

LEARNING AND TEACHING NEWSLETTER JANUARY 2020

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)



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









- (5) Testing improves transfer of knowledge to new contexts
- 6 Facilitates retrieval of material that wasn't tested



Improves metacognition



® Prevents interference from previous material when tearning new content



 Provides valuable feedback to teachers



© 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.

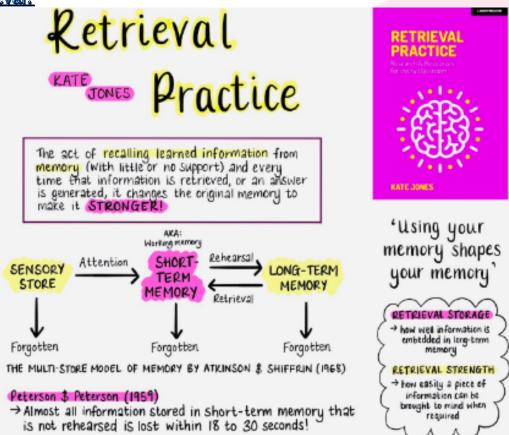
Our mental models become stronger in response to being used. We consolidate knowledge by practising or retrieving it-pulling information out of our minds is just as important as putting it in. The more effortful this process is, the greater strengthening effect, provided the retrieval attempt is actually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





What strategy can I use?

Cops and Robbers

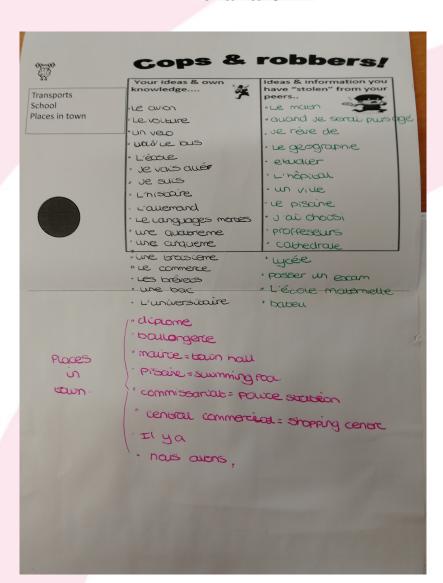
- Page 81, Retrieval Practice, Kate Jones.
- The cops column is for students to note down as much as they can without support from a topic/ theme of your choice.
- The robbers column is for students to "steal" additional knowledge from other classmates.
- This is a broad retrieval task- more challenging 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 vocabularypractical and academic.
- Retrieving definitions, dates, facts, meanings, quotes, moves, production steps.
- Pictures rather than words may be used.





Literacy and retrieval practice

use BACKGROUND KNOWLEDGE	ONESLIONS	IDENTIFY THE AUTHOR'S PURPOSE	IDENTIFY THE MAIN IDEA
	(?)		1
RECOGNIZE SEQUENCE	RECOGNIZE CAUSE AND EFFECT	MAKE INFERENCES	MAKE PREDICTIONS
$\underline{\underline{A}}^{\underline{B}}\underline{\underline{c}}$		£87	
SUMMARIZE	DISTINGUISH BETWEEN FACT AND OPINION	FIND FACTS AND DETAILS	recognize COMPARE AND CONTRAST
		Q	ONIBASI
CONNECTIONS	VISUALIZE	REREAD FOR CLARITY	adjust your PACING
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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



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.