

WALK
THRU



The Mechanisms of Learning

“Without an understanding of human cognitive architecture, instruction is blind.” (John Sweller, 2017).



Working memory:

- The site of awareness and thinking
- LIMITED in capacity – can only hold 4-5 chunks of information at once
- Working memory overload leads to information loss
- Process in working memory is essential for long-term storage

Long-term memory:

- Vast storehouse of knowledge
- UNLIMITED in capacity
- Information is organised into schemas
- We retrieve information back into our working memory when needed

Schema → An interconnected web of items of knowledge



Activating prior knowledge

Activating prior knowledge makes explicit links between existing and new knowledge, enhancing schema formation.

Provide opportunities to review prerequisite knowledge to provide a foundation before delivering new content.



Retrieval practice

The act of recalling learned information from memory. Every time a piece of information is retrieved, it changes the original memory to make it stronger!

Provide opportunities for students to engage with regular and spaced retrieval practice. Use our 4 TAC strategies: look-cover-write-check, brain dumps, topic summary and self-quizzing.



New knowledge

Deliver new knowledge through language rich, disciplinary, academic text with the class.

Read text using expert exposition, targeted questioning and model the thought process of an expert learner.



Processing knowledge

Plan generative learning activities to allow students to process the new knowledge and assess understanding.

Activities should deepen and refine understanding and may include a MWB quiz, comprehension questions, a summary, think-pair-share, variation.



Guided practice

Explain and model the new learning using worked/live examples and the 'I do, we do, you do' modelling strategy using a visualiser.

As students gain confidence, gradually remove the scaffolding to ensure the appropriate level of challenge and healthy struggle.



Independent practice

Plan opportunities for students to demonstrate their learning independently and in silence.

This may include practice exam questions, extended pieces of writing, extended independent work.



Reflect and respond

Plan regular opportunities for students to monitor and evaluate their work in order that they might self regulate and take ownership of their own progress.

Student reflection will be prompted by high quality regular feedback, clear success criteria and meaningful opportunities for peer/self assessment.