



EVIDENCE ALIGNED

HOW2

An attempt to align the various, and growing number of, research summaries by comparing them against a set of their perceived shared attributes.

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THE SCIENCE OF LEARNING <small>DEANS FOR IMPACT</small>		VISUALS	SCAFFOLD	ASSESS	PRACTICE	MEMORY	AGENCY
01	Students learn new content by reference to their prior knowledge.					■	
02	Information is mostly taken from memory in exactly the way in which it went in.					■	
03	Committing facts to long-term memory frees working memory resources for solving problems.					■	
04	Transferring knowledge requires a deep understanding of its underlying structure.	■	■				
05	Self-determined motivation leads to better long-term outcomes than controlled motivation.						■
06	There are many, romantic, myths about learning. Be aware of them and avoid like the plague!						

PRINCIPLES OF INSTRUCTION <small>BARAK ROSENSHINE INTERNATIONAL ACADEMY OF EDUCATION</small>		VISUALS	SCAFFOLD	ASSESS	PRACTICE	MEMORY	AGENCY
01	Daily review is an important component of instruction. It helps strengthen the connections of the material learned.					■	
02	Introduce new material in small steps because working memory is small, only handling a few bits of info at once.		■			■	
03	The most successful teachers spend more than half the class time lecturing, demonstrating and asking questions.		■	■			
04	Provide models— students need cognitive support to help them learn how to solve problems.	■	■				
05	Students need time to rephrase, elaborate and summarise new material in order to store it in their long-term memory.				■	■	
06	Less successful teachers ask “Are there any questions?” More successful teachers check on all students.			■			
07	A success rate of around 80% has been found to be optimal, showing students are learning and also being challenged.		■				
08	Scaffolds are temporary supports to assist learning. They are part of cognitive apprenticeship.		■				
09	Independent practice produces ‘overlearning’ — a necessary process for new material to be recalled automatically.				■		■
10	The effort involved in recalling recently-learned material embeds it in long-term memory.					■	■

WHAT EVERY NEW TEACHER NEEDS TO KNOW <small>NATIONAL COUNCIL FOR TEACHER QUALITY</small>		VISUALS	SCAFFOLD	ASSESS	PRACTICE	MEMORY	AGENCY
01	Pair graphics with words. Learning increases by using both verbal and visual channels, avoiding memory overload.	■				■	
02	Link abstract concepts with concrete representations to help understand new ideas and apply them in new situations.	■	■				
03	Pose probing questions. Ask ‘why,’ ‘how’ and ‘compare and contrast’ questions to strengthen knowledge of concepts.			■			
04	Alternate modelling and worked examples with students solving similar problems.		■		■		
05	Distribute practice as memory works better with multiple exposure space over significant intervals.				■	■	
06	Assess to boost retention. The phrase ‘use it or lose it’ is true. The effort of recalling strengthens long term memory.			■		■	

CLASSROOM INSTRUCTION THAT WORKS <small>ROBERT MARZANO</small>		VISUALS	SCAFFOLD	ASSESS	PRACTICE	MEMORY	AGENCY
01	Identifying similarities and differences.	■	■				
02	Summarising and note taking.		■				
03	Reinforcing effort and providing recognition.						■
04	Homework and practice.				■		
05	Nonlinguistic representations.	■					
06	Cooperative learning.						
07	Setting objectives and providing feedback.			■			
08	Generating and testing hypotheses.						■
09	Cues, questions and advance organisers.	■	■	■			

VISIBLE LEARNING <small>JOHN HATTIE</small>		VISUALS	SCAFFOLD	ASSESS	PRACTICE	MEMORY	AGENCY
01	Goals.						
02	Behavioural organisers, and advance organisers.	■	■				
03	Concept mapping.	■	■				
04	Mastery learning.				■	■	
05	Worked examples.		■		■		
06	Feedback.			■			
07	Providing formative evaluation.			■			■
08	Questioning.			■			■
09	Space practice.				■	■	
10	Peer tutoring.						
11	Metacognitive strategies.						■
12	Self verbalisation and self-questioning.						■