

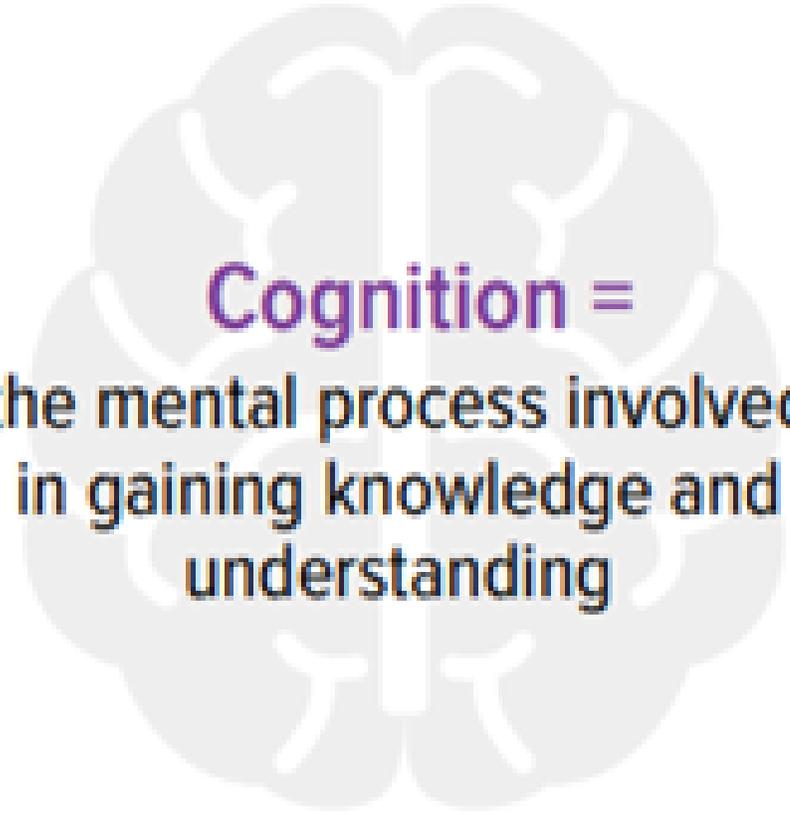
Home Learning for Real Impact

Research-led Learning

Metacognition

Meta =

beyond



Cognition =

the mental process involved
in gaining knowledge and
understanding

METACOGNITION



1
Knowing the different types of cognitive strategies



Cognition = the mental process involved in gaining knowledge and understanding

We use cognitive strategies to help us learn. There are 4 main ways



ORGANISING



SUMMARISING



REPETITION



IMAGERY



2
Knowing what strategy to use and when

This will be mostly a **trial and error process**. To help you become a better lifelong learner, after every situation reflect on...

- What strategies did I use or not use?
- What strategies have been the most helpful, effective or difficult?
- What can I do in future to be more effective at this specific type of task?



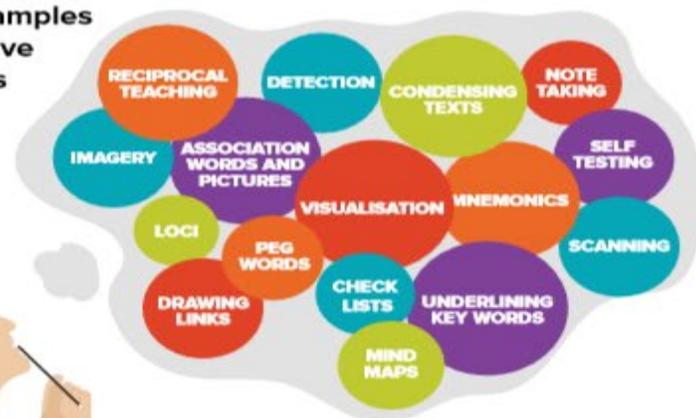
3
Knowing the factors that affect performance

You might know some things that help you or don't such as:



HOWEVER, to be metacognitive you need to understand your **SELFS**

Some examples of cognitive strategies are...



SELF EFFICACY:

How much confidence and self-belief do you have that you can learn this?



SELF HANDICAPPING:

How many obstacles do you put in your own way? If things go wrong, it's not your fault, right?



SELF DEPENDENCE:

Do you know what you need to do to work independently or would you rather be told exactly what to do?



SELF GOALS:

Do you...

- A** Want to get better and know by increasing your effort you will achieve it? (*Mastery*)
- B** Want to show people what you can do or be better than everyone else? (*Performance*)
- C** Just want people to like you and only want to be in the group with the people you like? (*Social*)



SELF MOTIVATION:

How motivated are you to do well? Do you push yourself to get to the next challenge and stay in the struggle zone? Or do you only really work to get a reward point or to prevent the teacher nagging you? Or would you rather be in the comfort zone?

•Cognition =

The mental process involved in gaining knowledge and understanding

•Cognitive strategies =

a type of strategy that learners use in order to learn more successfully

- repetition
- Organising new language
- Imagery for memorisation

The Science behind it...

Some key points – DT Willingham

The brain is not designed for thinking

- It is designed to save you from *having* to think.
- Thinking is slow and effortful and uncertain.

When we can get away with it we don't think, instead we rely on memory.



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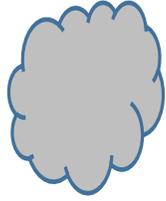


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sponge

8x8



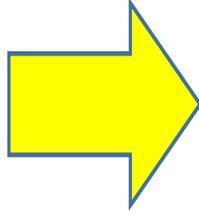
$6 \times 7 = 42$



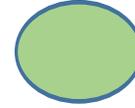
£



∞



Roma



Red



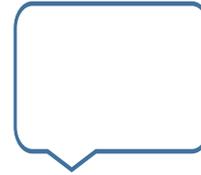
lemons



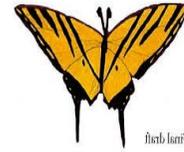
wizard



11



hen



15





Some key points – DT Willingham

Factual knowledge must precede skill

- Skills such as analysis and critical thinking require extensive factual knowledge
- When someone is apparently engaged in logical thinking they are ACTUALLY engaged in MEMORY RETRIEVAL.

MEMORY is the cognitive process of FIRST RESORT

Some key points – DT Willingham

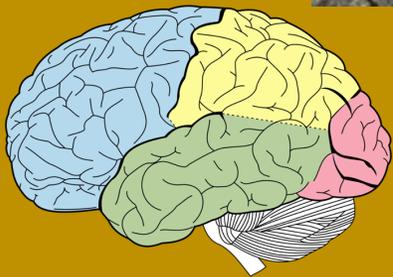
Memory is the residue of thought

- Your memory system lays its bets this way: If you think about things carefully , you'll probably have to think about it again, so it should be stored.
- THUS your memory is not a product of what you want to remember : it's a product of what you THINK ABOUT.

If you don't pay attention to something you can't learn it.



WORKING MEMORY



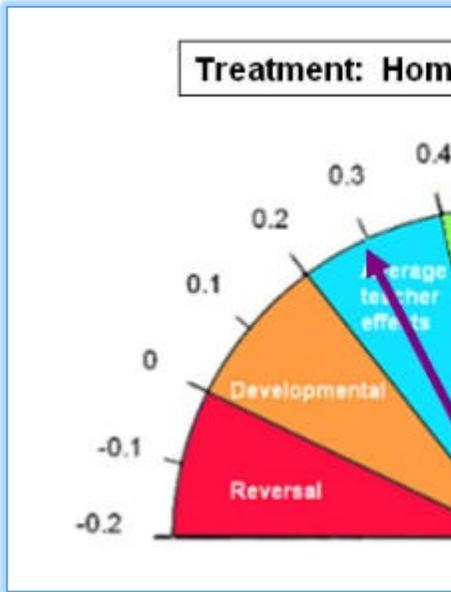
3-4 elements

20 seconds

LONG TERM MEMORY



HOMEWORK ☹️



Most homework
teachers set is
crap!

Professor Dylan William

HOMEWORK

TEACHING & LEARNING TOOLKIT TOPIC	↑ COST	↓ EVIDENCE	↓ IMPACT
Meta-cognition and self-regulation	£ £ £ £ £		+ 8 months
Feedback	£ £ £ £ £		+ 8 months
Peer tutoring	£ £ £ £ £		+ 6 months
Early years intervention	£ £ £ £ £		+ 6 months
Oral language interventions	£ £ £ £ £		+ 5 months
Homework (Secondary)	£ £ £ £ £		+ 5 months
			+ 5 months

- ❖ We don't want children wasting their time doing tasks that don't impact on learning
- ❖ We don't want parents having to constantly nag their children to complete things they don't understand
- ❖ We don't want to stress out parents if they don't know how to help their child (or with the nagging!)
- ❖ We don't want parents doing the homework for their children!

- ✓ We want homework to perfectly match the work they are doing in school so that it supports and reinforces each other
- ✓ We want homework to support children becoming independent learners, using cognitive strategies that suit them as individuals
- ✓ We want homework to support our work on metacognition
- ✓ We want homework to be consistent in application so that anxieties about what to do and doing it right are reduced
- ✓ We want homework to be flexible so that pupils can actively pursue other interests without homework getting in the way or being a burden. If you have scouts one night, or gymnastics practice – we want you to concentrate on this as it's important. Homework can be fitted in around your schedules

Knowledge Organisers

- the information you need to get INTO the long term memory

- Each child will get a knowledge organiser for their module (foundation subjects). The knowledge organiser contains key knowledge they NEED to know.
- Pupils learn this information for homework using different **cognitive strategies** (we will teach them in class).

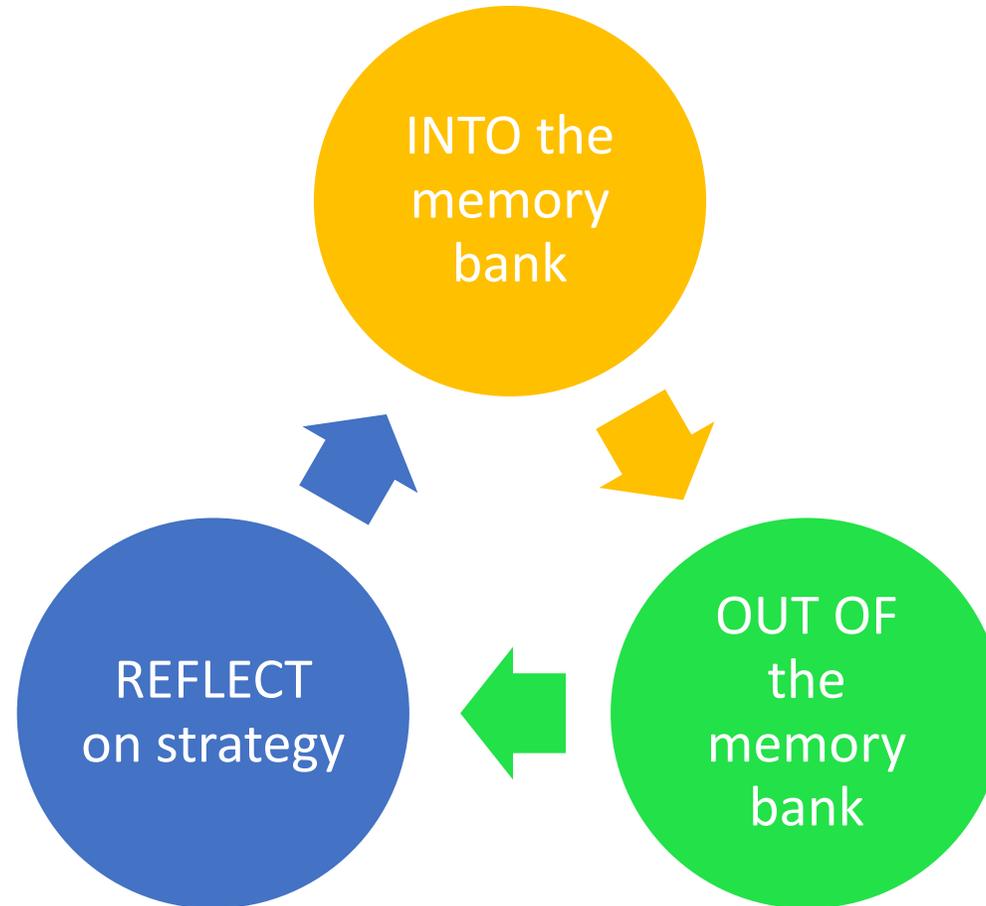
Retrieval Practice

- checking how much information you can get OUT OF
the long term memory

Retrieval means...

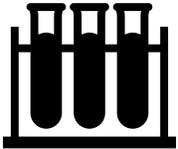
- Testing
 - Direct verbal questions
 - Self questioning
 - Writing notes from memory
 - Using flash cards
 - Writing essays
 - Writing mind maps from memory
- All information is **retrieved** rather than passively heard or re-read

Home learning / Learning to Learn sessions will be a combination of both



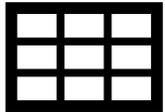
So what does it look like for you?

In The Shadows



Variable – A thing that is changed
A fair test has one variable

Data is recorded using



-Tables



-Bar charts



-Diagrams

To make the information easy to understand



Results need to be checked and verified with other investigations



Darkness is the absence of light

Different materials allow different amounts of light to travel through them;

Transparent



All Light passes

Translucent

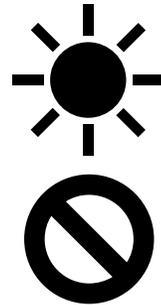


Some Light passes

Opaque



No Light passes



Shadows are formed by blocking light

Shadows are formed when an opaque object blocks light from travelling through it, resulting in an area of darkness behind the object

The position of a light source changes the shadow length (position of the sun/shadow length)

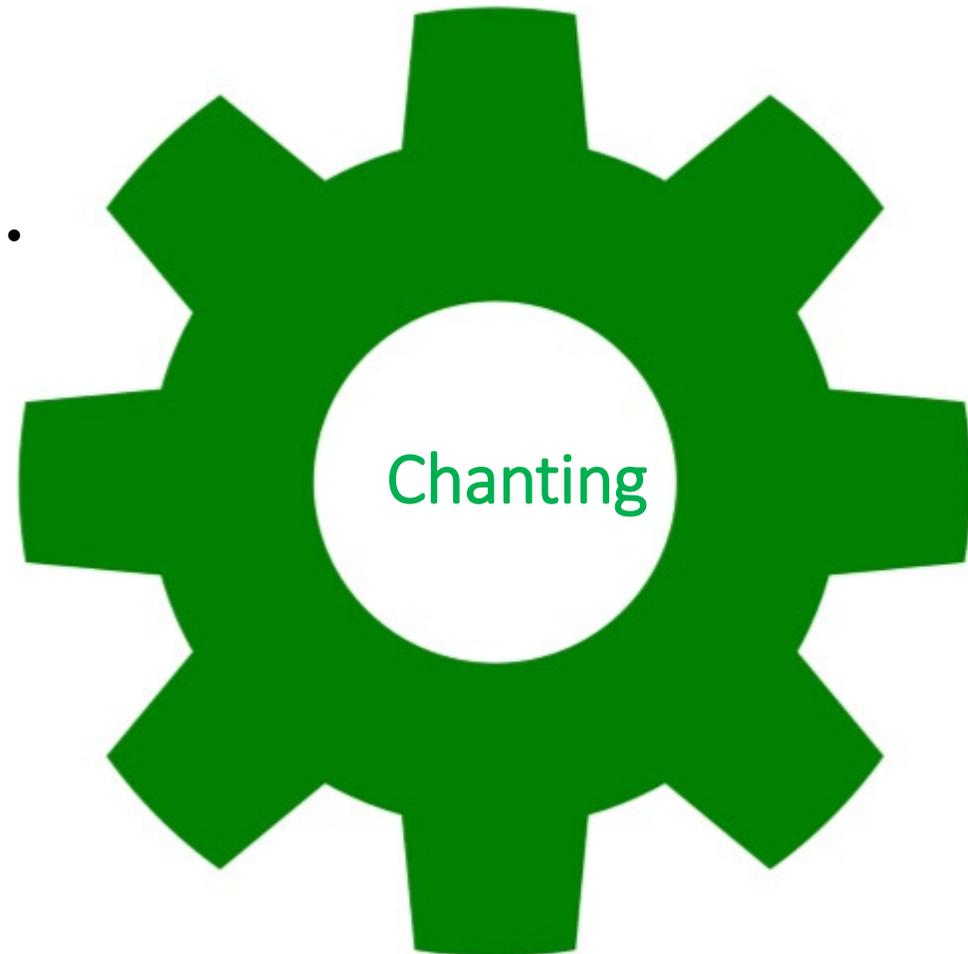


Far away – small shadow



Close by – large shadow

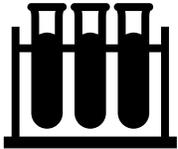
Repeating information in a memorable way



Let's try this one

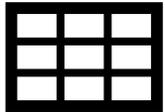
- Transparent,
- Translucent,
- Opaque,
- All light,
- Some light,
- No light.

In The Shadows



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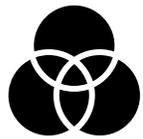
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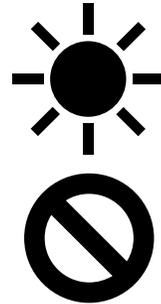


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Far away – small shadow



Close by – large shadow

23.11.21

I chanted for 10 minutes;

Transparent,

Translucent,

Opaque,

All light,

Some light,

No light.

We Will Remember Them



Biased means having an unfair or unbalanced opinion – propaganda contributes to this

(propaganda= the organised spreading of false ideas)



Propaganda posters were used to share the messages of war

? **Historians question how reliable and useful the evidence is**

✓ A reliable source of evidence means that the evidence can be trusted

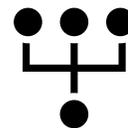
Historical significance is a decision that modern people make about what is important from the past



Events may have long-term and short-term consequences

↙ short-term consequence = ↗ Long-term consequence =

- **B**lack outs
- **E**vacuation
- **A**ir raids
- **R**ationing



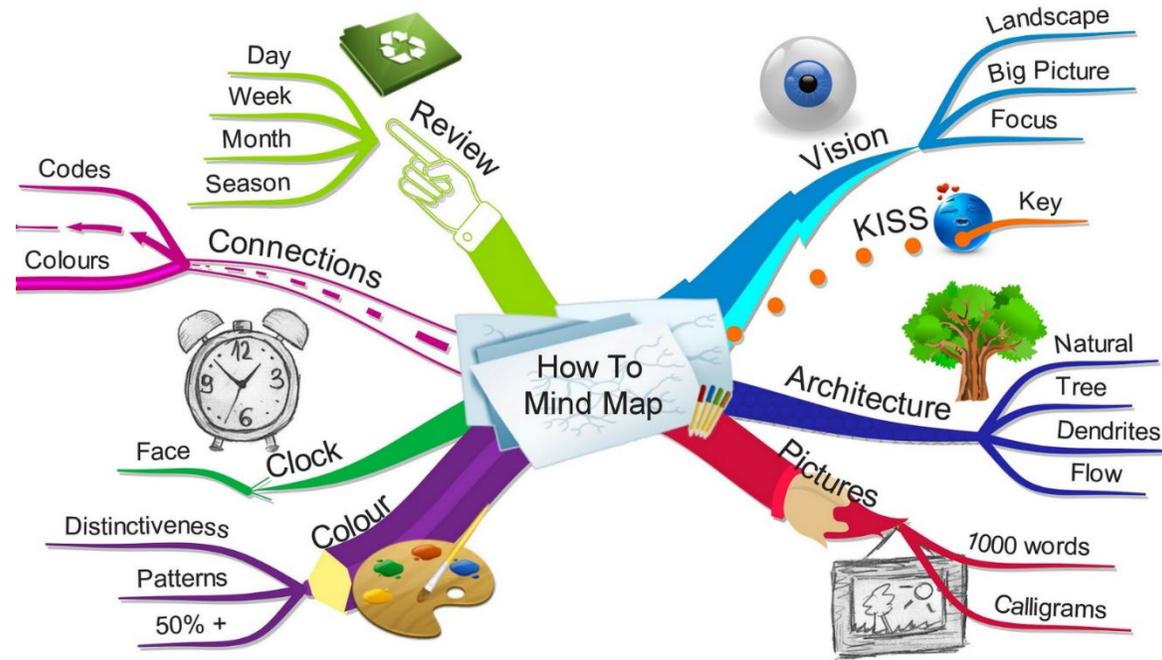
Sometimes more than one cause is needed to explain an event in History



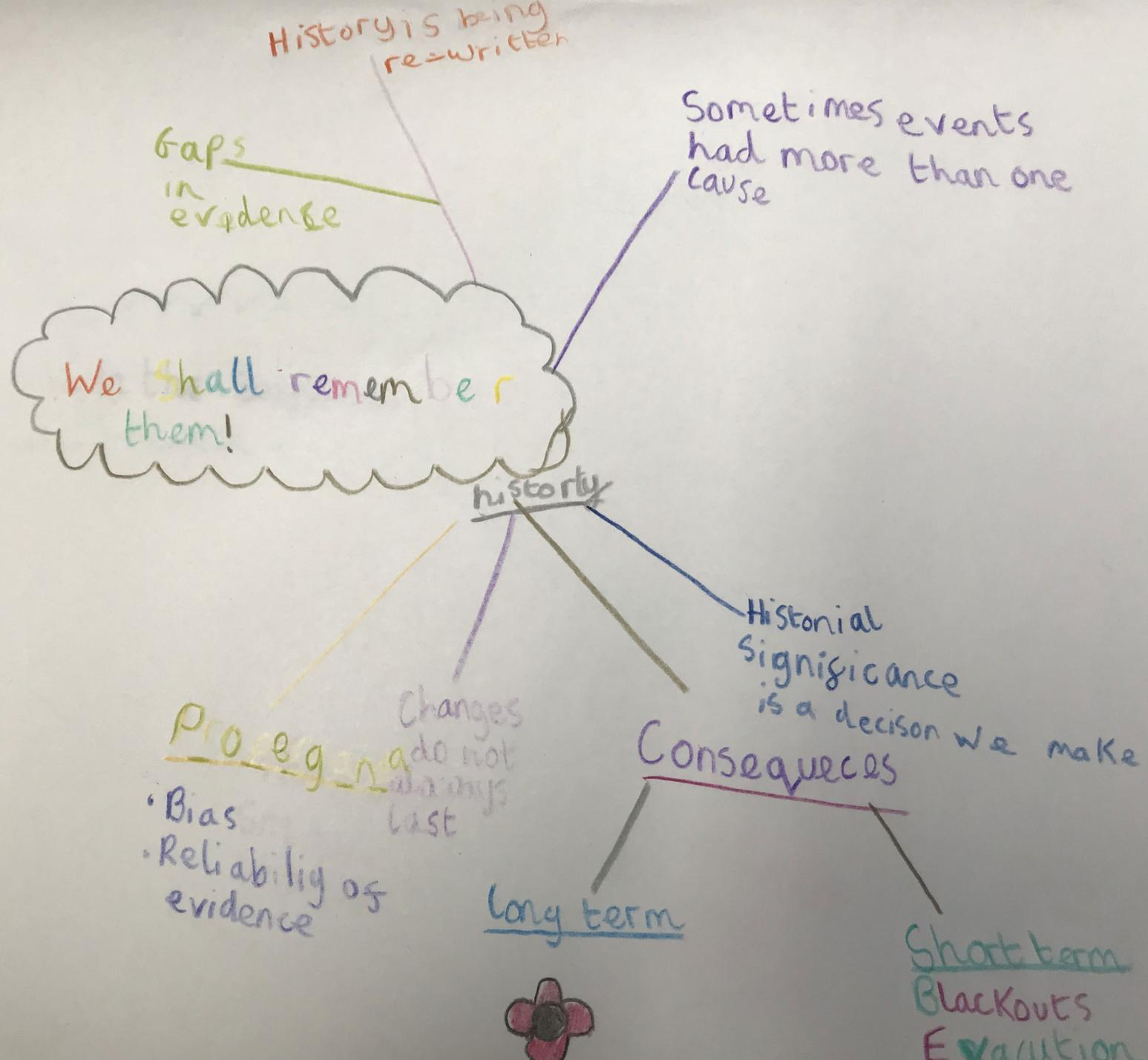
Changes do not always last

History is continuously being re-written and that we have different interpretations because of gaps in evidence

Mapping out the information you need to understand can be really helpful—especially to understand the links between the information



Mind maps
Concept maps
A maps



Retrieval Practice

- Prompted
- Nudged
- Dumped
- Applied

We Will Remember Them



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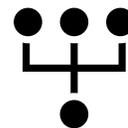
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Retrieval practice – prompted 15 mins

13/15

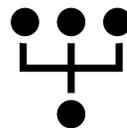
X Long term consequence – NHS

X Biased = unfair

We Will Remember Them



B
E
A
R



Eventually...

- Your child will start to understand **WHAT** cognitive strategies work for them in **WHAT** situation.

But for now

- 2x Knowledge organiser sessions
- 5x reading (10 mins)
- 2x spelling (10 mins)
- 3x TT Rockstars (10 mins)

Any questions?

Please use the chat facility