



How to get the best from your revision

- *What did you have for dinner last Friday?*
- *Can you multiply 53×17 in your head?*
- *(Parents) Can you remember your home phone number when you were growing up?*

Tonight's Session



- 1. What are the best revision strategies?
- 2. What can I do if it is not sticking?



Experiment

Equipment:

Person A

Person B



Experiment

Person B: Close your eyes



Group A

You have been shipwrecked on an Island with 7 other people. There is no running water, no means of communication and you are likely to be here for some time.

When you see the list of words please rate each one on a scale of 1 – 5 as to how necessary each is to aiding your survival.

(1 – not necessary : 5 – vital)

Experiment

Person A: Close your eyes



Group B

You will see a list of words.

Please count the number of vowels in each word.

Word List

- ✓ The words will appear here.
- ✓ Your task is to recall as many words as possible.
- ✓ Do not write anything until the list has finished.

Bacteria

Body

Institute

Journal

Opium

Contract

Magazine

Hostage

Sunrise

Tomb

Recall Task

Please recall as many of the different words as you can.

Recall Task

Bacteria

Body

Institute

Journal

Opium

Contract

Magazine

Hostage

Sunrise

Tomb

Daniel Willingham

“Memory is the residue of thought.”

ASK THE COGNITIVE SCIENTIST

What Will Improve a Student's Memory?



How does the mind work—and especially how does it learn? Teachers' instructional decisions are based on a mix of theories learned in teacher education: trial and error, craft knowledge, and

on the test. I've found that these students typically know little about how their memories work and, as a result, do not know how to study effectively.

Tonight's Session



- 1. What are the best revision strategies?
- 2. What can I do if it is not sticking?



Strengthening the Student Toolbox

Study Strategies to Boost Learning



BY JOHN DUNLOSKY

gies are actually the most effective,¹ and at least on the surface
should seem sound, such as because some of the following are all

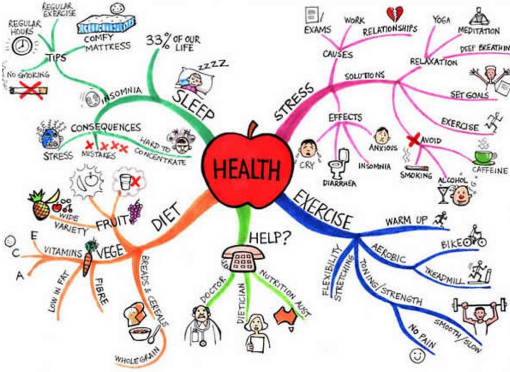
Active not passive



5 key revision strategies



1. Retrieval Practice - What do you already know?



Free recall

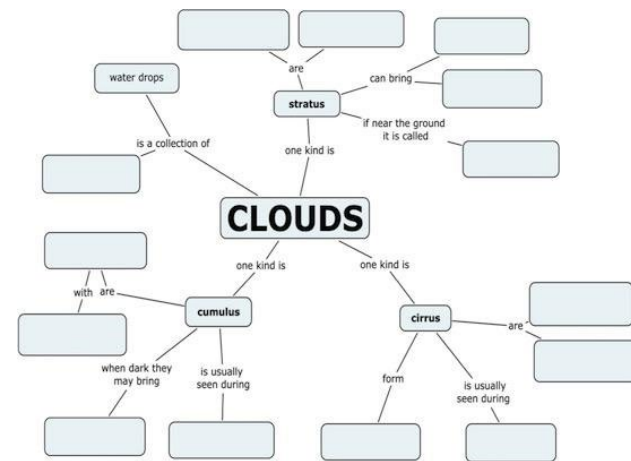
IMPORTANT:
check your
notes/guide for
accuracy after



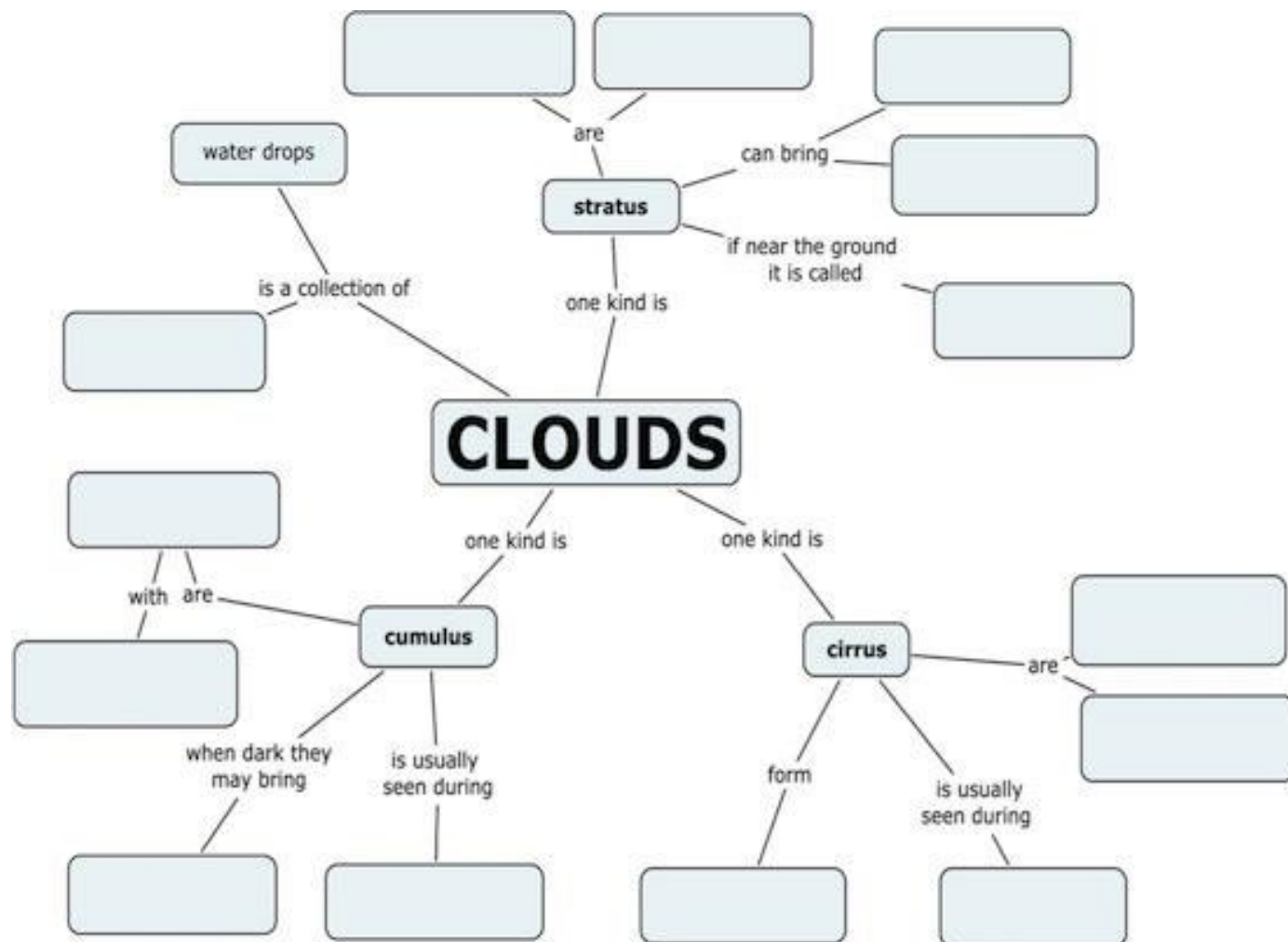
Close your eyes



Group discussion



Partial completion



Character Summaries

Macbeth - A warlike Scottish Thane (Lord) who betrays and murders his king for power. He is the tragic hero who suffers downfall.

Lady Macbeth - Macbeth's ambitious and manipulative wife.

Duncan - A good and benevolent Scottish king murdered by Macbeth.

Banquo - Macbeth's noble friend, who also receives a prediction from the witches. Banquo has a son called Fleance.

Macduff - A Scottish Lord who seeks revenge on Macbeth.

Witches - Three 'weird sisters' who offer Macbeth

Character Summaries

_____ - A warlike Scottish Thane (Lord) who betrays and murders his king for power. He is the tragic hero who suffers downfall.

_____ - Macbeth's ambitious and manipulative wife.

_____ - A good and benevolent Scottish king murdered by Macbeth.

_____ - Macbeth's noble friend, who also receives a prediction from the witches. Banquo has a son called Fleance.

_____ - A Scottish Lord who seeks revenge on Macbeth.

_____ - Three 'weird sisters' who offer Macbeth various prophecies.

_____ - Duncan's son and heir, who flees to England

| | | |
|----|--|---------------------------------|
| 1 | L'*nn** d*rn**r* | <i>Last Year</i> |
| 2 | J* s**s *ll* | <i>I went</i> |
| 3 | *v*c m* f*m*ll* | <i>With my family</i> |
| 4 | *n * v*y*g* *n... | <i>We travelled by...</i> |
| 5 | c'*t**t... | <i>It was</i> |
| 6 | J* s**s r*st* d*ns... | <i>I stayed in...</i> |
| 7 | L* p*sc*n* *t**t gr*nd* *t *m*s*nt* | <i>The pool was big and fun</i> |
| 8 | J'* v*s*t* d*s m*n*m*nts | <i>I visited some monuments</i> |
| 9 | *l f**s**t ch**d | <i>It was hot</i> |
| 10 | J* v**dr**s r*t**rn*r | <i>I would like to return</i> |

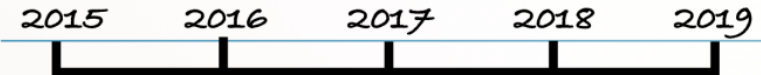
| | | |
|----|-------------|---------------------------------|
| 1 | L'a d | <i>Last Year</i> |
| 2 | J s a | <i>I went</i> |
| 3 | A m f | <i>With my family</i> |
| 4 | O a v e... | <i>We travelled by...</i> |
| 5 | c't... | <i>It was</i> |
| 6 | J s r d... | <i>I stayed in...</i> |
| 7 | L p é g e a | <i>The pool was big and fun</i> |
| 8 | J' v d m | <i>I visited some monuments</i> |
| 9 | I f c | <i>It was hot</i> |
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| | | |
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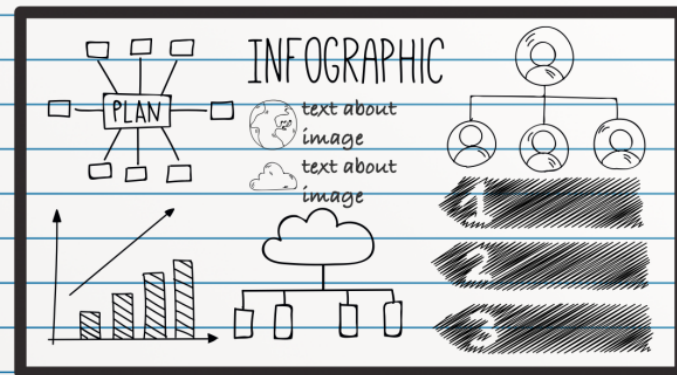
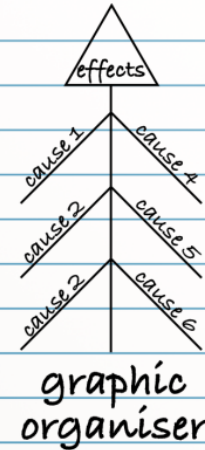
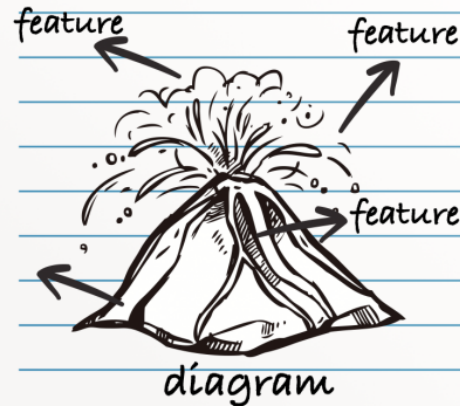
2. Dual Coding

- combining
visual and text

timeline



event 1 event 2 event 3 event 4 event 5



infographic

June - Saint's
day

Flowerden
confronted

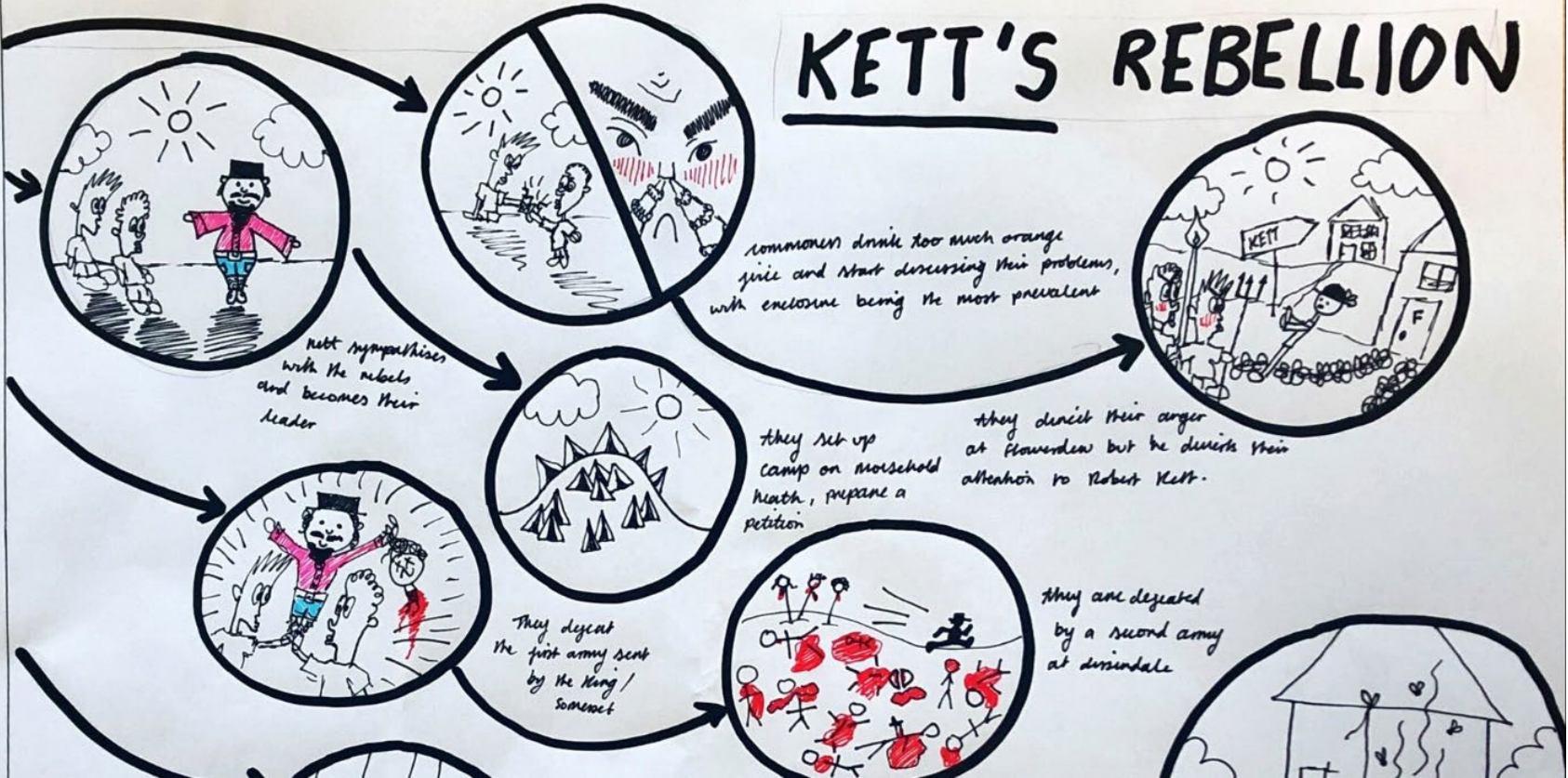
Kett's
confrontation

Camp on
Morsehold
Heath

defeat the
King's first
army

defeated by the
King's second
army.

KETT'S REBELLION



Nuclear



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!



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!

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!

Is it really that dangerous?

Despite the seemingly huge impact 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.

| Country | Deaths |
|---------|--------------------------|
| U.S. | 10,000+ deaths |
| Europe | 22,300+ deaths |
| India | 80,000 - 115,000 deaths! |

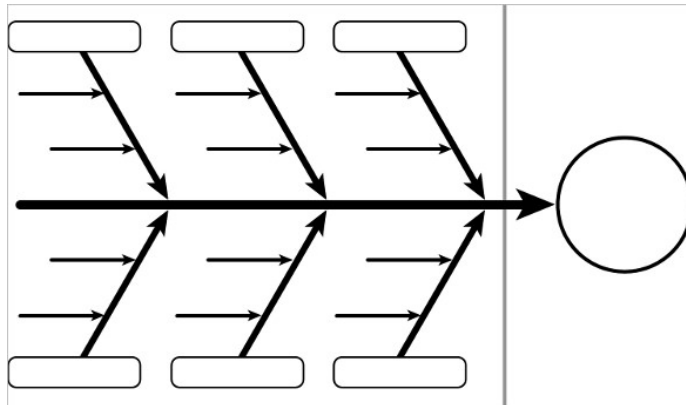
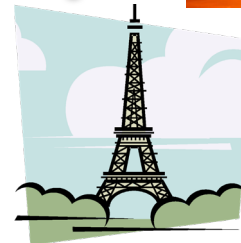
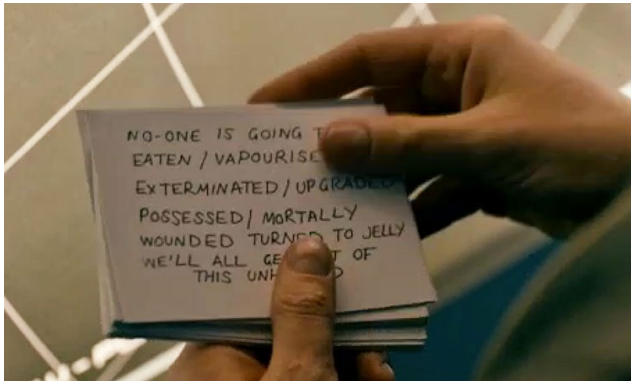
How do nuclear plants work?

- 1) First, you have the fuel, usually Uranium, which must be:
 - 1) MINED...
 - 2) ENRICHED... ^{235}U ISOTOPE
 - 3) THEN, FORMED INTO PELLETS WHICH ARE PLACED IN RODS WITHIN THE REACTOR!

FACT... DID YOU KNOW?

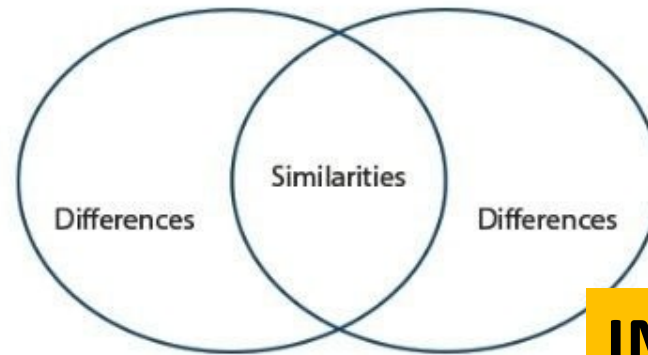
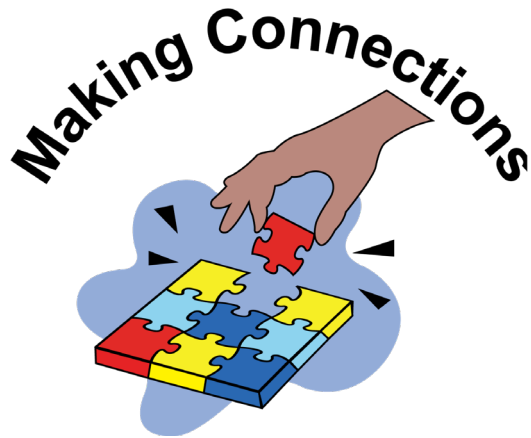


Transform notes into visual representations



IMPORTANT: reverse the process, i.e. produce something written or spoken from the visuals

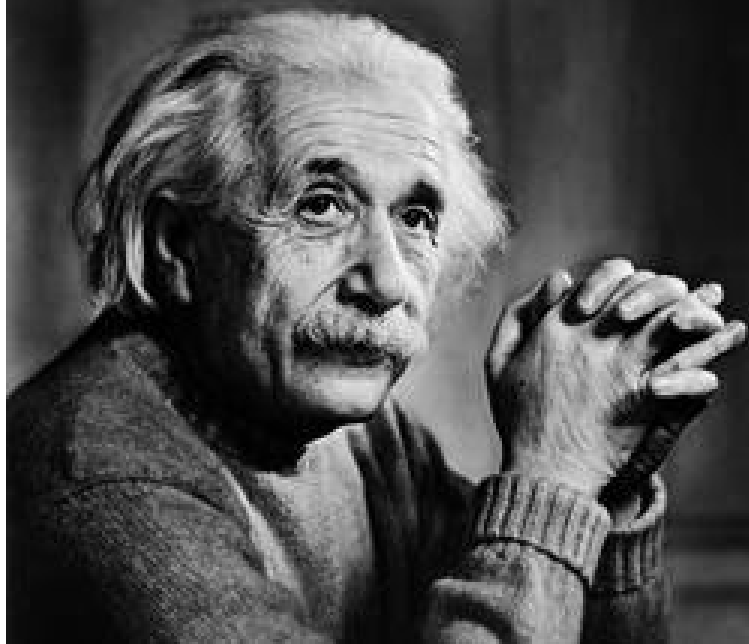
3. Go beyond the facts - describe, and explain in detail, ask why?



IMPORTANT: work up to being able to describe and explain without looking at notes

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

– Albert Einstein



Of course I talk to
myself. Sometimes
I need expert advice.

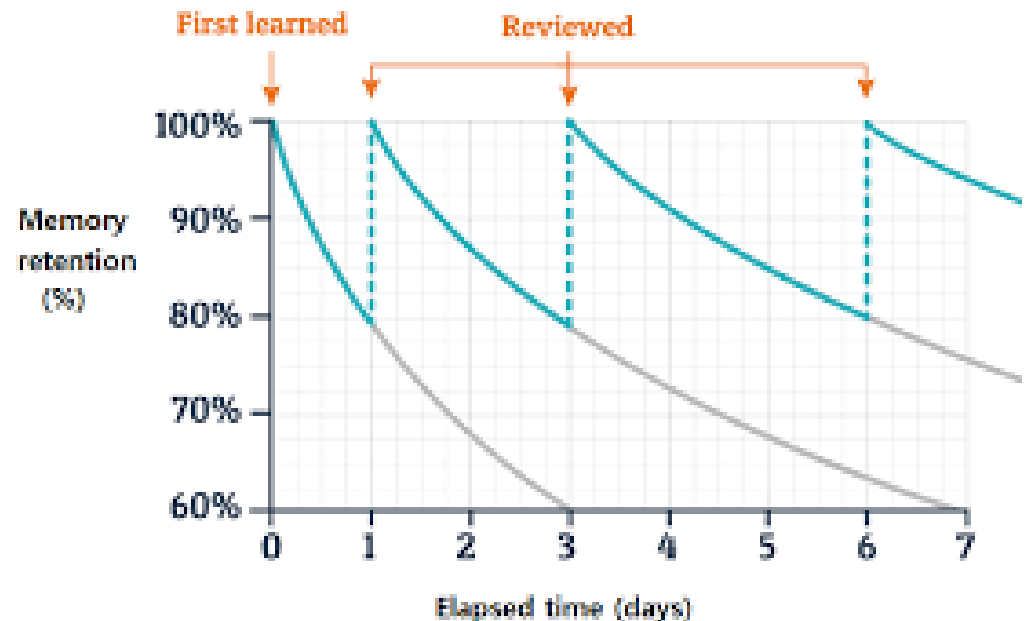
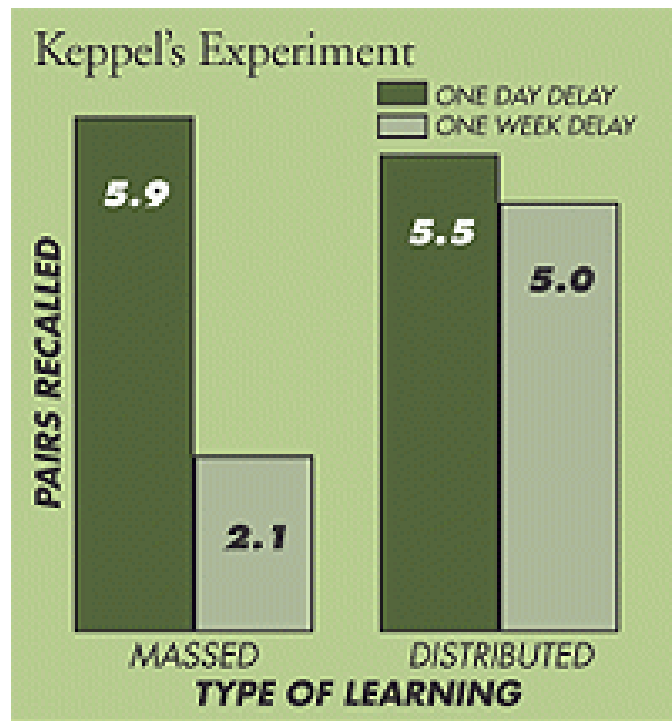


4. Space your learning and mix up your revision - have some time to forget!

Concentrated Practice

VS.

Distributed Practice

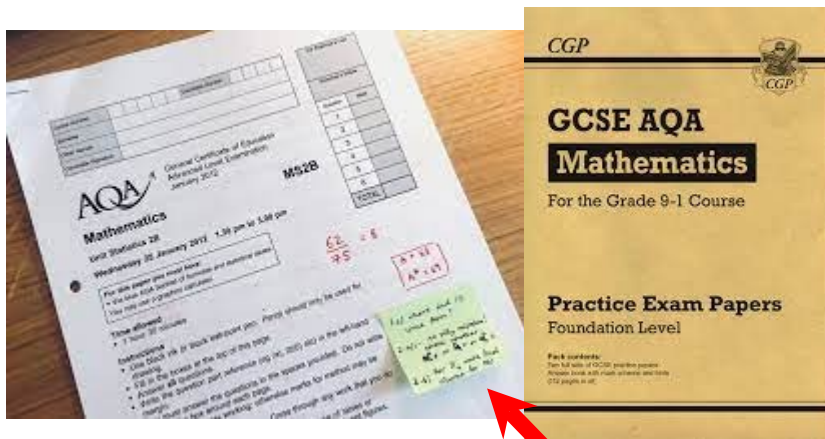


4. Space your learning and mix up your revision - have some time to forget!

Use interleaved practice

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| T | T | T | T | T | T | T | T | T | T | T | T | T | T | T | |
| O | O | O | O | O | O | O | O | O | O | O | O | O | O | O | |
| P | P | P | P | P | P | P | P | P | P | P | P | P | P | P | |
| I | I | I | I | I | I | I | I | I | I | I | I | I | I | I | |
| C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | |
| 1 | 2 | 3 | 4 | 4 | 2 | 1 | 3 | 1 | 3 | 2 | 4 | 4 | 2 | 3 | 1 |

5. Deliberate Practice



Perfect
**PRACTICE
MAKES
PERFECT**



edexcel
advancing learning. changing lives



Mark scheme

| | |
|--|---|
| <p>[Level 3] Answer gives a correct explanation of how Deflex may reduce transmission across synapses in terms of its effect on (neuro)transmitters or receptors. Quality of written communication does not impede communication of the science at this level. (5 – 6 marks)</p> <p>[Level 2] Answer indicates reduction of transmission across synapses OR reduced activity of (neuro)transmitters. Mechanism unclear. Quality of written communication partly impedes communication of the science at this level. (3 – 4 marks)</p> <p>[Level 1] Suggests that Deflex is a depressant or reduces transmission of impulses. Quality of written communication impedes communication of the science at this level. (1 – 2 marks)</p> <p>[Level 0]</p> | <p>6 This question is targeted at grades up to A*</p> <p>Indicative scientific points at level 3 may include:</p> <ul style="list-style-type: none"> Deflex binds with receptors in synapses transmitter can no longer bind to receptors binds with the neurotransmitter once released breaks down the released neurotransmitter <p>Indicative scientific points at level 2 may include:</p> <ul style="list-style-type: none"> Deflex works on synapses Deflex reduces amount of transmitter substance <p>Indicative scientific points at level 1 may include:</p> <ul style="list-style-type: none"> Deflex is a depressant no impulse sent along second neurone <p>ignore Deflex is a sedative / sleeping tablet</p> <p>ignore Deflex affects / slows the nervous system</p> |
|--|---|

Exam Diagnostic: S1 May 2013

| 10001 | John Smith |
|----------------|------------|
| Target Grade | C |
| Class Teacher | Mr Uddin |
| TEACHING CLASS | Year 12 |
| EXAM 1 | D |
| EXAM 2 | C |
| CURRENT | B |

| Q | TOPIC | MAX | MARKS |
|----|--|-----|-------|
| 1 | Calculating variability of bivariate data (Six, Sy) | 3 | 3 |
| 2 | Calculating PMCC | 2 | 2 |
| 3 | Using the PMCC | 1 | 1 |
| 4 | Regression line | 4 | 4 |
| 5 | Interpreting regression line | 1 | 1 |
| 6 | Using regression line | 2 | 2 |
| 7 | Interpreting data from boxplots | 1 | 1 |
| 8 | Interpolation to find median and IQR | 3 | 3 |
| 9 | Drawing boxplots | 5 | 5 |
| 10 | Using boxplots to compare data | 2 | 2 |
| 11 | Calculating probabilities from two-way tables | 4 | 4 |
| 12 | Drawing Venn diagrams (three way) | 4 | 4 |
| 13 | Using Venn diagrams to interpret probabilities | 2 | 2 |
| 14 | Estimating mean and sd from grouped data | 3 | 3 |
| 15 | Linear interpolation to calculate | 2 | 2 |
| 16 | Linear interpolation to estimate lower quartile | 1 | 1 |
| 17 | Estimating the IQR of the distribution | 2 | 2 |
| 18 | Commenting/comparing measures of location | 1 | 1 |
| 19 | Coding | 3 | 3 |
| 20 | Mean of discrete random variable | 5 | 5 |
| 21 | The expected value for X^2 | 1 | 1 |
| 22 | The variance of a random variable | 3 | 3 |
| 23 | Cumulative distribution function | 1 | 1 |
| 24 | Probability distribution | 3 | 3 |
| 25 | Finding probabilities of random variables | 2 | 2 |
| 26 | Finding the value of the mean - μ | 3 | 3 |
| 27 | Using the percentage points to calculate probability | 3 | 3 |
| 28 | Finding the standard deviation - σ | 4 | 4 |
| 29 | - | 2 | 2 |
| 30 | - | 2 | 2 |
| | | 75 | 53 |

16/04/2016





Key strategies to make revision effective



Revision

1. Retrieval Practice
2. Transform notes - dual coding
3. Go beyond the facts
4. Distribute your revision
5. Practise questions and past papers

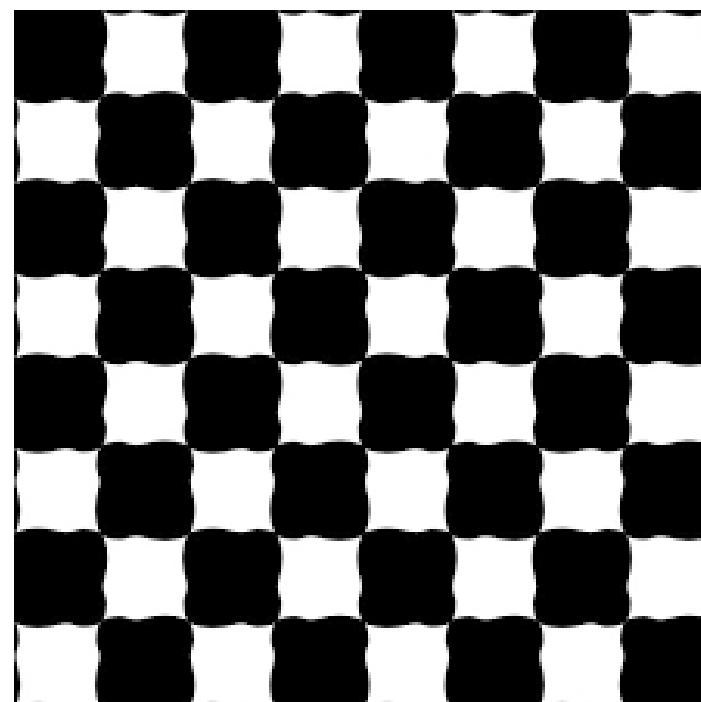
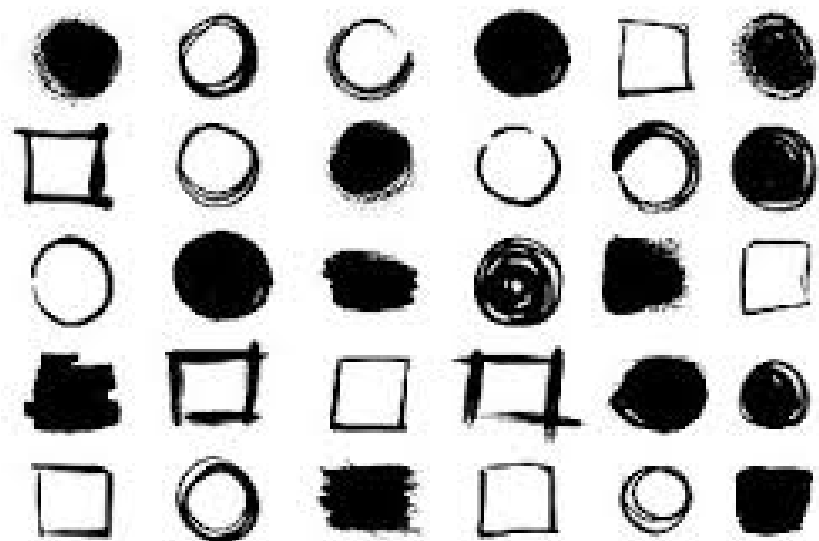


Tonight's Session



- 1. What are the best revision strategies?
- 2. What can I do if it is not sticking?





Use Mnemonics

Ordering Mathematical Operations

| | | | | | |
|-------------------|----------------------------|--------------------|----------------------------|-----------------|-----------------|
| B | O | D | M | A | S |
| Brackets (...) | Orders \sqrt{x} x^2 | Division \div | Multiplication \times | Addition $+$ | Subtract $-$ |



A.V.O.C.A.D.O. =



MAIN

1. A → Adjectives
2. V → Verbs (Variety of Verbs)
3. O → Opinions
4. C → Connectives
5. A → Adverbs
6. D → Description
7. O → ORIGINALITY

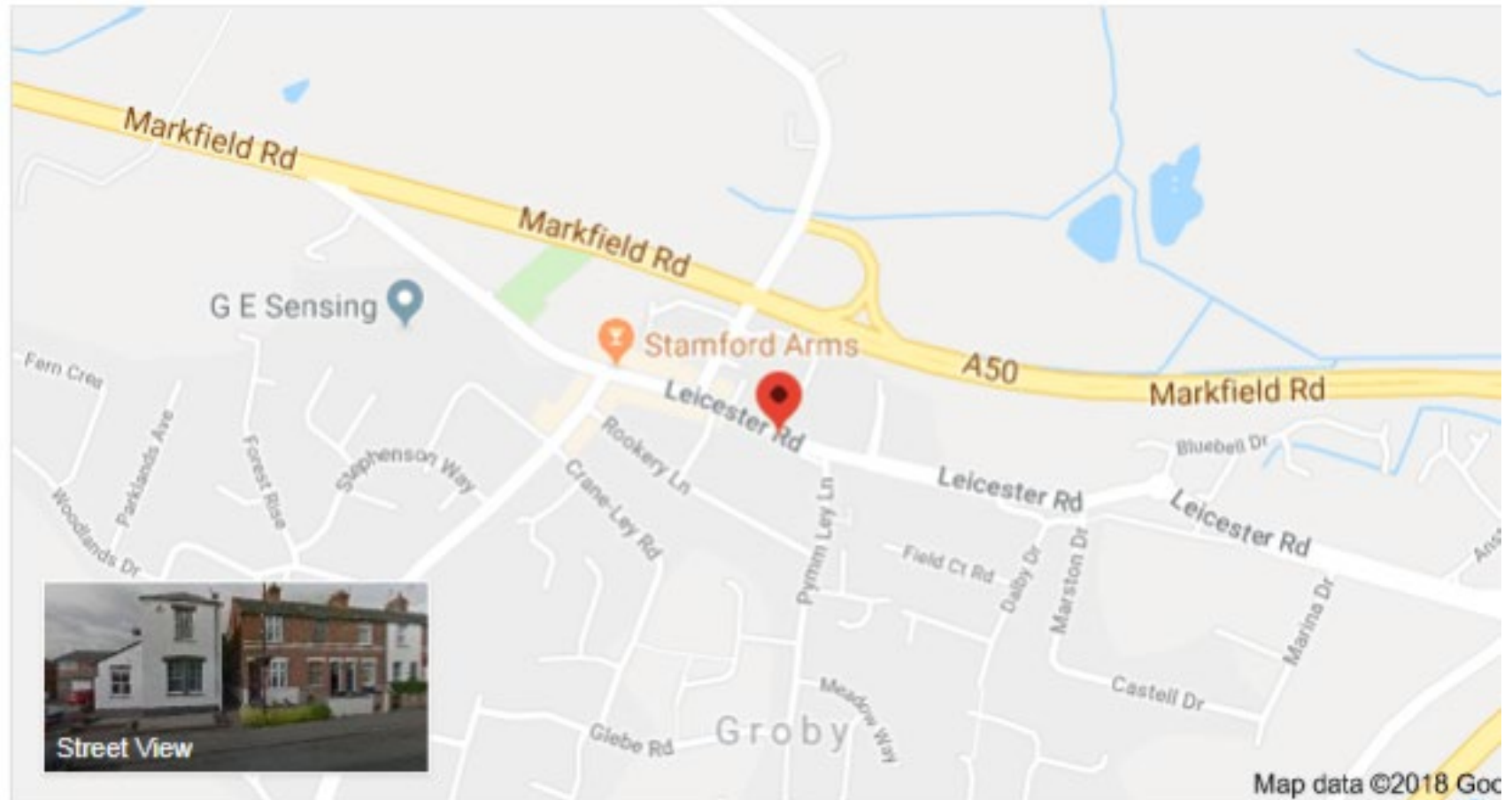


Mnemonic Device: MAIN

Explanation: to remember the four MAIN causes of world war 1
Militarism, Alliance System,
Imperialism, Nationalism

 [More Mnemonics for History](#)

Go on a familiar journey!



50 Leicester Rd, Groby, Leicester LE6 0DJ

[Get directions](#)

Use stories



Final tips...!



Key strategies to make revision effective





Thank you for participating.

Have a good evening!