Marzano's (Nine) High-Yield Instructional Strategies

Adapted from the book: Classroom Instruction that Works: Research-based Strategies for Increasing Student Achievement, by Robert Marzano (2001)

	WHAT TO DO	HOW TO DO IT
IDENTIFYING SIMILARITIES & DIFFERENCES (Yields a 45 Percentile Gain)	Students should compare, classify, and create metaphors, analogies, and non-linguistic or graphic representations	thinking maps; T-charts; Venn diagrams; classifying, analogies; cause and effect links; compare and contrast organizers; QAR (Question/Answer/Relationship); sketch to stretch; affinity diagrams; Frayer model
SUMMARIZING & NOTE-TAKING (Yields a 34 Percentile Gain)	Students should learn to eliminate unnecessary information, substitute some information, keep important information, write/rewrite, and analyze information; students should be encouraged to put some information into own words	teacher models summarization techniques; identify key concepts; bullets; outlines; clusters; narrative organizers; journal summaries; break-down assignments; create simple reports; quick writes; graphic organizers; column notes; affinity diagrams
REINFORCING EFFORT & PROVIDING RECOGNITION (Yields a 29 Percentile Gain)	Teachers should reward based on standards of performance; use symbolic recognition rather than just tangible rewards	hold high expectations; display finished products; praise students' effort; encourage students to share ideas and express their thoughts; honor individual learning styles; conference individually with students; authentic portfolios; stress-free environment; high-fives; spelling bees; school newspaper
HOMEWORK & PRACTICE (Yields a 28 Percentile Gain)	Teachers should vary the amount of homework based on student grade level (less at the elementary level, more at the secondary level); keep parent involvement in homework to a minimum; state purpose; and, if assigned, should be debriefed	retell, recite, and review learning for the day at home; reflective journals; parents are informed of the goals and objectives; grade-level teams plan together for homework distribution; SLCs; teacher email
NONLINGUISTIC REPRESENTATIONS (Yields a 27 Percentile Gain)	Students should create graphic representations, models, mental pictures, drawings, and pictographs, and participate in kinesthetic (hands-on) activities in order to assimilate knowledge	visual tools and manipulatives; problem-solution organizers; spider webs; diagrams; concept maps; drawings; charts; thinking maps; graphic organizers; sketch to stretch; storyboards; foldables; act out content; make physical models
COOPERATIVE LEARNING (Yields a 23 Percentile Gain)	Teachers should limit use of ability groups, keep groups small, apply strategy consistently and systematically—but not overuse; assign roles and responsibilities in groups	integrate content and language through group engagement; reader's theater; pass the pencil; circle of friends; cube it; radio reading; shared reading and writing; plays; science projects; debates; jigsaw; group reports; choral reading; affinity diagrams; students tackle TAKS word problems in groups and explain their answers
SETTING OBJECTIVES & PROVIDING FEEDBACK (Yields a 23 Percentile Gain)	Teachers should create specific but flexible goals, allowing some student choice; teacher feedback should be corrective, timely, and specific to a criterion	articulating and displaying learning goals; KWL; contract learning goals; teacher can display objectives on the in-focus projector and follow-up on the mastery of the objective at the end of the lesson
GENERATING & TESTING HYPOTHESIS (Yields a 23 Percentile Gain)	Students should generate, explain, test, and defend hypotheses using both inductive and deductive strategies through problem-solving, history investigation, invention, experimental inquiry, and decision-making	thinking processes; constructivist practices;, investigate; explore; social construction of knowledge; use of inductive and deductive reasoning; questioning the author of a book; finding other ways to solve same math problem
QUESTIONS, CUES, & ADVANCE ORGANIZERS (Yields a 22 Percentile Gain)	Teachers should use cues and questions that focus on what is important (rather than unusual), use ample wait time before accepting responses, eliciting inference and analysis; advance organizers should focus on what is important and are more useful with information that is not well-organized	graphic organizers; provide guiding questions before each lesson; think alouds; inferencing; predicting; drawing conclusions; skim chapters to identify key vocabulary; concepts and skills; foldables; annotating the text

There are four basic types of tasks that focus on identifying similarities and differences for knowledge development:

- COMPARING
- CLASSIFYING
- CREATING METAPHORS
- CREATING ANALOGIES

T-CHART

(TOPIC/SUBJECT)

LOOKS LIKE	SOUNDS LIKE
CAUSE	EFFECT
COMPARE	CONTRAST
PRO	CON

COMPARISON MATRIX

	THING 1	THING 2
ATTRIBUTE 1		
ATTRIBUTE 2		
ATTRIBUTE 3		

Used to show similarities & differences between two things (people, places, events, ideas, etc.).

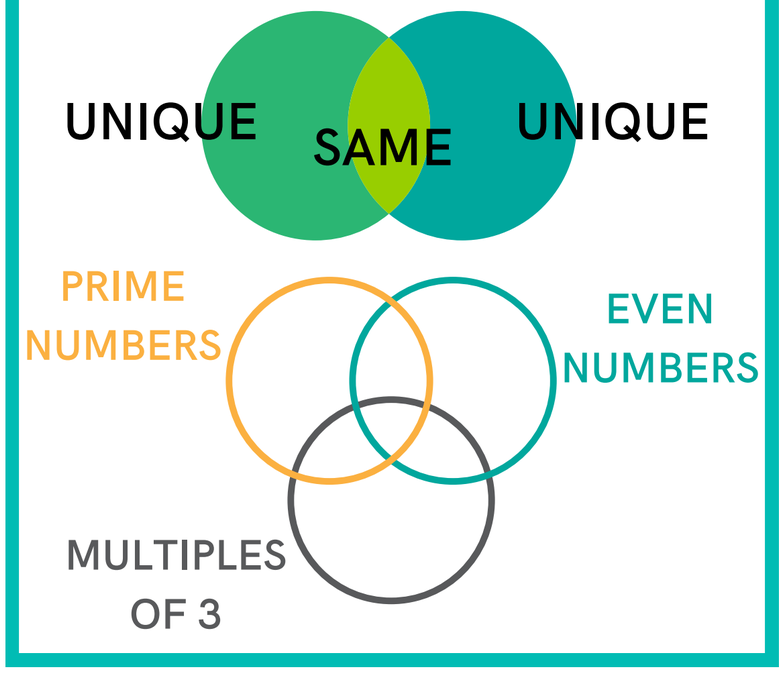
Key frame questions:
What things are being compared?
How are they similar?
How are they different?

CAUSE & EFFECT LINKS

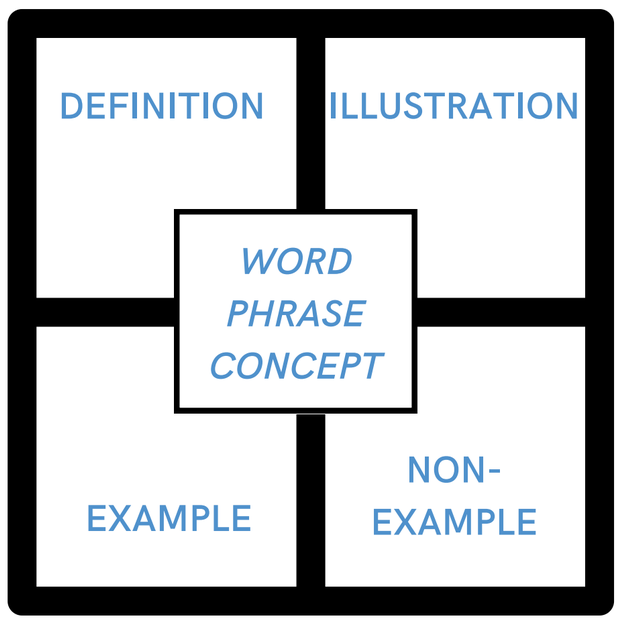
- A CAUSE is something that makes something else happen. Out of two events, it is the event that happens first. To determine the cause, ask the question "Why did it happen?"
- An EFFECT is what happens as a result of the cause. Of two related events, it's the one that happens second or last. To determine the effect, ask the question "What happened?"
- At times conjunctions (connecting words) are used to link the cause and effect. Examples of common conjunctions (connecting words) are:

since	as a result	because	the cause of	due to + noun phrase
therefore	consequently	due to the fact	nevertheless	
the reason for	thus	so	has led to	because of + noun phrase

VENN DIAGRAMS



FRAYER MODEL

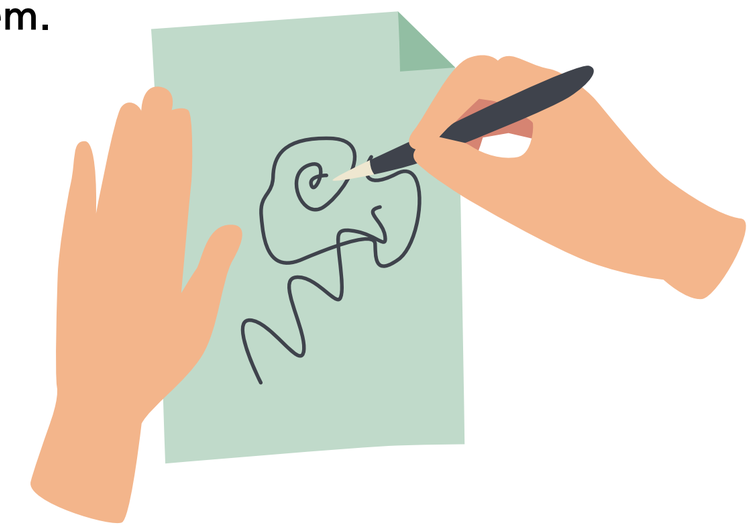


COMPARE & CONTRAST TEXT/CHARACTER COMPARISON

The life events of: _____	Me, too	Explanation

SKETCH TO STRETCH

1. Students listen as a piece of text (story, article, poem, etc.) is read to them.
2. Students draw a picture that expresses:
   - how the text makes them feel
   - what they think the text means
   - what they think the author looks like
   - anything that comes to mind during the reading
3. Students explain their drawing to a partner/small group.



QUESTION/ANSWER/RELATIONSHIPS (QAR)

(Also related to "Book and Brain")

"Right There" (in the text) —Book Question— 	"Think & Search" (text + my thinking) —Book & Brain Question— 	"In My Head" (my thinking only) —Brain Question— *have to infer* 

CLASSIFYING

___ate family

___at family

Sort the word cards or pictures into the correct bucket.

COMPARING FRAME

FRACTIONS and DECIMALS are SIMILAR because they BOTH _____

FRACTIONS and DECIMALS are DIFFERENT because fractions _____, BUT decimals _____

CREATING ANALOGIES

Analogies help us see how seemingly dissimilar things are similar, increasing our understanding of new information.

EXAMPLES:

core is to earth as nucleus is to atom
(both describe the location and relationship of things)

thermometer is to temperature as odometer is to speed
(both measure things)