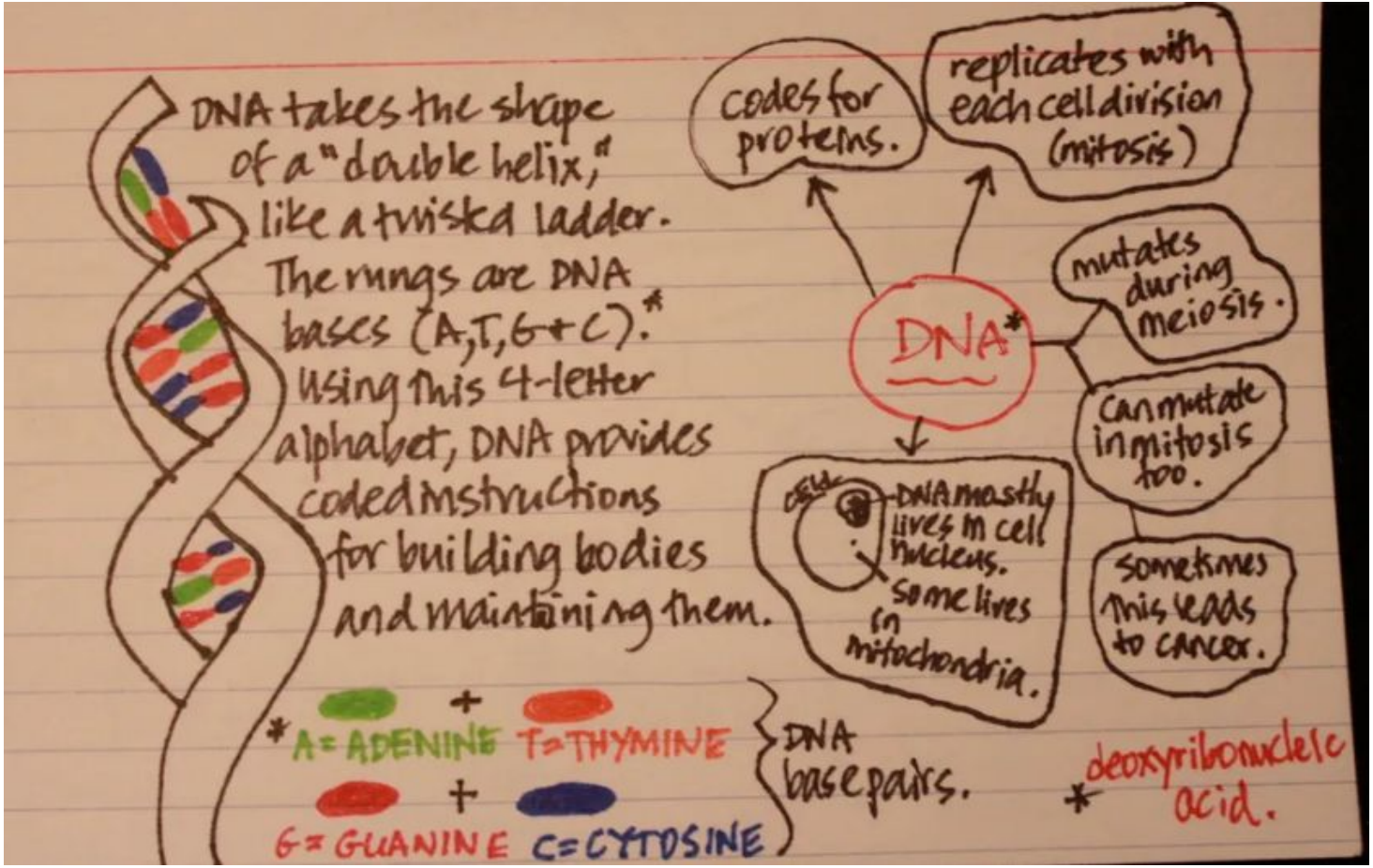


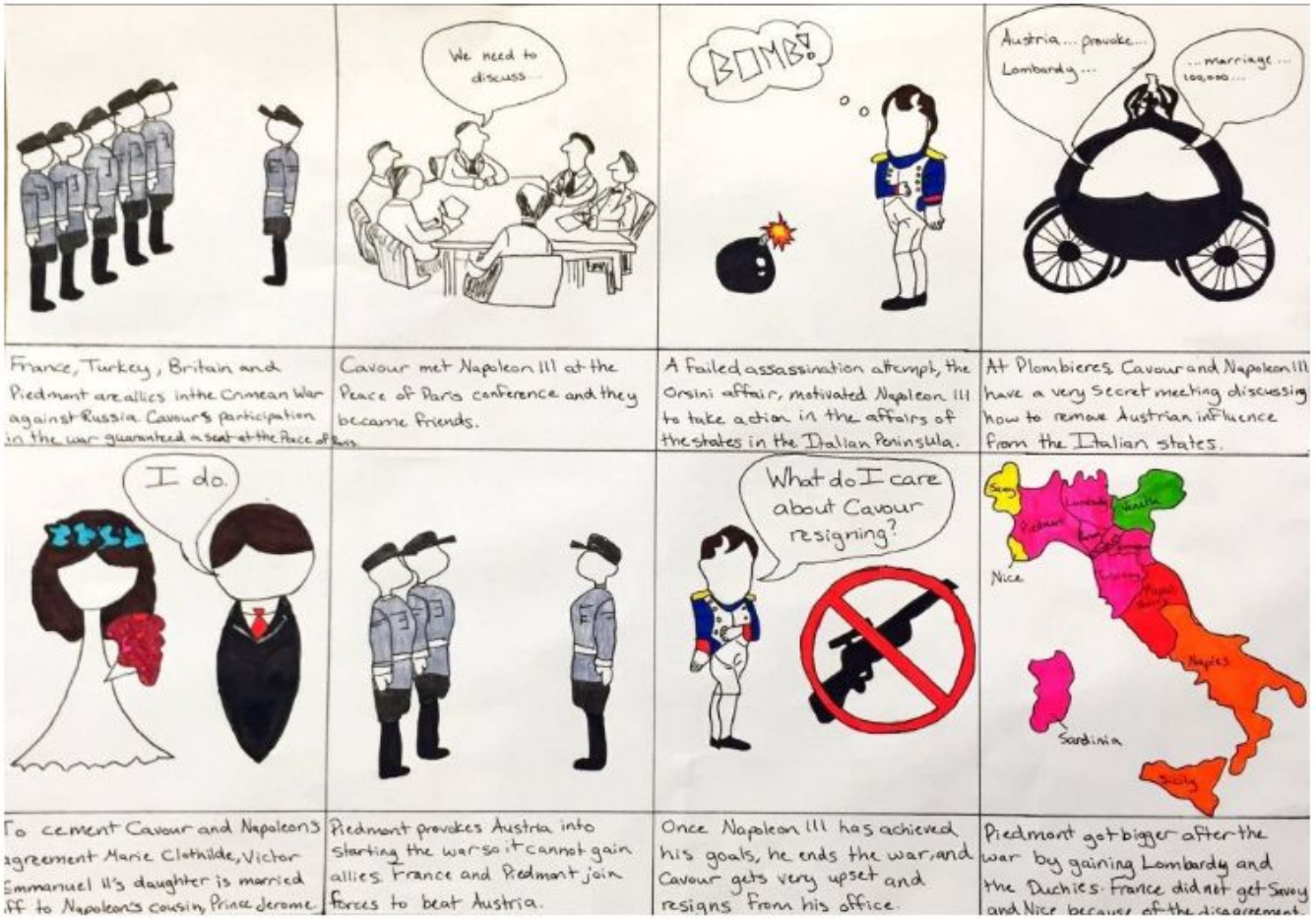
Dual Coding Theory - Allan Pavio

Combining verbal and visual input ***increases*** learning



Gives students two ways of remembering the same information.


DNA takes the shape of a "double helix," like a twisted ladder. The rungs are DNA bases (A,T,G+C).*
Using this 4-letter alphabet, DNA provides coded instructions for building bodies and maintaining them.
codes for proteins.
replicates with each cell division (mitosis)
mutates during meiosis.
DNA*
can mutate in mitosis too.
cell
DNA mostly lives in cell nucleus.
some lives in mitochondria.
sometimes this leads to cancer.
* A = ADENINE T = THYMINE
G = GUANINE C = CYTOSINE
DNA base pairs.
* deoxyribonucleic acid.



France, Turkey, Britain and Piedmont are allies in the Crimean War against Russia. Cavour's participation in the war guaranteed a seat at the Peace of Paris.

Cavour met Napoleon III at the Peace of Paris conference and they became friends.

A failed assassination attempt, the Orsini affair, motivated Napoleon III to take action in the affairs of the states in the Italian Peninsula.

At Plombieres, Cavour and Napoleon III have a very secret meeting discussing how to remove Austrian influence from the Italian states.

To cement Cavour and Napoleon's agreement Marie Clothilde, Victor Emmanuel II's daughter is married off to Napoleon's cousin, Prince Jerome.

Piedmont provokes Austria into starting the war so it cannot gain allies. France and Piedmont join forces to beat Austria.

Once Napoleon III has achieved his goals, he ends the war, and Cavour gets very upset and resigns from his office.

Piedmont got bigger after the war by gaining Lombardy and the Duchies. France did not get Savoy and Nice because of the disagreement.

A Year 11 GCSE History comic strip overview

Nuclear FUELS

What is it?

It's a substance that is used to produce heat to power turbines. Heat is produced when nuclear fuels undergo the nuclear fission.

WARNING: RADIOACTIVE!

DANGEROUS

The main nuclear fuels are uranium and plutonium. These are radioactive metals. Unlike fossil fuels, nuclear fuels are not burnt to make energy. Instead, nuclear fission reactions in the fuels release energy.

THE PROCESS OF... Nuclear Fission:

Advantages...

→ unlike fossil fuels, nuclear fuels do not produce carbon dioxide or sulfur dioxide.

→ This helps the global warming slow down.

→ The U.S. saves $12 billion dollars a year for energy costs, thanks to nuclear power!

VS

Disadvantages...

→ fossil fuels and nuclear fuels are non-renewable energy sources. If there is an accident, large amounts of radioactive material could be released into the world.

→ It must be stored safely!

DID YOU KNOW...

→ Enrico Fermi, an American / Italian physicist was the discoverer of nuclear energy.

→ 20% of U.S.'s electricity comes from nuclear energy!

→ France is the most reliant country on nuclear energy.

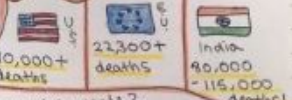
Reasons Why...

Since the beginning of the industrial revolution, the demands for energy has increased dramatically! Today, most of these demands are met with the combustions of fossil fuels. This is starting to change people's minds that because of the rising costs and the harmful effects on the environment caused by fossil fuels, we should look for ways to replace our dependence upon them. Nuclear energy is one of the best options because it has all of the technology required to be used on a large scale!

I'm innocent!

Is it really that dangerous?

Despite the seemingly large support reported by the media, there have been no deaths as a direct result of the meltdowns at either Fukushima or Three Mile Island! Even in the case of Chernobyl, the total number of deaths is quite low. In comparison, deaths due to the use of coal are over 10,000 a year in the U.S. alone, followed by 22,300 deaths per year in Europe and up to 100,000 deaths per year in India.



How do nuclear plants work?

1) First, you have the fuel, usually Uranium, which must be:

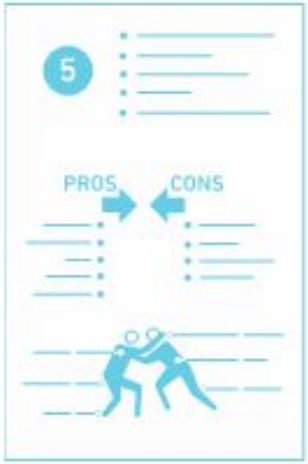
1) MINED...

2) ENRICHED... URANIUM-235 ISOTOPE

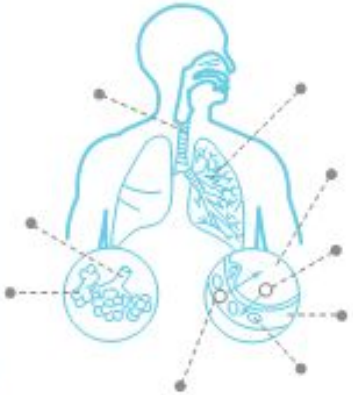
3) THEN, FORMED INTO PELLETS WHICH ARE PLACED IN RODS WITHIN THE REACTOR!

FACT... DID YOU KNOW?

INFOGRAPHIC



DIAGRAM



CARTOON STRIP

GRAPHIC ORGANIZER

TIMELINE

Revision Strategies - what works?

Deliberate practice

- Focus on specific types of questions
- Use worked examples - replicate steps until confident
- Put to practice in timed conditions

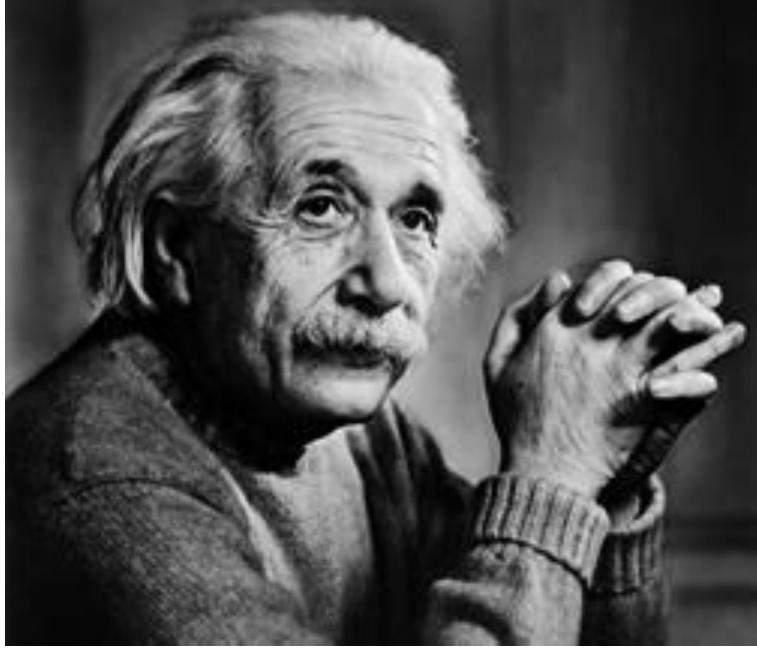
Revision Strategies - what works?

Elaboration

- Generate an explanation for a fact
- Ask ‘why?’
- Compare and contrast
- Make connections
- Talk to yourself!

If you can't explain it **simply**, you don't understand it well enough.

– Albert Einstein



Active not passive

5 key revision strategies

1. Retrieval Practice
2. Spacing Learning
3. Dual coding
4. Deliberate Practice
5. Elaboration

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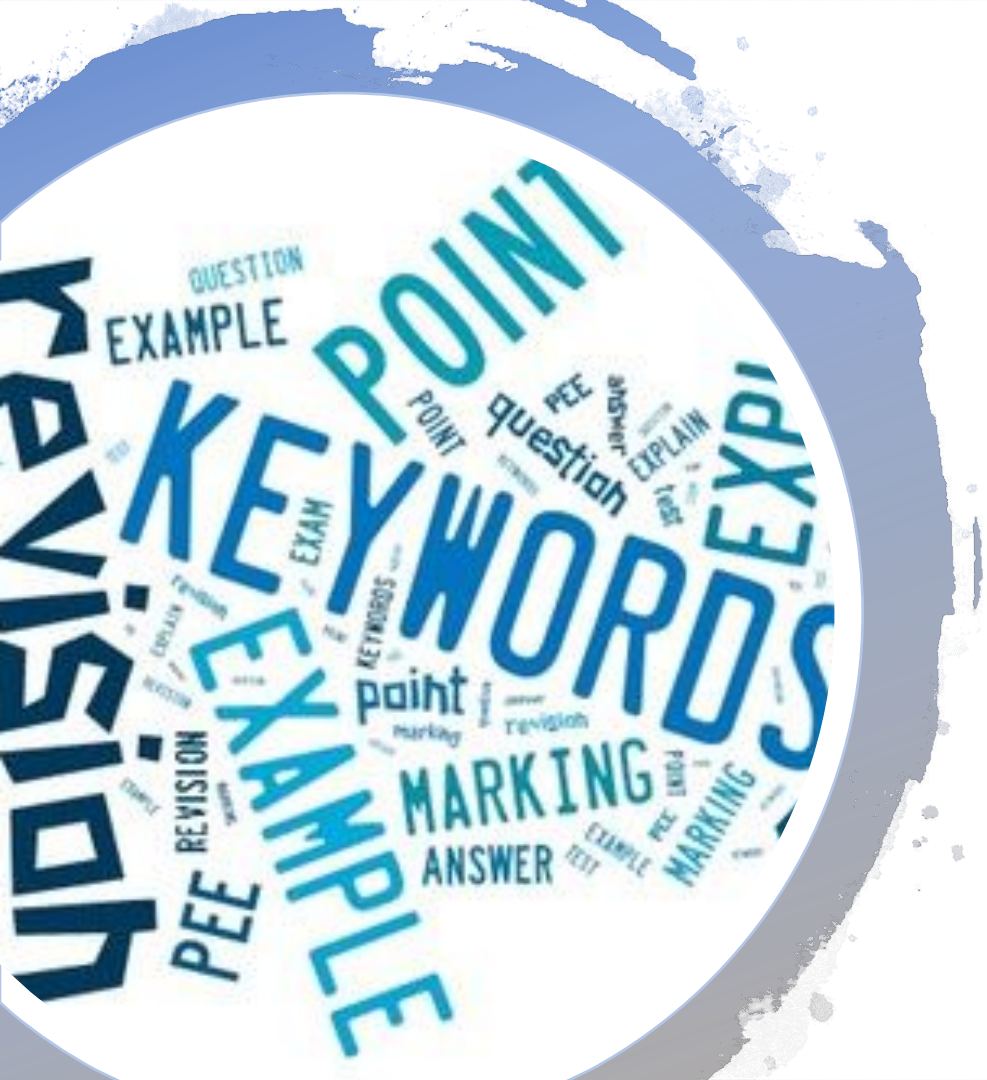
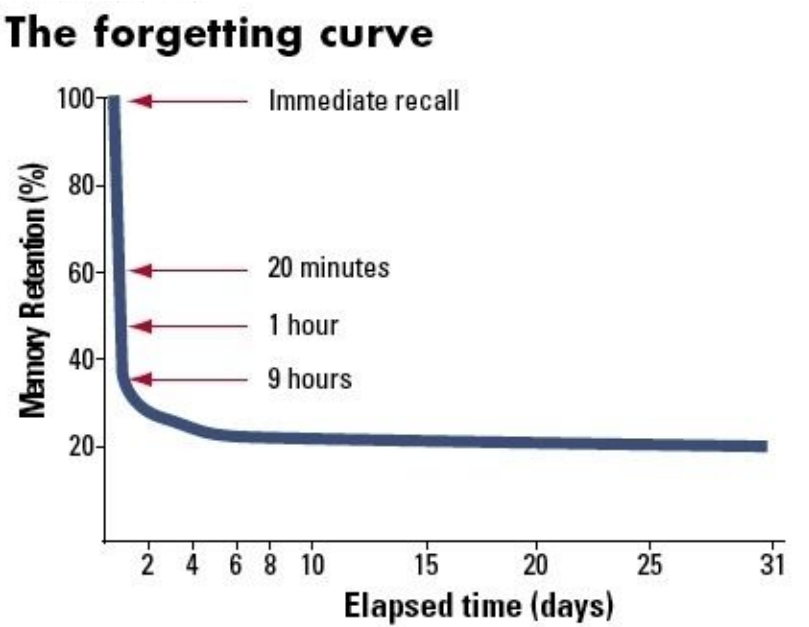


My tips on preparing for and taking exams

Active Recall Techniques

- Scan through the pages of your text book and write down all the questions you think could be asked of it.
- Read the text again in full absorbing as much information as possible
- Answer all the questions you previously wrote for yourself (making sure not to cheat)
- Go through the answers in the book
- Repeat this quiz using spaced repetition
- This can also be applied to flashcards



The "forgetting curve" was developed by Hermann Ebbinghaus in 1885. Ebbinghaus memorized a series of nonsense syllables and then tested his memory of them at various periods ranging from 20 minutes to 31 days. This simple but landmark research project was the first to demonstrate that there is an exponential loss of memory unless information is reinforced.

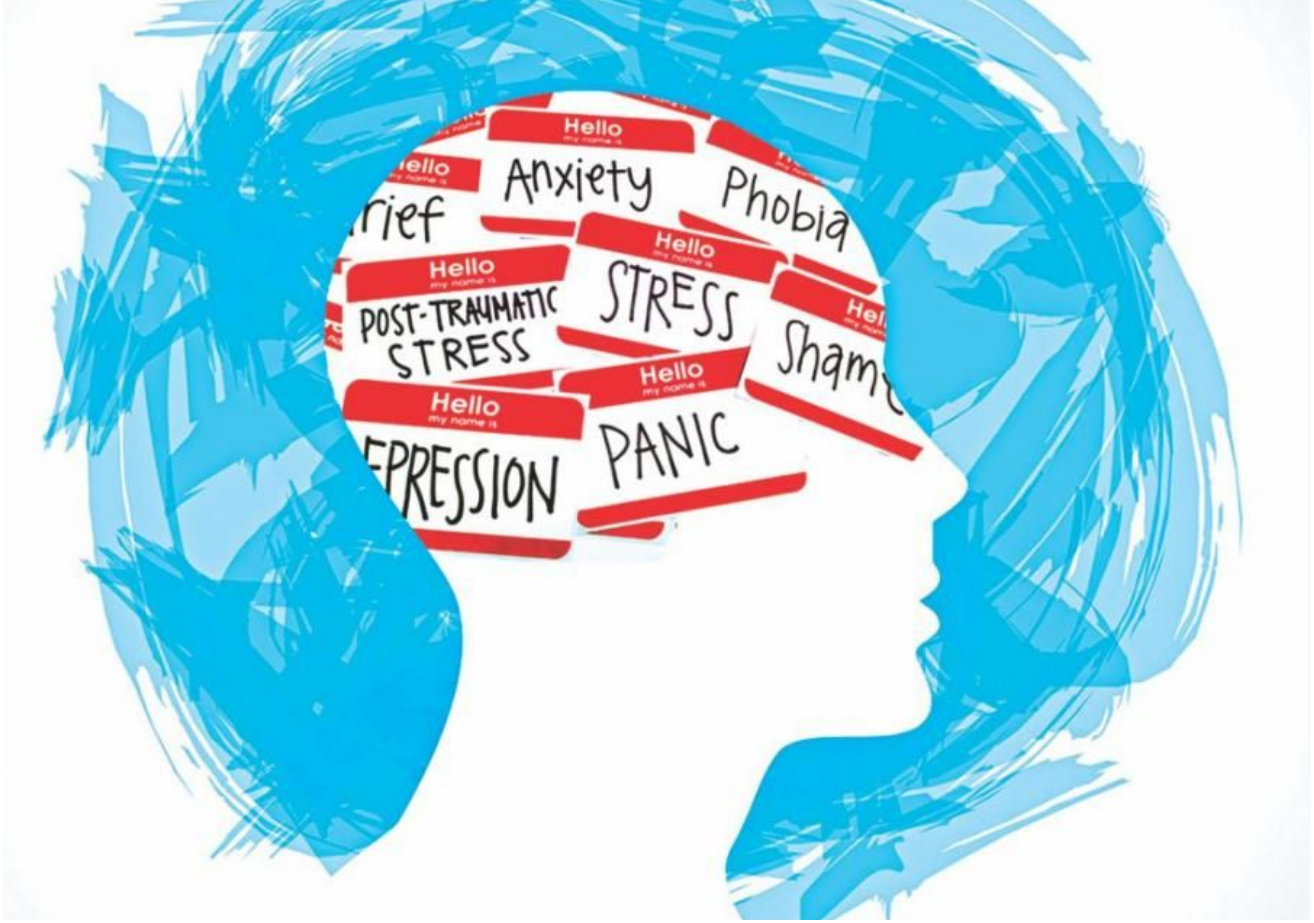
Stahl SM, Davis RL, Kim D, et al. *CNS Spectr*. Vol 15, No 8. 2010.

Make good use of all your time

- Blitz through many topics trying to actively recall as much as possible for each for many topics rather than spending time on just one.
- Record yourself reading out your notes whilst you walk home.
- Remember to include fun activities in your schedule.
- Leave your phone in your bag!
- Take regular breaks between revision to clear your mind and check your phone.
- Go to a study area with friends.

In the exam

- Read the damn question…
- Write down everything that’s in your head on the back of the paper
- Look for later questions that might help earlier ones
- If you can’t answer write down anything relevant
- Definitions



Your health is more important than a grade

A Realistic Note

- A degree does not guarantee you a job in the field you want.
- Do research into what avenues the subject you want to study will open up.

Student Debt

Once you leave university, you only repay when you're earning above £26,575 a year and even then it's fixed at 9% of everything you earn above that.

E.g.

If you earn £24,000 in a year, what do you repay?

Nothing

If you earn £27,000 in a year, what do you repay?

The answer is £115, as £27,000 is £1,275 above the threshold and 9% of £1,275 is £115.

And if you earn £35,000, what do you repay?

The answer is £835. £35,000 is £9,275 above the threshold and 9% of that is £835.

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The A Level Mindset

1. Vision
2. Effort
3. Systems
4. Practice
5. Attitudes

Unconditional Offers

Sleep Deprivation

Study 1:

Sleep deprived vs full night's sleep

Retrieval practice

40% fewer pieces of information

Study 2:

Monitoring of sleep patterns

Sleep duration and quality the month and week before an assessment correlated with grades.

Student 1: A grade

Student 2: B grade

Thank you for coming!