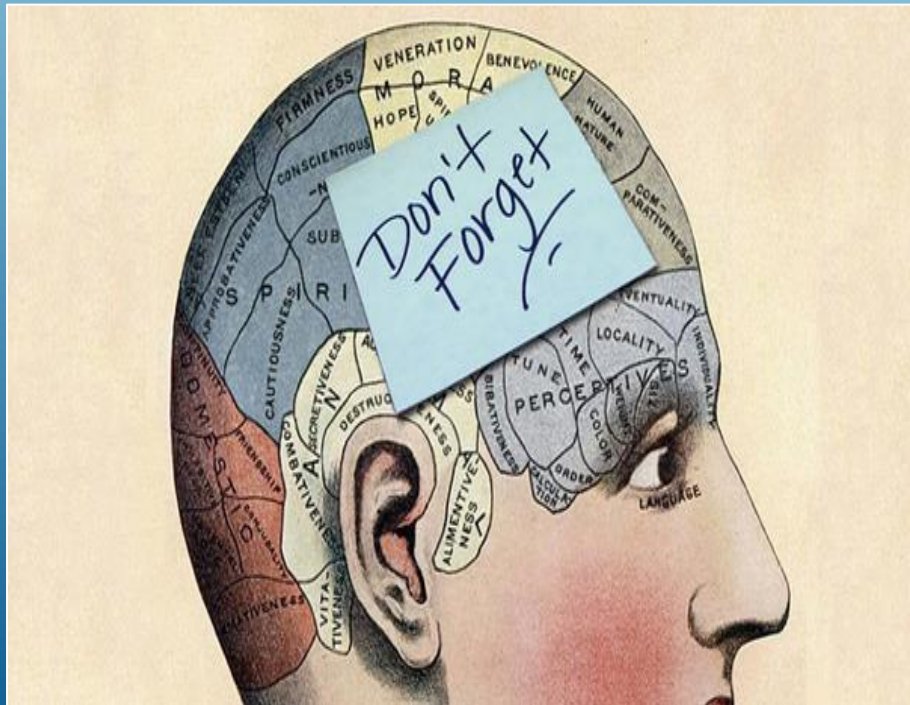


Learning to shape the future

Understanding the science of learning to help you to retain and recall information



EPCHS6th

OUR STRANGE MEMORIES

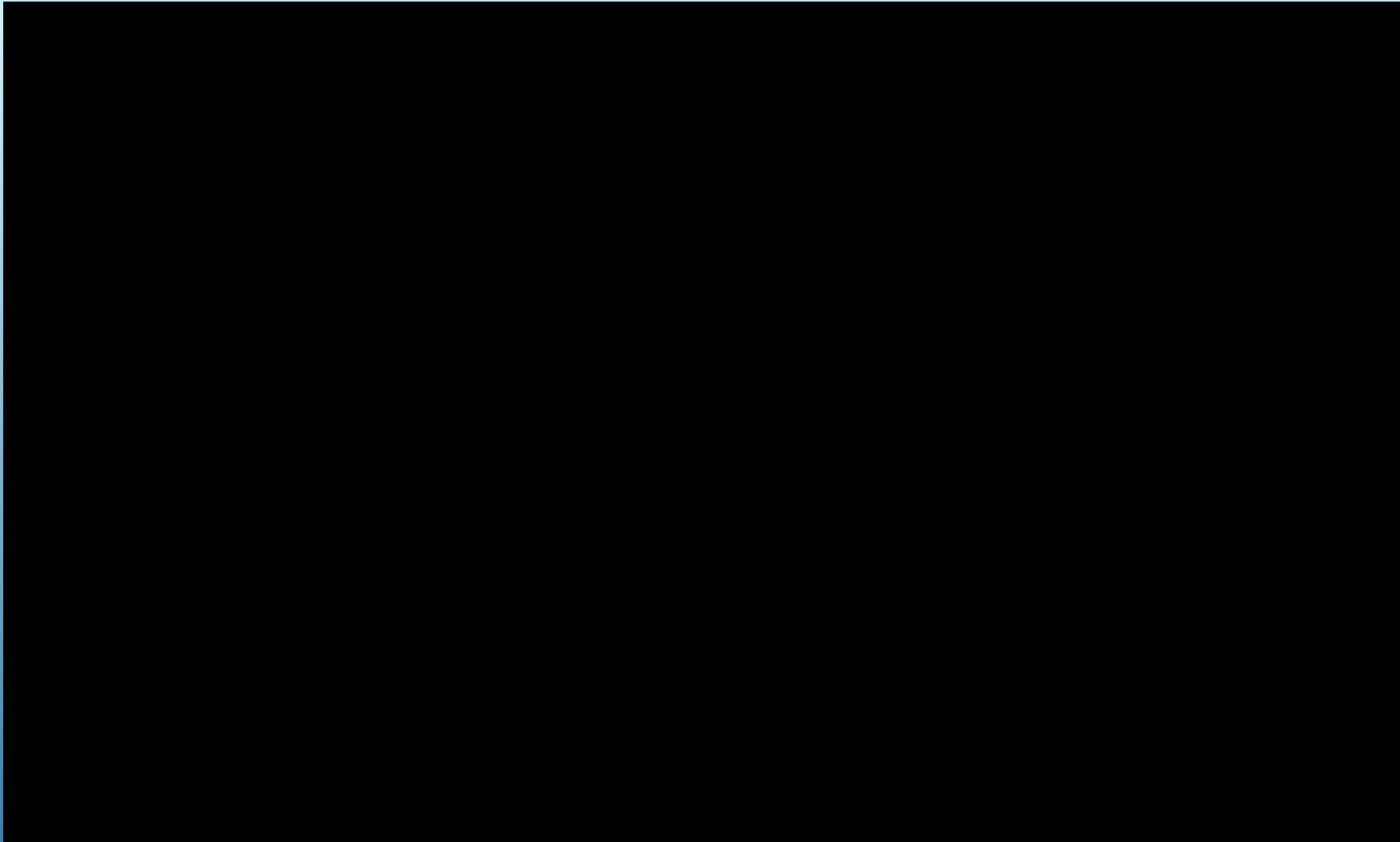
What do you remember about your primary school?

Why do you think you remember these things?

Why do you think that we remember song lyrics from 5, 10, 30 years ago?

How can we explain the fact that 12 year old boys can recall detailed statistics about Mo Salah's season for Liverpool, but can't remember their times tables?







**There were 17 items
on the conveyer belt
– how many do you
remember?
What techniques did
you use to try and
remember them?**

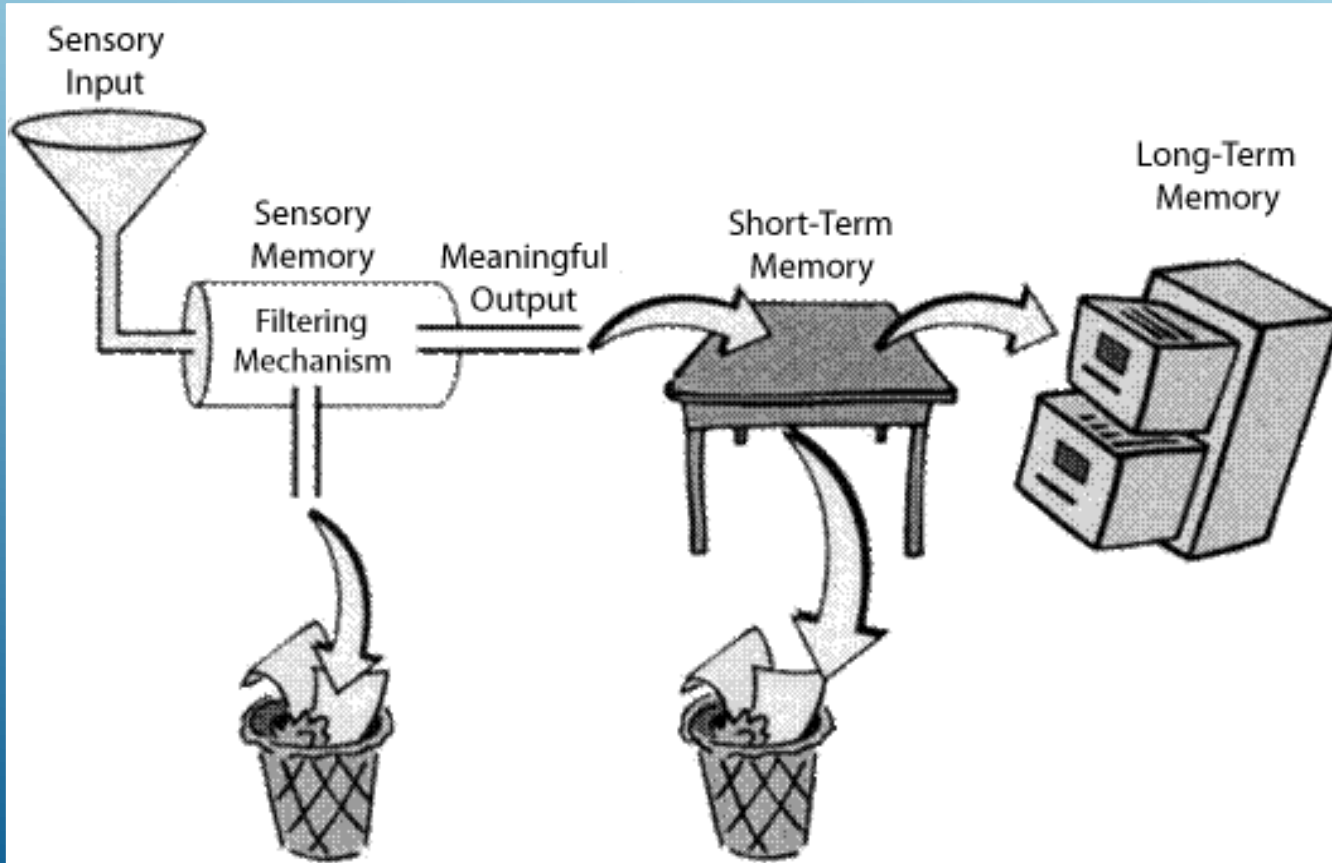


EPCHS6th

- 
- 
1. Loaf of bread
 2. Mobile phone
 3. Cup of tea
 4. Microphone
 5. Tin of Paint
 6. DVD
 7. Candle
 8. Diamond Tiara
 9. Shampoo
 10. Camera
 11. Violin
 12. Kettle
 13. Bible
 14. Computer
 15. Cuddly Toy
 16. Bird House
 17. Rabbit

How does memory work?

Memory is a highly complex process involving multiple components working simultaneously. Everything begins as sensory input from our environment. Using our sensory systems, we see, hear or feel a sensation or stimuli. Information 'grabbed' or made meaningful, moves on to short-term memory.

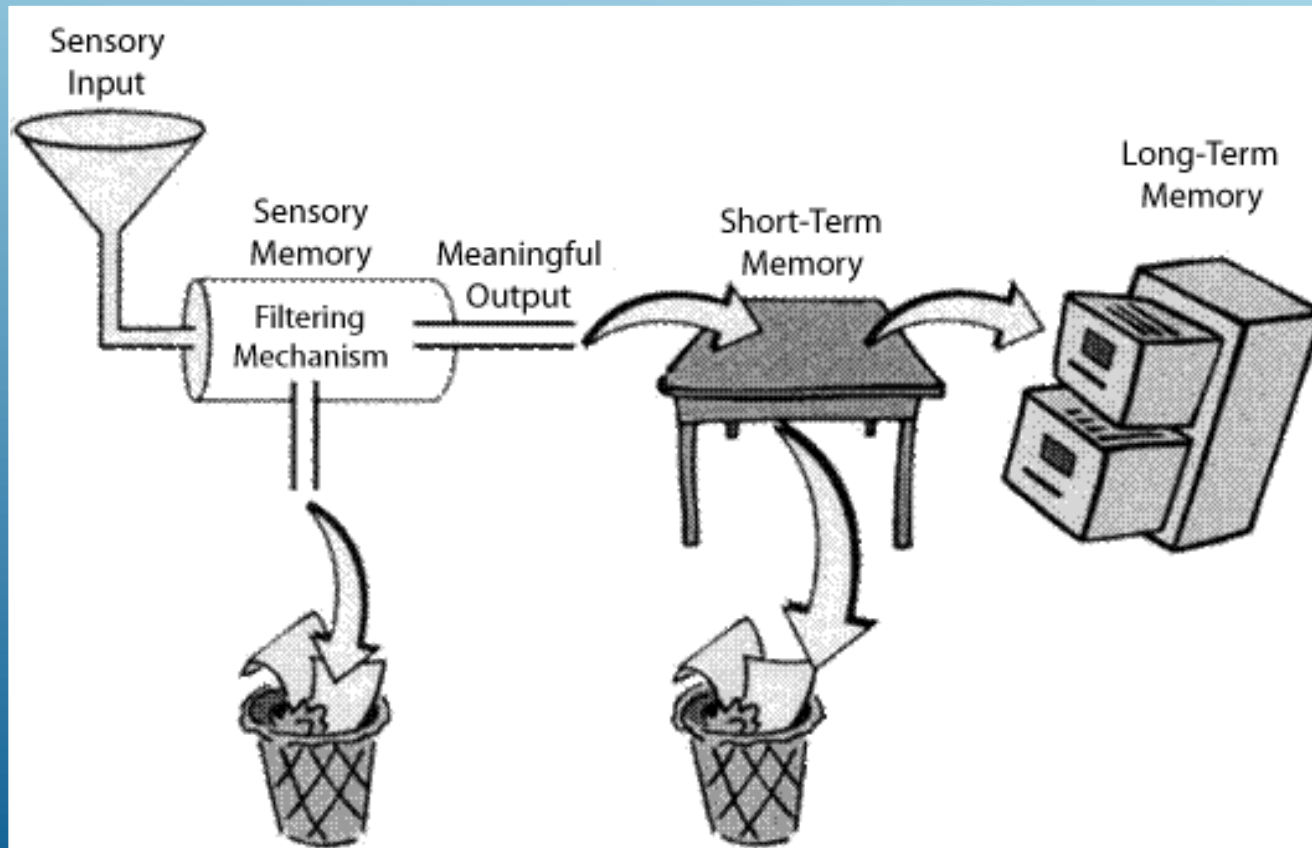


Our brains are programmed to pay attention to the unusual – something different. Incorporating novelty such as movement, music, humour, images into strategies help the information attract our attention. The use of strategies plays a very critical role in structuring input to help it move into long term memory in a meaningful and memorable format.

How does memory work?

To establish a more durable memory, we need to prevent information from being 'dumped'.

If the information is important and rehearsed it moves to another part of the brain and then is eventually stored in long term memory.

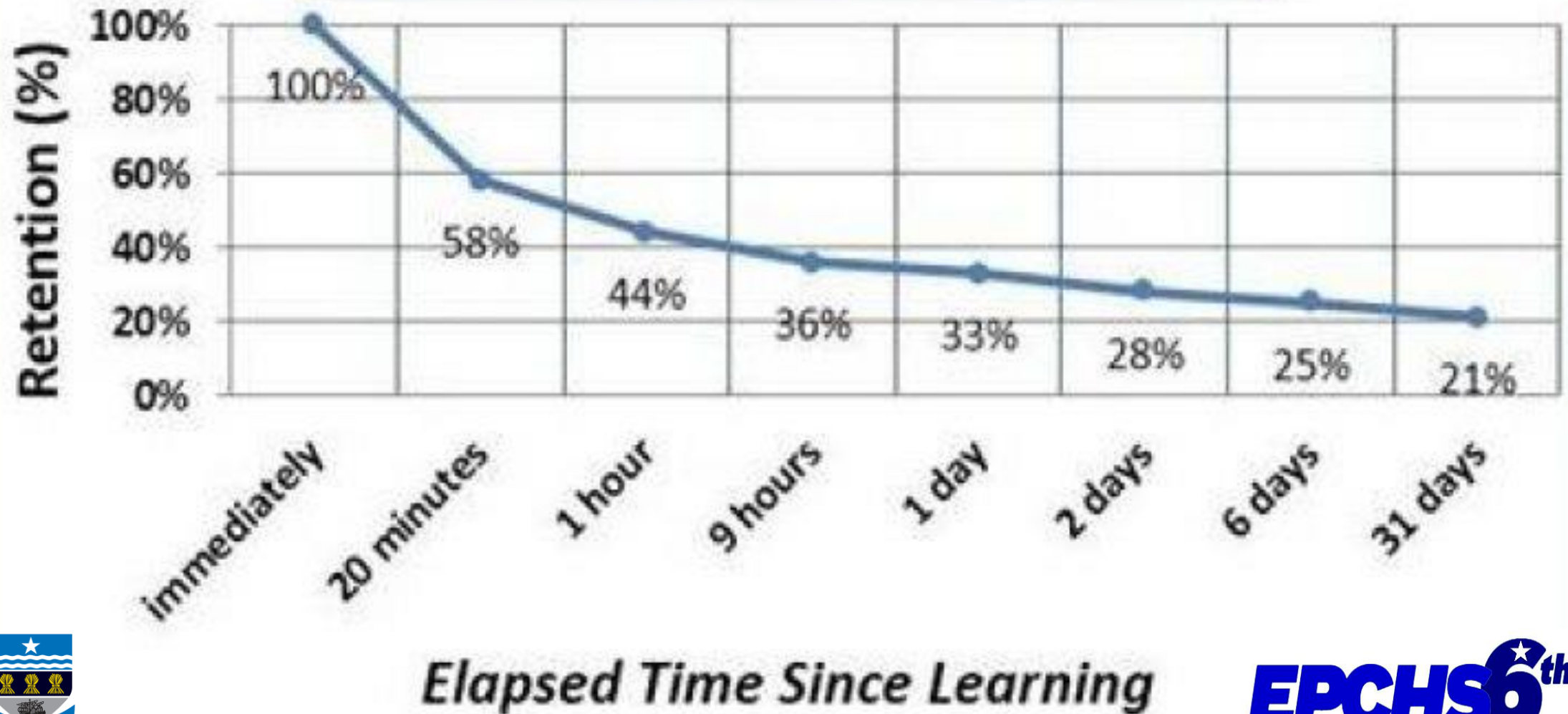


There is more than one way to store a given memory. One person may prefer to remember a list by singing it whereas another person may prefer to visualise an association. There is no correct way.

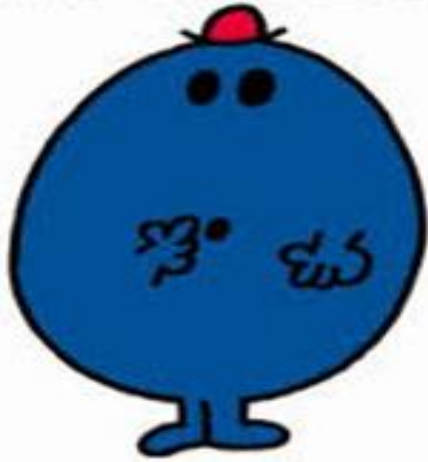


EPCHS6th

Ebbinghaus Forgetting Curve



MR. FORGETFUL

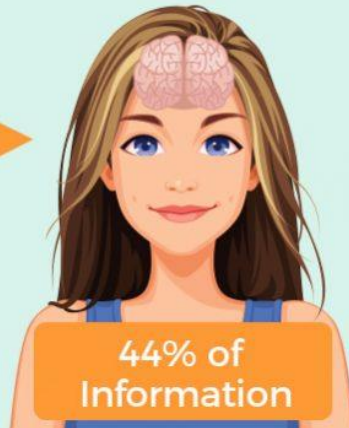


Why we forget

- ❖ Don't understand context
- ❖ Conflicting contexts
- ❖ Lack of attention
- ❖ Lack of motivation
- ❖ Confusion
- ❖ Lack of associations/cues
- ❖ No review, or too long before a review
- ❖ New material might push out old material

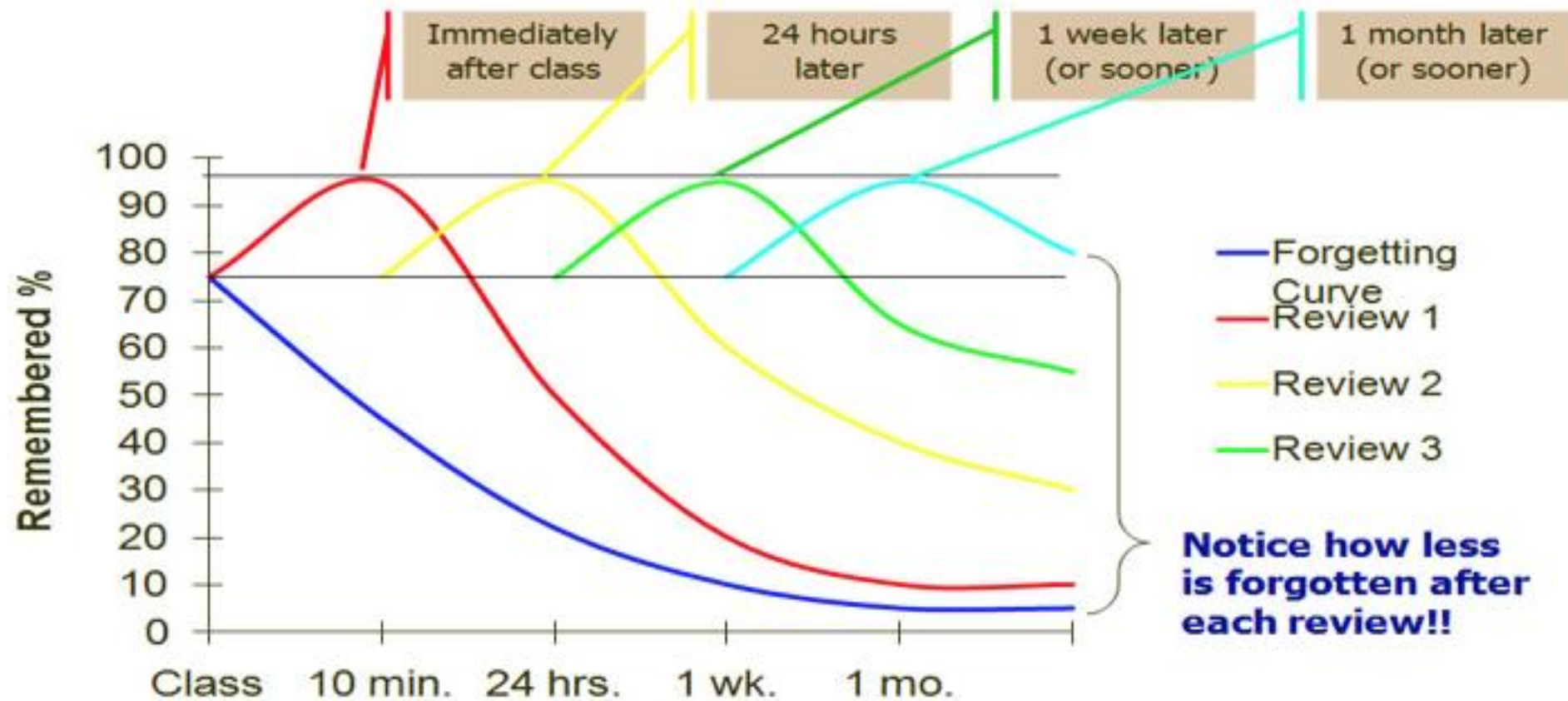
AFTER LEARNING

AFTER 1 HOUR



EPCHS6th

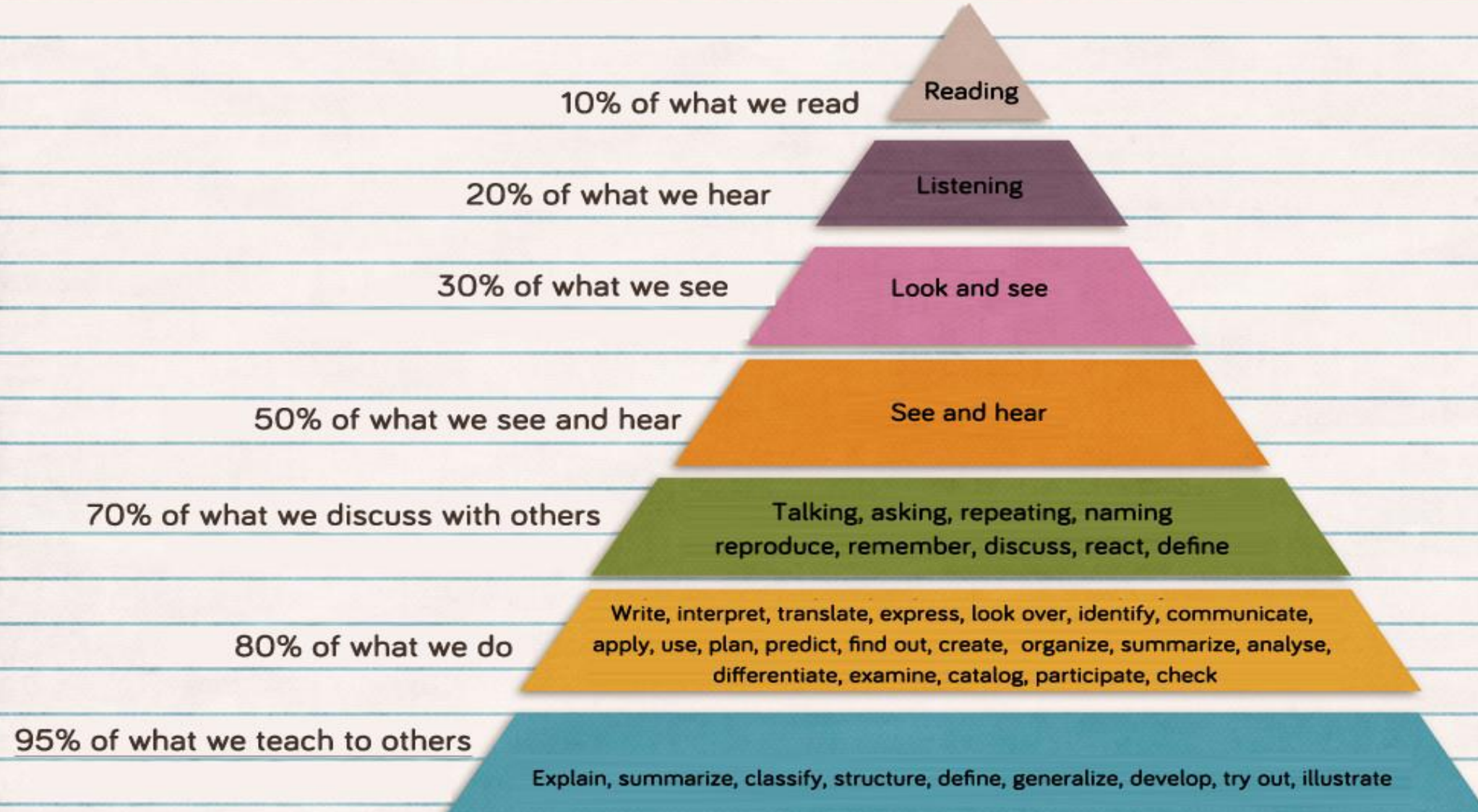
Overcoming the Curve



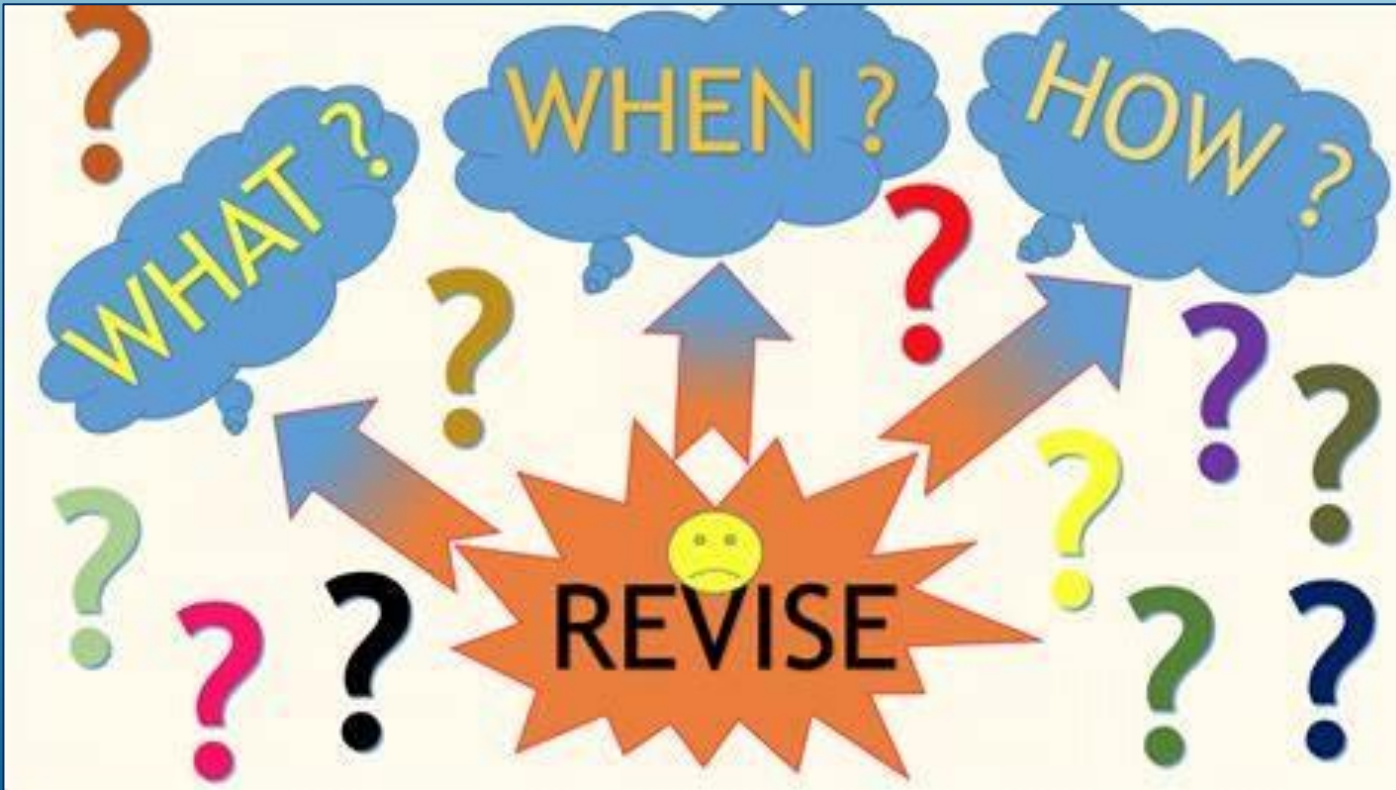
<https://www.youtube.com/watch?v=cVf38y07cfk&vl=en>

EPCHS 6th

How Do We Learn?



I don't know how to revise



Routines and Habits

Creating an effective revision environment



- ✓ Find a quiet, tidy room with minimal distractions – your bedroom, library or classroom
- ✓ Put your phone in another room, it is too much of a distraction
- ✓ Put your revision timetable, exam timetable and other key documents visible on your wall
- ✓ Loud music is a distraction, if you must listen, it needs to be low tempo, without lyrics
- ✓ Have all your revision materials and stationary on your desk ready to go – make it obvious
- ✓ Make sure you have a drink and snack with you, staying hydrated is important

Ineffective revision strategies

The science of learning has also told us there are several ineffective revision strategies which remain popular. Students often feel as they have been 'busy' doing these, thinking that they are revising hard. However, they have little impact.



Re-Reading

This gives a false sense that you 'know it'. However, but your brain isn't doing any hard work or learning.



Highlighting

It wastes time & leaves you focusing on a narrow area, often missing the big picture of the notes.



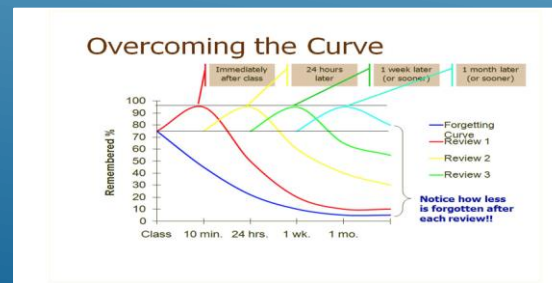
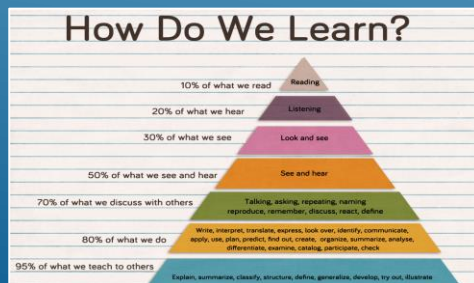
Cramming

This essentially overloads your working memory, you can't learn it all. It causes stress/anxiety before exams



Re-Writing

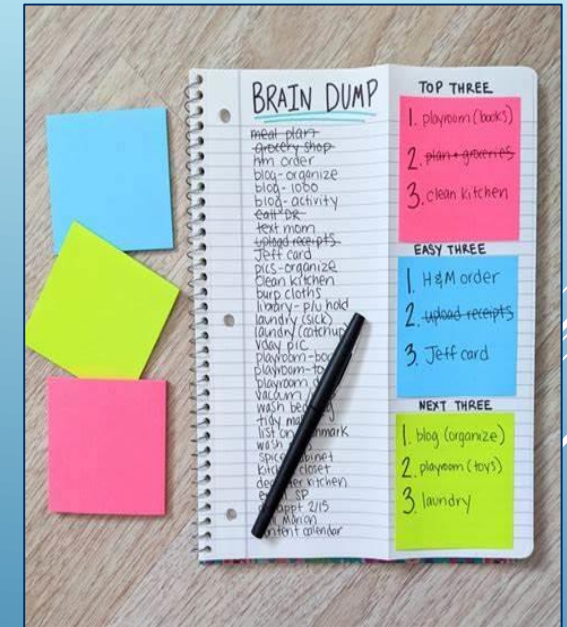
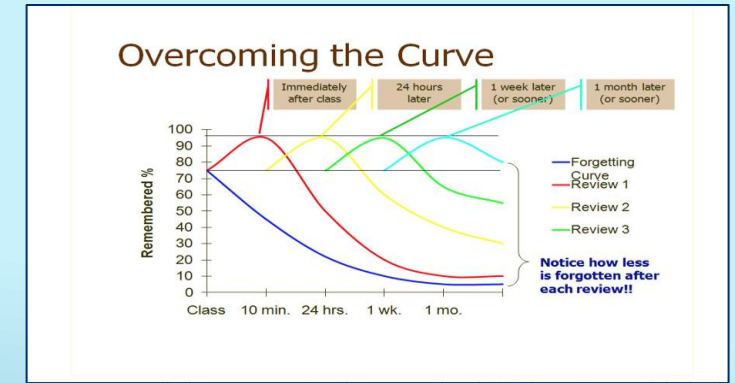
Writing out your notes again isn't making your brain do any hard work, it simply wastes time.



Retrieval Practice

Retrieval Practice is a learning strategy which makes you think hard and brings information to mind. It is knowledge that boosts learning and strengthens memory.

- ✓ Knowledge quizzing, low stakes testing and multi-choice tests.
- ✓ Completing past papers or practice answers
- ✓ Answering verbal questions asked by teachers/peers/parents/guardians
- ✓ Summarising, creating flash cards or revision materials where you can 'test' yourself
- ✓ A brain dump where students write down everything they know about a topic



Retrieval Practice

Summary: Brain dumps



1.

Identify knowledge

Identify the knowledge/topic area you want to cover.



2.

Write it down

Take a blank piece of paper/white board and write down everything you can remember about that topic. (with no prompts)

Give yourself a timed limit (e.g. 10 minutes)



3.

Organise information

Once complete and you cannot remember any more use different colours to highlight/underline words in groups.

This categories/links information.



4.

Check understanding

Compare your brain dump to your K/O or book and check understanding.

Add any key information you have missed (key words) in a different colour.



5.

Store and compare

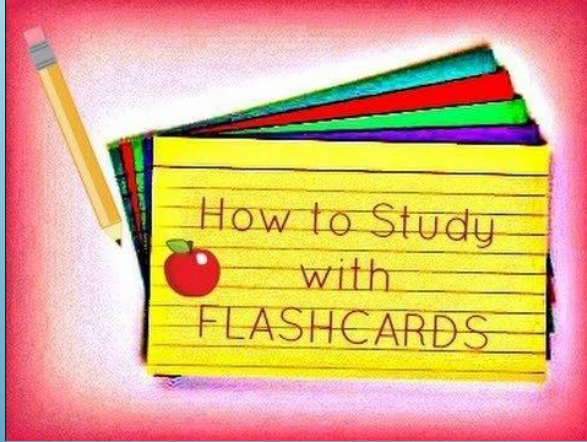
Keep your brain dump safe and revisit it.

Next time you attempt the same topic try and complete the same amount of information in a shorter period of time or add more information.

Brain dumps are a way of getting information out of your brain.

Retrieval Practice

Technique: flash/cue cards:

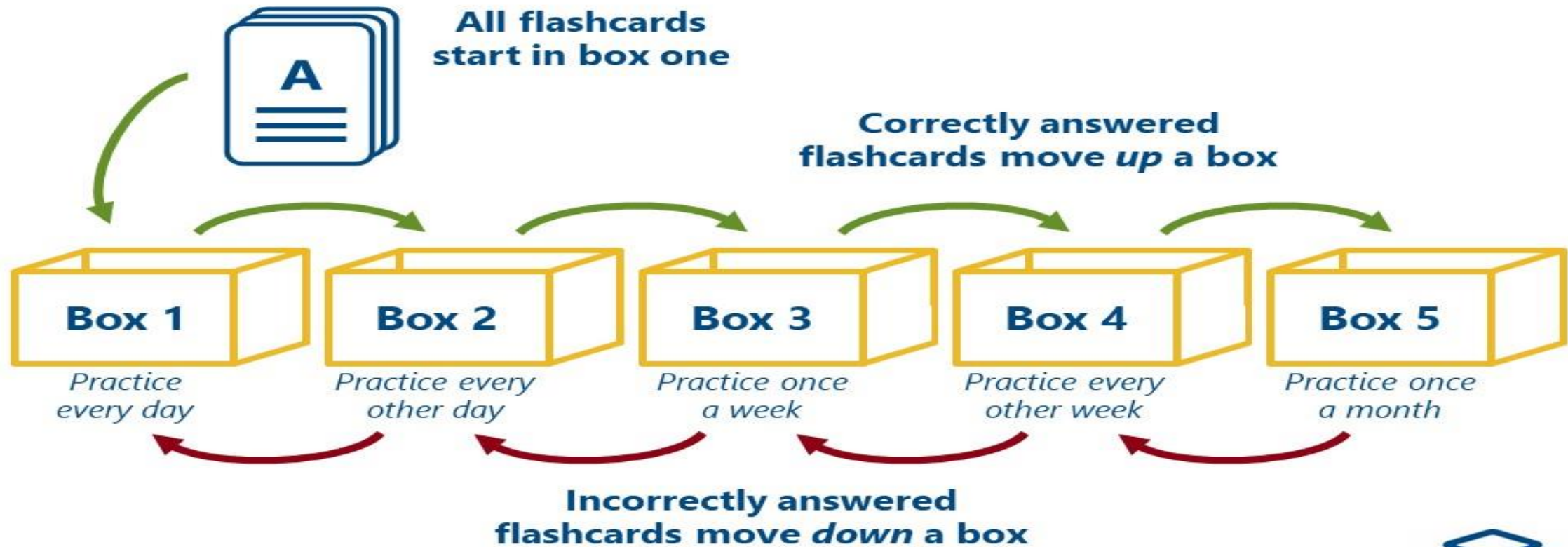


- **Summarise:** Once you have written out your revision notes, it's time to condense that information into small manageable facts. This is where memory cards come in to play.
- **Word power:** For each topic, write bullet points of key facts on a set of index cards.
- **Organise:** Categorise the facts into sub-categories, then sub-sub-categories so you can understand how they all link together.
- **Link:** Don't just remember the key facts on the cards. They should act as prompts for all the other revision facts you've been learning.
- **Portable:** The great thing about small index cards is that you can put them in your bag/pocket and take them anywhere. That way you can look at them on the way to school or even when you're out shopping!

- 1 piece of info per card
- A question linked to the topic on the card, on the reverse
- Good for quizzing each other, and verbalising your understanding (if you can talk about it, you can often write about it!)
- Good for revising with people at home who have no subject knowledge – they can quiz you!

How to use the Leitner system for flashcards

Increase your memory with spaced repetition and active recall

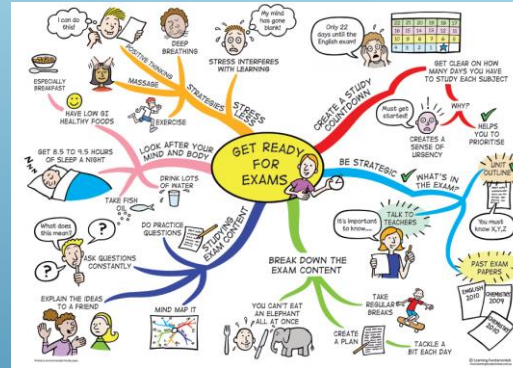




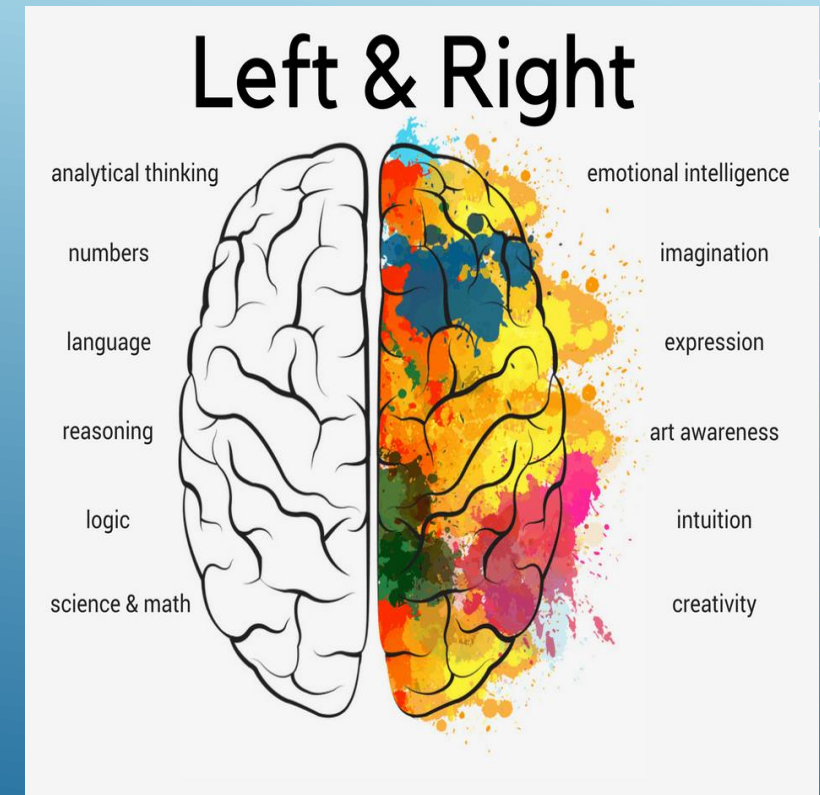
Dual coding

When reviewing something you have learnt, combining words and pictures can be powerful. Research suggests that combining words and images increases your learning by visually representing information in two different ways. Some examples are:

- ✓ Timelines
- ✓ Flow diagrams
- ✓ Mind maps
- ✓ Venn diagrams
- ✓ Concept maps
- ✓ Story boards
- ✓ Diagrams



MEDIEVAL CRIMES c.1000-1500	CRIMES 1500-1800 (Tudors, Civil War, Witchcraft)	CRIMES 1700-1900 Industrial Revolution	CRIMES 1900 - Present
Poaching Outlaws Theft Forest Laws Crimes against Authority	Influence of nobles Murders William I Matthew Hopkins Strict Puritan Laws Influence of Tudor Monarchs	Smuggling - more gangs/transport Witchcraft - decriminalised in 1735 Poaching - even harsher Black Act 1723 NEW DEFINITIONS OF CRIME Highway Robbery Tolpuddle Martyrs	SAME CRIMES BUT MODERN METHODS • Drug crime • Smuggling • Slavery • Terrorism • Theft NEW CRIMES • Racism/Homophobia • Abortion • Domestic Violence • Conscientious Objections • Military Services Act 1916
MEDIEVAL LAW ENFORCEMENT c.1000-1500	LAW ENFORCEMENT 1500-1800 (Tudors, Civil War, Witchcraft)	LAW ENFORCEMENT 1700-1900 Industrial Revolution	LAW ENFORCEMENT 1900 - Present
Castles Collective Responsibility Justices of the Peace Shire Reeves Tithings	Religious Oaths Benefit of Clergy Benefit of the Doubt Trial by Combat (William I) Hue and Cry Coroners	Bow Street Runners & Fielding Brothers Metropolitan Police Act 1829 National Constabulary Act 1839 C.I.D. 1842 Robert Peel 1856 Similarities: Rural areas less organised, collective responsibility still expected, army could still be brought in, watchmen still employed by rich.	Huge influence of science and technology on policing DNA CCTV Transport Computers Finger Printing Crime Prevention Specialist Units Standardisation PCSOs Neighbourhood Watch (Collective Responsibility)
MEDIEVAL PUNISHMENT c.1000-1500	PUNISHMENT 1500-1800 (Tudors, Civil War, Witchcraft)	PUNISHMENTS 1700-1900 Industrial Revolution	PUNISHMENTS 1900 - Present
Murder Fire Branding Hanging Pillory Socking religious sanctuary Church more lenient Punishments	Gunpowder Plot 1605 Pillory Hanging Drawing Quartered Ylogging Burnt at Stake (heresy)	MAJOR CHANGES PRISONS PURPOSE BUILT - END OF BLOODY • Pentonville • Silent System • Separate System • Humanitarianism • Religion • Crank/treadwheel • Prison improvements Elizabeth Fry John Howard Robert Peel	Abolition of Death Penalty 1969 Serek Timothy Sentient Event Ruth Ellis Community Rehabilitation Service 1948 - hard labour & corporal punishment banned in prisons ASBOs Specialist Prisons • Mental Health • Electronic • Young Persons • Borstal • Female Prisons

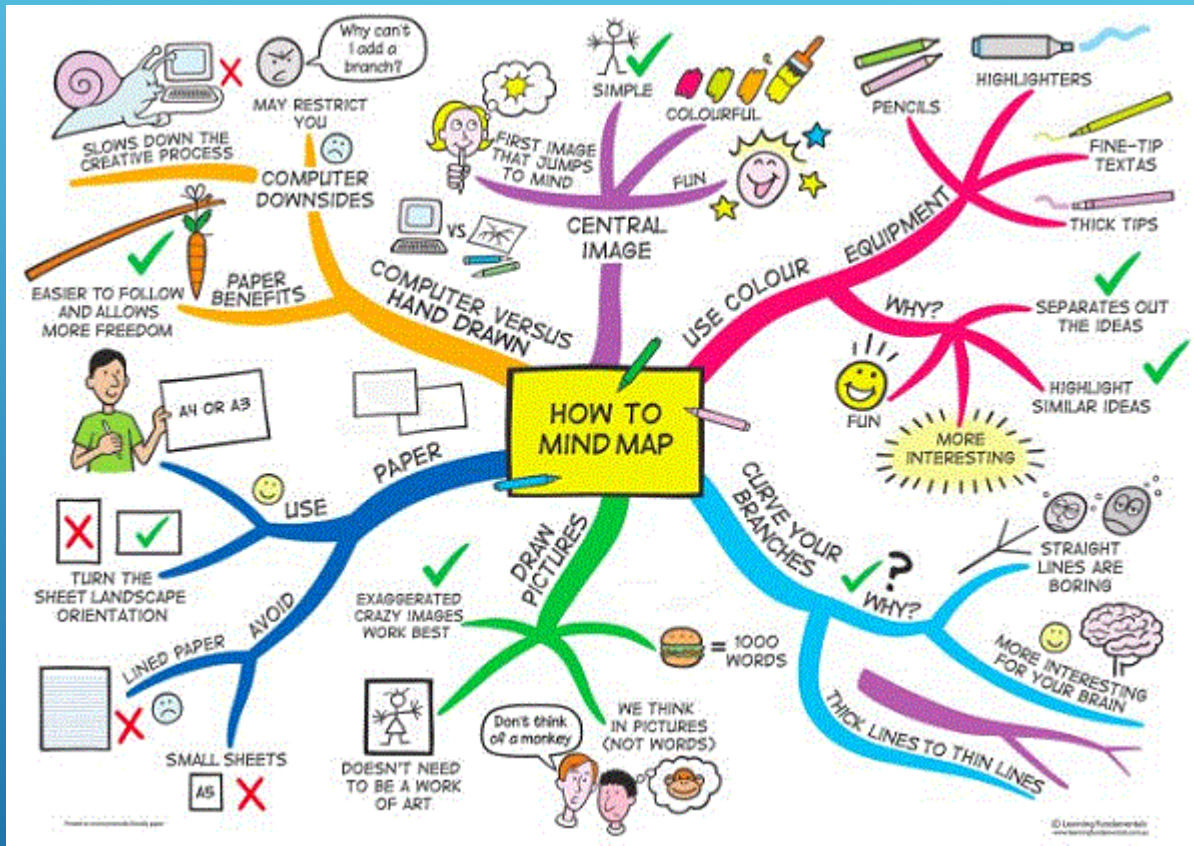


Revision Technique : Mind maps

Technique – Mind maps:

They are a useful memory tool because:

- They are visual and visual memory is strong in everyone (irrespective of learning style)
- Memory is about association and mind maps force pupils to make associations
- They can act as memory cues in a variety of ways (memories can be cued in by remembering the layout, the words, the pictures, the colours and the links)



Summary: How to create a mind map



1.

Identify knowledge

Select a topic you wish to revise. Have your class notes/knowledge organisers ready.



2.

Identify sub topics

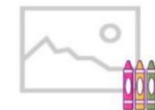
Place the main topic in the centre of your page and identify sub topics that will branch off.



3.

Branch off

Branch of your sub topics with further detail.
Try not to fill the page with too much writing.



4.

Use images & colour

Use images and colour to help topics stick into your memory.



5.

Put it somewhere visible

Place completed mind maps in places where you can see them frequently.

Avoid using too much information: mind maps are designed to summarise key information and connect areas of a topic/subject. If you overcrowd the page, you lose the point of the mind map and will find it

Key to successful revision is repetition

Spaced Retrieval Practice

SPACING out your revision into smaller chunks over a period helps you to remember the material better and ensures you are less stressed with your revision.

This ensures you are not **cramming** as it will overload your memory and make you overconfident. By leaving time between revising and testing, and making the brain work harder, the more chances you have of remembering.

M	T	W	T	F	S	S
30	30	30	30	30	Relax!	30
30	30	30	30	30		30

Interleaving

Interleaving involves switching between ideas and topics during a study session and not revising in blocks of topics.

This ensures you are not studying one idea or topic for too long – research states that

Mixing up your revision and chunking it supports learning and strengthens your memory as we know you need to review information overtime to reinforce learning.

M	T	W	T	F
MACBETH	UNSEEN POETRY	AN INSPECTOR CALLS	JEKYLL AND HYDE	CREATIVE WRITING
AN INSPECTOR CALLS	JEKYLL AND HYDE	CREATIVE WRITING	MACBETH	UNSEEN POETRY
CREATIVE WRITING	MACBETH	UNSEEN POETRY	AN INSPECTOR CALLS	JEKYLL AND HYDE

Coping with the pressures of exams – how can we support each other through the exam period?

Has their behaviour changed?

Worried?

Not
sleeping?

Headaches
or stomach
pains?

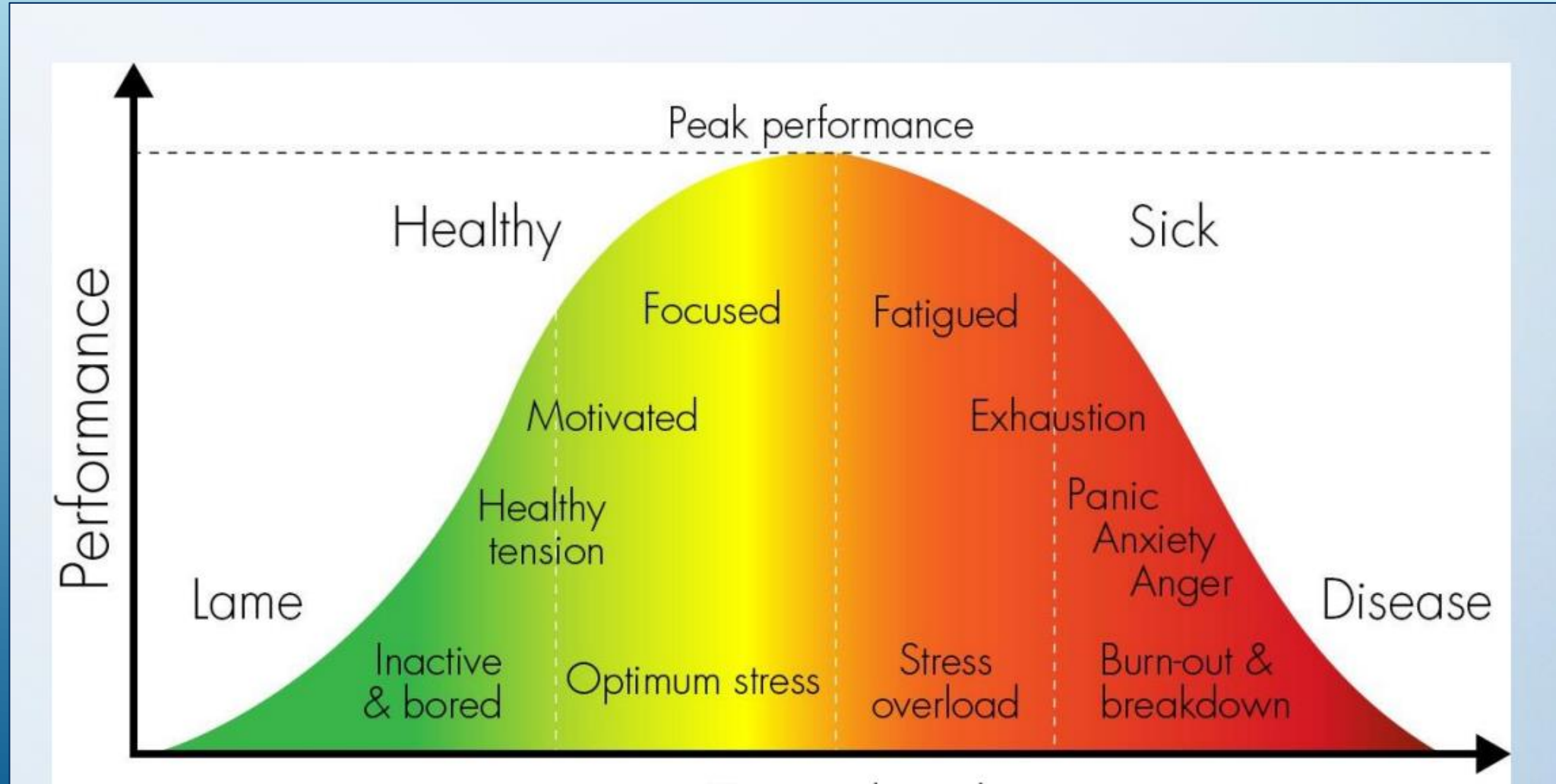


Irritable?

change in
eating
habits?

What will I
do?

Coping with the pressures of exams – how can we support each other through the exam period?



Coping with the pressures of exams – how can we support each other through the exam period?

Top tips to help at home:

1. Healthy balanced diet with lots of water to keep hydrated
2. Sleep well – try to stick to regular bedtimes and aim to get approx. 8 hours sleep
3. Be flexible
4. Give them space
5. Encourage breaks and exercise
6. Please contact school if additional support/advice needed





Any Questions

