

Welcome to the first edition of Central Learning and Teaching Newsletter!

The objectives of this fortnightly newsletter will be to:

- Share the most up to date research linked to retrieval practice to support you in informing and refining your practice.
- Promote a whole school approach to retrieval practice across all areas of the curriculum.
- Connect retrieval practice to literacy and classroom culture and seek applications to our classrooms.

What is learning?

Learning = a change in long-term memory
‘if nothing has changed nothing has been learned’

Meaningful learning is about producing organised, coherent and integrated mental models that allow people to make inferences and apply their knowledge. (Karpicke, J. 2012)

THE BENEFITS:

- ① Retrieval practice aids later retention
‘every time you retrieve a memory it becomes deeper, stronger and easier to access in the future’
- ② Testing identifies gaps in knowledge
- ③ Testing causes students to learn more from the next learning episode
- ④ Testing produces better organisation of knowledge



- ⑤ Testing improves transfer of knowledge to new contexts



- ⑥ Facilitates retrieval of material that wasn't tested



- ⑦ Improves metacognition



- ⑧ Prevents interference from previous material when learning new content



- ⑨ Provides valuable feedback to teachers



- ⑩ Regular testing encourages students to study more



In his paper, "[Learning: what is it and how might we catalyse it?](#)" Peps McCrea offers 9 Insights on learning it is a pre-requisite to fully take into account when planning for learning through retrieval practice. Read the full paper [here](#).

Our mental models become stronger in response to being used. We consolidate knowledge by practising or retrieving it- pulling information out of our minds is just as important as putting it in. The more effortful this process is, the greater strengthening effect, provided the retrieval attempt is actually successful (Bjork & Bjork 2006)

One way to generate this effort (and so impact) is to space out the intervals between retrieval. When we learn appears as important as what. The optimal time to retrieve something is just before you forget it, and so practising across increasingly distributed intervals is superior to practising in one single block (Bjork and Bjork 2006)

Consolidation works best when it focuses on what pupils already know, rather than attempting to simultaneously build new connections (Davis et al. 2017), and when the stakes for pupils are relatively low-zero stakes approaches provide insufficient incentive for pupils to perform, and excessively high stakes can induce anxiety, which uses up valuable mental resources.

What is retrieval?

Retrieval Practice

KATE JONES

The act of recalling learned information from memory (with little or no support) and every time that information is retrieved, or an answer is generated, it changes the original memory to make it **STRONGER!**

AKA: Working memory

SENSORY STORE → Attention → SHORT-TERM MEMORY → Rehearsal → LONG-TERM MEMORY → Retrieval → SHORT-TERM MEMORY

Forgotten

THE MULTI-STORE MODEL OF MEMORY BY ATKINSON & SHIFFRIN (1968)

Peterson & Peterson (1959)
→ Almost all information stored in short-term memory that is not rehearsed is lost within 18 to 30 seconds!

‘Using your memory shapes your memory’

RETRIEVAL STORAGE
→ how well information is embedded in long-term memory

RETRIEVAL STRENGTH
→ how easily a piece of information can be brought to mind when required



What strategy can I use?

Cops and Robbers

- Page 81, Retrieval Practice, Kate Jones.
- The cops column is for students to note down as much as they can without support from a topic/ theme of your choice.
- The robbers column is for students to "steal" additional knowledge from other classmates.
- This is a broad retrieval task- more challenging and more effective.

Benefits:

- Students have to think hard.
- By identifying then reflecting/ discussing what they had forgotten, they will strengthen retrieval and connections.

Applications:

- Knowledge of subjects specific vocabulary- practical and academic.
- Retrieving definitions, dates, facts, meanings, quotes, moves, production steps.
- Pictures rather than words may be used.

Cops & robbers!

Transports School Places in town	Your ideas & own knowledge....	Ideas & information you have "stolen" from your peers..
	<ul style="list-style-type: none"> • Le avion • Le voiture • un vao • un bus • L'école • Je vais aller • Je suis • L'histoire • L'auemond • Le languages mates • une quatrieme • une anquere • une brasiere • le commerce • Les brevets • une bar • L'universitaire 	<ul style="list-style-type: none"> • Le math • quand je serai pusage • Je rêve de • Le geographie • etudier • L'hôpital • un vide • le piscine • J'ai choisi • professeurs • cathedrale • lycée • passer un exam • L'école maternelle • bateau

Places in town:

- diplôme
- boulangerie
- mairie = town hall
- Piscine = swimming pool
- commissariat = police station
- central commercial = shopping centre
- Il y a
- nous avons,

Literacy and retrieval practice

USE BACKGROUND KNOWLEDGE 	ASK QUESTIONS 	IDENTIFY THE AUTHOR'S PURPOSE 	IDENTIFY THE MAIN IDEA 
RECOGNIZE SEQUENCE 	RECOGNIZE CAUSE AND EFFECT 	MAKE INFERENCES 	MAKE PREDICTIONS 
SUMMARIZE 	DISTINGUISH BETWEEN FACT AND OPINION 	FIND FACTS AND DETAILS 	RECOGNIZE COMPARE AND CONTRAST 
MAKE CONNECTIONS 	VISUALIZE 	REREAD FOR CLARITY 	ADJUST YOUR PACING 

Lisa shared with us this great "Reading Skills Key" last term. Many of these principles work alongside retrieval practice.

- Could we use reading as a medium to challenge background knowledge, to test out our students' understanding and ability to make connections?
- Could our "Do Nows" tasks link to summarising and contrasting from memory?
- How can our questioning challenge misconceptions and push students' inference skills?

Classroom Culture and retrieval practice

DATE:

Lesson Title

"Lesson Objective"

Equipment needed for this lesson:

- pen
- Paper

While you wait:

5:00


▶

This lesson will begin once the timer has finished

Have you?

- Got everything you need?
- Muted your microphone?

These lessons will be recorded so they can be watched again by CLHS students.
Please make sure you're adhering to the rules outlined in the 'Remote Learning' user agreement.

 **Central Lancaster High School**

The above holding slide for MS Teams allows you to continue with the 'Do Now' activity when teaching remotely. As a reminder, a 'Do Now' is an activity which:

- Starts the lesson in a controlled, focussed manner
- Students complete in silence
- Typically reviews prior learning
- Our 'Do Now' routine links in with our retrieval practice focus because the 'Do Now' requires students to retrieve prior learning and therefore increases students' ability to remember key information and knowledge. The ability to remember will further help students as they progress in their learning.

DO IT NOW!