

3 research-informed strategies that have been game-changers in my classroom – Helen Reynolds

What	How	Resources
The Big Picture	Brains and maps of the terrain: - Teach them about learning, memory and meaning making - Show them where they are going with an organizer - Make thinking explicit by talking through it in real time	- Tomsett, J. (2021). Cognitive apprenticeship in action. John Catt Educational.. - Nuthall, G. (2007). The hidden lives of learners. NZCER Press - Efrat Furst: Daniel Willingham Olicav   
Breaking It Down	Explicit Instruction: - Chunk it, use document camera to talk it through - Try to max out their use of WM by removing distractions - Use mini-whiteboards A LOT for checking for understanding	- Sherrington, T. (2019). Rosenshine's principles in action. John Catt Educational. - Lovell, O. (2020). Sweller's cognitive load theory in action. John Catt Educational.
Building It Up	Retrieval/Spaced Practice: - Regular short quizzes about everything important (retrieval practice) - Ask about things from a while ago - Let them correct everything/make it LOW stakes	- Jones, K. (2021). William and Leahy's Five Formative Assessment Strategies in Action. John Catt Educational. - Jones, K. (2020). Retrieval practice: Resources and research for every classroom. John Catt Educational.

Lenses

- To **'see it like I see it'** is why we are here
- The **'curse of the expert'** is a real thing
- Novices are **not** little experts; they learn differently.
- Working memory is **limited**; load it wisely
- Learning involves a **change to a learner's long-term memory**
- Having a **model of memory** and learning (Willingham) is extremely helpful if you are trying to learn anything as it helps you choose **strategies that are likely to work well**.

ALL the summaries: Presentation



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Thanks for coming!

Research:

The Big Picture:

- Ausubel, D. P. (1960). *The use of advance organizers in the learning and retention of meaningful verbal material*. Journal of Educational Psychology, 51(5), 267-272.
- Chi, M. T. H. (1978). Categorization and representation of physics problems by experts and novices. Cognitive Science, 5(2), 121-152
- Efrat Furst: <https://sites.google.com/view/efratfurst/home>
- Daniel Willingham: <http://www.danielwillingham.com/articles.html>

Breaking It Down:

- Rosenshine (2010) – explicit instruction = establish what they know, and need to know, break it down, check they’ve learned it
- Sweller (1988) - cognitive load theory = maximize their use of WM so they can put it in their LTM

Building It Up:

- Ebbinghaus, H. (1885). On memory: Investigations into experimental psychology. *Psychologische Forschung*, 2, 123-144.
- Roediger, H.L., III, & Karpicke, J.D. (2006). Test enhanced learning: Taking memory tests improves long-term retention. *Psychological Science*, 17, 249–255.
- Adesope O, Trevisan, D & Sundararajan, N, (2017) Rethinking the Use of Tests: A Meta-Analysis of Practice Testing, *Review of Educational Research*