Instructional Strategies – Comprehensive List

The lead4ward instructional resource is designed to provide teachers with detailed descriptions of specific, instructional strategies, many of which are modeled and experienced in lead4ward professional development sessions. Teachers may select from this list to populate the "Instructional Strategies" column of the PLC menus. This resource is intended to support educators in using an intentional planning process that includes delivering instruction that is aligned to the TEKS, promotes student engagement, and teaches for access, transfer, and rigor.

TABLE of CONTENTS

Strategy	Instructional Routine	Cooperative Learning Strategy	Instruction and/or Intervention (Tier I, II, & III)	Vocabulary Strategy	Link to Think Strategy	Item Practicing Strategy	Evidence of Learning	Page
Exit Ticket			✓	✓	✓	✓	✓	15
Fact or Fib Showdown			✓	✓	✓	✓		16
Factual/Practical			✓		✓			16
Find the Flaws/Fib Activity			✓		✓		✓	16
Fishbone Graphic Organizer			✓		✓		✓	16
Four Corners		✓						16
Frayer Model			✓	✓	✓		✓	17
Genre Hang Ups			✓		✓		✓	17
Get to the Point			✓			✓		17
Graffiti			✓		✓		✓	17
He Said – She Said			✓			✓		18
Hierarchy Graphic Organizers			✓		✓		✓	18
Hot and Cold			✓		✓			18
Hot Seat			✓		✓			18
Human Timelines			✓		✓		✓	19
Inner/Outer Circle		✓						19
IQ (Investigating the Question) Slap Down			✓			✓		19
Items Sorts			✓		✓	✓	✓	20
I've Got This!			✓			✓		20
Jig Saw		✓						21
Just the Facts, Please			✓		✓			21
Justified List			✓		✓		✓	21
Justified True/False			✓		✓		✓	21
Justify Your Answer			✓		✓		✓	21
K/W/L Chart			✓		✓		✓	22
Make an Appointment		✓						22
Match It Up			✓			✓	✓	22
Match Mine with Mix-Freeze-Group			✓		✓		✓	22
Matching Double Trouble			✓	✓			✓	23
Math Problem Solving Graphic			✓		✓			23
Millionaire Game			✓		✓	✓		23
Mix-Freeze-Group (Musical)		✓						23
Mystery [Content Area]			✓					24
Mystery Envelope			✓		✓			24
Name Game			✓			✓	✓	24
Nine Squares			✓			✓	✓	24
Number Up, Stand up, Team Up		✓						25
Odd One Out			✓		✓		✓	25

Instructional Strategies – Comprehensive List

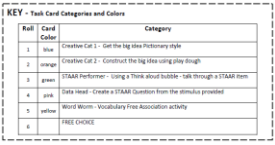| Strategy	Instructional Routine	Cooperative Learning Strategy	Instruction and/or Intervention (Tier I, II, & III)	Vocabulary Strategy	Link to Think Strategy	Item Practicing Strategy	Evidence of Learning	Page
One Question, One Comment, Last Word			✓		✓			25
Order Up			✓		✓			26
Pair-Square-Share		✓						26
Pick a Process		✓						26
Pick 3 That Stump Me			✓			✓		27
Pick Up the Slip Up			✓		✓			27
Picture It			✓			✓		27
Picture-Text-Picture Analysis			✓			✓		27
Picture Worth 1000 Words			✓		✓			28
Play it – Say it!			✓		✓			28
Plot Diagram			✓		✓		✓	28
Pocket Guide	✓							28
Problem Solving Board			✓		✓			28
Problem Solving Graphic			✓		✓			29
Question/Genre Sort			✓		✓		✓	29
Quiz-Quiz-Trade			✓			✓		29
Reading Log	✓							29
Reading Symbols	✓							29
Recast			✓		✓			29
Rank 'Em			✓		✓			30
Rank It			✓		✓			30
Reflection/Response Museum Walk	✓							30
RERUN Chart			✓		✓		✓	30
Rock & Roll Item Review			✓			✓		31
Rock & Roll Vocabulary			✓	✓				32
Roll With It			✓			✓		32
Round Robin (or Rotating) Review		✓						33
Rule of 3 – Effective Praise	✓							33
Scientific Method Graphic			✓		✓			33
Sentence Frame/Starters/Stems			✓		✓		✓	33
Sequencing Sentence Frames			✓		✓		✓	34
Shake and Share		✓						34
Show Me What You Know			✓			✓		34
Sketch It			✓	✓			✓	35
Synectics Snowball			✓	✓			✓	35
Stage It			✓		✓			36
Stand up! Hand up! Pair up!		✓						36
Stop, Plop, and Roll			✓		✓			36

Strategy	Instructional Routine	Cooperative Learning Strategy	Instruction and/or Intervention (Tier I, II, & III)	Vocabulary Strategy	Link to Think Strategy	Item Practicing Strategy	Evidence of Learning	Page
Story Map			✓		✓		✓	37
Swipe It			✓			✓		37
Talk a Mile a Minute			✓	✓				38
Talking Chips or Babble Beans		✓						38
T-Chart			✓		✓		✓	39
Tea Time			✓	✓	✓			39
Team-Pair-Solo		✓						39
Tic-Tac-Tally			✓	✓	✓	✓	✓	39
Tic-Tac-Tally (Reading Adaptation)			✓	✓	✓	✓	✓	40
Think-Pair-Square-Share		✓						40
Think Strip			✓		✓			40
Thinking Maps®			✓	✓	✓	✓	✓	40
Toss a Question			✓		✓	✓		41
Tour of Knowledge			✓		✓			41
Trashcan Basketball			✓			✓		42
Trifold Organizer (Cause/Effect)			✓		✓		✓	42
Triple Play			✓	✓	✓			43
Turn and Teach		✓						43
Venn Diagram			✓		✓		✓	43
Visual Vocabulary			✓	✓	✓			44
Vocabulary Dominoes			✓	✓	✓			44
Vocabulary Link			✓	✓	✓			44
Vocabulary/Genre Sort			✓		✓		✓	44
Vocabulary Pyramid Game			✓	✓				44
What Went Wrong			✓		✓	✓		45
What's On Your Plate Brainstorming			✓		✓			45
Who Am I?			✓	✓				46
Yet to Yes Game			✓			✓		46

High Yield Strategy	Instructional Steps	Thinking (Process TEKS Rigor)
1 Minute Paper	1. Students "brain dump" all the ideas, concepts, skills, processes, etc., they have learned by writing for 1 minute. 2. Students then draw 1 conclusion about what they learned. (Sentence Frame: *From everything we learned today, I can conclude that this is important because _____.)* NOTE: This strategy can be implemented as a formative assessment "exit ticket." Results will inform instruction for the next day.	• Analyze/Interpret • Generalize • Summarize
3-2-1 Summary	1. Students write 3 big ideas or facts/details they learned. (What did it say?) 2. Students write 2 examples, applications, or inferences about what they learned. (What did it mean?) 3. Students write 1 question or draw 1 conclusion about what they learned. (What does it mean?) NOTE: 3-2-1 Summaries may be used as exit tickets at the end of class, or they may be implemented with "Musical Mix-Freeze-Group" to allow students to share and refine summaries with peers.	• Analyze/Interpret • Apply • Draw Conclusions • Infer • Summarize

3-2-1 Test Review	1. Students analyze a graded test to determine where they are strong and where they still need to work.
	  • 3 = select 3 difficult questions you got correct and explain WHY you got them correct to a friend.
	  • 2 = select 2 questions you THOUGHT you got correct, but you missed them and correct your mistake with a friend.
	  • 1 = select 1 question you guessed on or are "clueless" about and find someone to teach you how to best start, think about, and answer that question.
		• Analyze/Interpret
		• Apply
		• Compare/Contrast/ Categorize
		• Draw Conclusions
		• Evaluate

6-Steps to Building Academic Vocabulary *(Building Academic Vocabulary by Robert Marzano)*	1. Teacher DESCRIBES the term. 2. Students RESTATE the term. 3. Students SKETCH/DRAW the term graphically. 4. Students participated in ACTIVITES that deepen understanding of the term. 5. Students TALK about the term. 6. Students PLAY games with the terms.	• Analyze/Interpret • Apply • Cause/Effect • Compare/Contrast/ Categorize • Create/Develop • Draw Conclusions • Generalize • Infer • Make Connections
7 Little Words **with Connect 4 Thinking**	1. Organize students into partners. 2. Present students with clues to 7 key vocabulary terms and the number of letters in each term. 3. Then provide students with a chart that contains all the words broken into 2 and 3 letter "chunks" or tiles. 4. Students read the clues and then "search" the letter chunk clues to "build" the correct word from the clues. 5. The teacher may provide hints as appropriate (the first letter, the first tile, etc.) 6. After students correctly guess the each word, they must make 4 connections to the term: a synonym, an antonym, another term in the unit or a quick sketch, and to real life. 7. Teacher clarifies/verifies	• Analyze/Interpret • Apply • Compare/Contrast/ Categorize • Create/Develop • Draw Conclusions • Infer • Make Connections

High Yield Strategy	Instructional Steps	Thinking (Process TEKS Rigor)
Always/Sometimes/Never	1. Teacher creates content statement cards that include true and false statements and distributes them to students. (Statements may be based on student misconceptions or concept "distractors.") 2. Use a cooperative structure such as Mix-Freeze-Group, Stand up/Hand up/Pair Up, or Shake and Share to organize students into pairs or triads. 3. Focusing on a specific content statement determined by the teacher, pairs analyze if the statement is "always true," "sometimes true," or "never true" and justify their response. 4. Student groups debate the statements on which they disagree. 5. Teacher clarifies/verifies.	• Analyze/Interpret • Apply • Cause/Effect • Compare/Contrast/ Categorize • Create/Develop • Draw Conclusions • Evaluate • Generalize • Infer • Make Connections • Predict/Estimate • Sequence/Order • Summarize
ABCD Card Reasoning	1. Organize students into groups of 4. 2. Each student is assigned a letter- A/F, B/G, C/H, or D/J. 3. Students distribute among their group 4 different assessment items (cards or questions) provided by the teacher. 4. For the item they currently have, each student analyzes the item and predicts why a student might select THEIR answer choice (even if it is the incorrect answer. Possible justifications may include the following: careless error, stopped too soon, mixed up steps, or guessed). 5. Students write a justification of their answer choice analysis on the back of the item card. 6. Students rotate their cards/questions (Round Robin) and continue to justify why a student might choose their answer. 7. After all questions have been rotated around the group, students discuss the correct answer for each card and probable errors students might make on each item. 8. Students use the "Learning from Students' Mistakes" handout to assist them in their thinking. 9. Teacher clarifies/verifies and if data is available for the items, the teacher could display the data and discuss the actual error patterns students made.	• Analyze/Interpret • Apply • Cause/Effect • Draw Conclusions • Evaluate • Infer • Make Connections

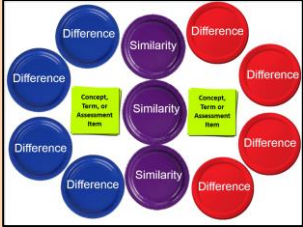| High Yield Strategy	Instructional Steps	Thinking (Process TEKS Rigor)
Anchor Chart *(using concepts)*	1. Place a chart on the classroom wall with the overarching concept associated with the unit listed in the center. 2. Students add ideas to the anchor chart as the unit progresses, linking skills, topics, examples, details, images, and clarifying information to the chart. 3. Students transfer the anchor chart information to their journals.	• Analyze/Interpret • Apply • Cause/Effect • Compare/Contrast/Categorize • Create/Develop • Draw Conclusions • Evaluate • Generalize • Infer • Make Connections • Predict/Estimate • Sequence/Order • Summarize

Anchor Charts *(Using the Student Learning Reports)*	1. To help students access the content taught all year long, create visible (and mental) "filing cabinet drawers" into which students will place everything they learn.
	2. Each Anchor Chart represents a Knowledge and Skills family of standards, which in turn will represent a specific "drawer" into which students will "file" their learning. For example, in grade 5 science, there are 6 Knowledge and Skills families that represent content. This means there will be 6 Anchor Charts or "filing cabinet drawers" for grade 5 science.
	3. Place the Student Learning Report in the center of chart.
	4. As the unit progresses, the teacher and students co-create a comprehensive Anchor Chart that includes the following:
	  • Visual Representations, various stimuli, resources, texts, pictures, charts, graphs, videos, etc. used to teach the content
	  • Key vocabulary terms (including student sketches if applicable)
	  • Memorable moments (strategies, fun activities, labs, interesting events, activities that involved deep thinking, etc.)
	  • Evidence of learning (tests, quizzes, graphic organizers, 3-2-1 summaries, thinkalouds, etc.)
	5. Students transfer the ideas from the Anchor Chart into their Interactive Notebooks.
	6. Students loopback to the Anchor Charts throughout the year to access and connect learning.
		• Create/Develop
		• Draw Conclusions
		• Make Connections
		• Summarize

High Yield Strategy	Instructional Steps	Thinking (Process TEKS Rigor)
Blind Sequencing *(Adapted from Kagan Cooperative Learning)*	1. Organize students into groups of 4. 1. Provide each group a set of cards, ideas, posters, or steps in a process to sequence BEFORE they have been exposed to any instruction about the concept. 2. Group leaders distribute the cards/posters among the group members. 3. Students have several minutes to huddle, read the cards/posters, and then determine an appropriate sequence. 4. At the teacher's signal, the student groups turn and show their sequence to the class. 5. The teacher asks for students to hold up step 1, then step 2, then step 3, etc. 6. Varying responses indicate that the class has little prior knowledge about the topic. Similar responses (whether correct or incorrect) indicate the majority of the class is thinking similarly. 7. Teacher clarifies/verifies the correct sequence, summarizing the content over which the lesson will focus. 8. Students re-sequence their cards based on the new information from the teacher. 9. At the teacher's signal, students show their new sequence to the class. 10. Students then examine each step in greater detail and depth through buddy reading, online research, video clips, etc. NOTE: The activity can be differentiated for different levels of learners by providing a set of clues that reveal a few of the steps in sequence.	• Analyze/Interpret • Apply • Create/Develop • Draw Conclusions • Infer • Make Connections • Predict/Estimate • Sequence/Order • Summarize

Bioranium	1. Organize students into small groups.
	2. Provide each group with a die, a container of play dough, a set of color-coded "Bioranium" cards, and a KEY indicating which task students should complete for each number rolled.
	3. Student partners take turns rolling the die.
	4. Students grab the color card that corresponds with the number they rolled.
	5. Read the card.
	6. Complete the activity as a team.
	7. Were you successful? If applicable, ask the other team to check.
	   • **YES!** Move on to the next task card.
	   • **No.** Repeat Task.
	8. Continue rolling the die and completing the corresponding activities.
	NOTE: Bioranium cards are created by copying various assessment items or vocabulary terms on the various color-coded card stock. Try to select items that best reflect the category tasks.
		• Analyze/Interpret
		• Apply
		• Compare/Contrast/ Categorize
		• Create/Develop
		• Draw Conclusions
		• Infer
		• Make Connections
		• Summarize

High Yield Strategy	Instructional Steps	Thinking (Process TEKS Rigor)

Brain in the Game with 4 Square	1. Divide the room into 4 squares.
	2. Place a Knowledge and Skills summary (1-4 words) in each square.
	3. From a pre-selected group of assessment items representing these four K & S, present each student with one item as they enter the classroom (or simply project the 4 items on your Smart board.)
	4. Ask students to "get their brain in the game" by completing the following on the back of the question…
	    • analyze the item's stimulus
	    • describe/identify 3-5 important vocabulary terms in their item
	    • predict what the question might be about
	5. Students move to the square in the room that best reflects their item's topic/category.
	6. Students find a partner in their square with their same question, compare their "brain in the game" analysis.
	7. Students must justify their thinking.
	8. Students may change squares if they discover another K & S is a better fit after their partner discussions.
	9. Teacher clarifies and verifies.
		• Analyze/Interpret
		• Compare/Contrast/ Categorize
		• Draw Conclusions
		• Infer
		• Make Connections
		• Predict/Estimate

Bubble When You Struggle	1. The teacher develops 3-4 key questions students may ask themselves when students are stumped on an assessment item to help them move from "frozen" to "starting" the problem. 2. When students answer these 3-4 questions, they draw a bubble out beside the item and list the answers to those 3-4 key questions the teacher provided. NOTE: Teachers may also create an acronym to help students remember their "bubble when you struggle" questions; for example, in social studies, the *Bubble When You Struggle* might be **EPIC** (E = what **E**ra? P = what **P**eople? I = what's **I**nteresting? C = what's **C**omparable to other things you know?)	• Analyze/Interpret • Apply • Cause/Effect • Compare/Contrast/ Categorize • Create/Develop • Draw Conclusions • Evaluate • Generalize • Infer • Make Connections • Predict/Estimate • Sequence/Order • Summarize

Instructional Strategies – Comprehensive List

High Yield Strategy	Instructional Steps	Thinking (Process TEKS Rigor)

Card Sort	1. The teacher and/or students create a set of cards reflecting various vocabulary terms, images, models, assessment items, or content associated with the TEKS in the unit of study.
	2. Students work cooperatively in small groups or with partners to sort the cards into various categories, first through an open sort and second through a closed sort.
	   • OPEN SORT: student create their own categories, sort the cards, and justify their thinking.
	   • CLOSED SORT: teacher provides the categories and asks student to re-sort their cards into these new categories and justify their thinking.
	3. As students sort, the teacher should circulate among the groups asking for justifications, but not correcting errors yet. Instead, the teacher may pull a card and ask students to first justify their categorization. Rather than telling students they are incorrect, the teacher should ask students to "re-think" their categorization.
	4. Teacher clarifies/verifies as a whole group.
	5. Students may transfer the sorting categorization cards into a graphic representation in their journals.
	NOTE: To save preparation time, write terms on the white board, and ask students to form groups and create their own card set using note cards or notebook paper cut into rectangles. For assessment item sorts, present groups with a worksheet or test and ask them to cut the items apart into separate "cards." If the card set has images, copy one set of the images for each group and ask students to cut the images apart to create their card set.
	NOTE: a vocabulary card sort could be used as a pre-test and post-test using the following categories: know it, kind of know it, and don't know it yet.
		• Analyze/Interpret
		• Apply
		• Compare/Classify/Categorize
		• Create/Develop
		• Draw Conclusions
		• Generalize
		• Infer
		• Make Connections

Careless-Clueless Analysis	1. Students get a graded assessment back and individually analyze the questions they missed and code it beside each missed item as one of the following:
	   • careless mistake (knew it and blew it!)
	   • clueless mistake (didn't reach me; need to teach me!)
	2. For students who missed 3 or less questions, they should select the 3 most difficult questions from the test and explain WHY they were complex beside the question.
	3. Using a cooperative structure such as Mix-Freeze-Group, Stand up/Hand up/Pair up, or Shake and Share, students share their analysis over one of the items they missed with a partner.
	4. Repeat 3 rounds so students have shared/explained 3 different items with 3 different partners.
	5. Students "vote" for 1 item they want the teacher to go over and review.
	6. Using an engaging item review strategy such as IQ Slap Down, the teacher reviews the item students requested.
		• Analyze
		• Compare/Contrast
		• Evaluate

Choose and Chat	1. Teacher presents a concept, process, or skill.
	2. Teacher asks students to display a hand signal to reflect their understanding such as the following:
	   • Thumb up = I completely understand
	   • Thumb to the side = I kind of understand
	   • Thumb down = I need more information
	3. Students evaluate their understanding, choose a signal, and the chat with a partner about the following:
	   • explain parts of the content they understand
	   • identify parts of the content they do not understand
	   • ask one clarifying question
		• *Thinking will vary depending on the task or question that is assigned*

High Yield Strategy	Instructional Steps	Thinking (Process TEKS Rigor)
Circuit Time	1. Teacher provides groups of students a variety of novel (text) excerpts. 2. Students have 2 minutes (for each excerpt) to read and jot down as many pieces of evidence as possible from the text(s) to show that the story is set in alternative reality or a place different from the world we know today. 3. Each piece of evidence must be no more than 4 words long. 4. The winning team is the one who has the most solid evidence.	• Analyze • Make connections • Compare/contrast • Summarize

Circuit Training	1. The teacher sets up 5-7 learning "circuits" around the room that reflect different vocabulary, link to think, and engaging item practicing strategies over content that students need to review, rehearse, or practice without penalty.
	2. Answer keys are provided for students to self-monitor their understanding.
	3. Students evaluate their responses to the activities in order to target the areas in which they still need to work.
	  • For activities that have a correct answer, students evaluate their responses:
	    - *I got it correct the first time, and I understand it*
	    - *I got it correct, but I'm not sure why*
	    - *I got it wrong, but I know where I messed up*
	    - *I got it wrong, and I have no idea how to do this*
	
	  • For activities that do not have a specific correct answer or have several different correct responses, students evaluate their own understanding:
	    - *I understand this content and could teach it to someone else*
	    - *I somewhat understand this content, but I need some clarification*
	    - *I do not understand this content and need a re-teach*
	
	4. Suggestions for setting up Circuit Training stations are listed below:
	  • Vocabulary Card Sort
	  • Show Me What You Know
	  • Matching Double Trouble
	  • Odd One Out
	  • Connect the Dots
	  • Compare/Contrast Paper Plate Model
		• *Thinking will vary depending on the task or question that is assigned*

Commit and Toss Discourse (Keeley's Science Formative Assessment)	1. Students answer an assessment item and JUSTIFY their response. 2. Students then crumple their paper into a ball and toss it randomly across the classroom. 3. Student pick up 2 different balls and toss them, too. 4. On the 4th ball, students open the paper to read, discuss, and record any new information to add value to the original response. 5. Teacher clarifies and verifies.	• Analyze/Interpret • Compare/Contrast/ Categorize • Create/Develop

High Yield Strategy	Instructional Steps	Thinking (Process TEKS Rigor)
Compare / Contrast Paper Plate Model	1. Organize baggies filled with 2 white plastic plates, 6 blue plastic plates, 6 red plastic plates, 6 purple plastic plates, and 1 dry erase marker. (Colors may vary.) 2. Organize students into groups of 3. 3. WHITE PLATES: Ask students to list topic #1 on one white paper plate and to list topic #2 on the second paper plate. (Topics may be determined by the teacher and/or the students but must be aligned to the unit of study.) 4. Group members each get 2 plates of each color. 5. PURPLE PLATES: Taking turns, students generate ideas of similarities between the 2 topics, share their ideas, and place their plates in the center of the model. 6. RED PLATES: Taking turns, students generate ideas of how topic #1 is unique and different from topic #2, share ideas, and place their plates in the model. 7. BLUE PLATES: Taking turns, students generate ideas of how topic #2 is unique and different from topic #1, share ideas, and place their plates in the model. 8. Students elect one person to "take a cruise" to 3 other groups, getting additional ideas to bring back to their home group. Students add these ideas to their model. 9. Teacher clarifies/verifies students' compare/contrast thinking. 10. Students transfer information from the model into their journals. 11. Students clean the plates and place them back into the baggies to prepare them for the next group. NOTE: Although this activity, done with paper plates, allows for a high degree of tactile and physical engagement; sticky notes, colorful paper, colored index cards, or chart paper with colored markers could also be used to create the compare/contrast model. NOTE: This strategy can also be used for item review. Students compare/contrast 2 assessment items over the same SE or Knowledge and Skills statement to see how the stimulus, thinking, vocabulary, etc. are the same and how they are different, which will help students with transfer and rigor.	• Analyze/Interpret • Compare/Contrast/ Categorize • Create/Develop • Infer • Make Connections • Summarize
Concept Attainment (Mystery Bag)	1. Teacher presents positive examples that reflect the topic of the lesson as well as non-examples. 2. Students determine the common attributes of the positive examples. 3. Students form a hypothesis of what the lesson topic may be and provide a nonverbal signal to demonstrate to the teacher their understanding. • Thumbs up = I've got it! • Thumb sideways = I may have it but need more clues. 4. Teacher clarifies and verifies. 5. Students generate additional positive examples. NOTE: Teachers may pull the examples and non-examples from a backpack, brown grocery sack, or another "mystery" container to add an element of excitement to the activity.	• Analyze/Interpret • Compare/Contrast/ Categorize • Draw Conclusions • Generalize • Infer • Make Connections • Predict/Estimate

High Yield Strategy	Instructional Steps	Thinking (Process TEKS Rigor)

Concept Connections (Card Sort)	1. Organize students into pairs or triads.
	2. Provide Students with a set of pictures/ideas/definitions/terms/questions.
	3. Student sort (classify/categorize) the cards into given concept categories.
	4. Possible concepts or categories:
	  • Math: four operations; proportional vs. non-proportional; positive/negative/undefined/zero slope, etc.
	  • Science: matter, energy, force of motion, earth's surface, space, adaptability of organisms, changing environments, etc.
	  • ELAR: types of conflict, various genre (fiction, poetry, drama, historical fiction, informational expository, procedural, persuasive), figurative language, elements of plot, types of thinking (summarize, infer, make connections), etc.
	  • Social Studies: Gilded Age, Progressive era, Rise of World Power, Roaring Twenties, Depression, WWII, Cold War, Vietnam, Civil Rights, Contemporary era
		• Analyze/Interpret
		• Apply
		• Compare/Contrast/ Categorize
		• Create/Develop
		• Generalize
		• Infer
		• Make Connections

Concept Hang Ups *with* **Compare/Contrast Paper Plate Model**	1. Organize students into pairs or triads. 2. Provide student groups with a set of cards related to the unit content. (Instructional vocabulary terms, major ideas/skills, images, assessment items, the actual TEKS for the unit, etc.) (Teachers may also ask students to create the cards by providing a list of ideas, and students copy those ideas onto note cards.) 3. Students create hangers for each of the major concepts/categories. 4. Students then "hang" the concept cards on hangers that reflect the categories associated with the cards. 5. The teacher evaluates the students' hang ups and provides hints such as, "How could you re-think this card?" or "You have 2 cards out of place. Can you figure out which ones might need to move?" 6. Students revise their sort according to teacher's hints. 7. Once the "hang up" card sort is verified, student select ideas from two different hangers and complete a compare/contrast paper plate model. 8. Students transfer their Compare/Contrast model to their journals. 9. Student "take a cruise" to get 3 new ideas from other groups to add to their journal. 10. The teacher clarifies/verifies as appropriate.	• Analyze/Interpret • Apply • Compare/Contrast/ Categorize • Create/Develop • Draw Conclusions • Generalize • Infer • Make Connections

High Yield Strategy	Instructional Steps	Thinking (Process TEKS Rigor)
Concept Maps and Brainstorming Webs	1. Student brainstorm ideas, identify specific content information, and analyze information through a graphic representations showing the relationship of the ideas. 2. Examples may include the following: 	• Analyze/Interpret • Apply • Cause/Effect • Compare/Contrast/ Categorize • Create/Develop • Draw Conclusions • Evaluate • Generalize • Infer • Make Connections • Predict/Estimate • Sequence/Order • Summarize

Connect 4 Thinking	1. Students are organized into groups of 4.
	2. Students are provided a key term or concept.
	3. Each student makes a connection with the term and explains the connection to the group.
	4. Possible connections may include the following:
	  • synonym
	  • antonym
	  • analogy
	  • quick sketch or graphic representation
	  • another term or concept
	  • real life
	5. Students record the 4 connections in their journals or interactive notebooks
	6. Teacher clarifies and verifies as appropriate.
		• Analyze/Interpret
		• Compare/Contrast/ Categorize
		• Create/Develop
		• Draw Conclusions
		• Infer
		• Make Connections

Connect It	1. Place objects and/or images on the table that relate to big ideas or concepts. 2. Students observe and analyze the items/images. 3. Students discuss their observations and connections of the objects to the big ideas or concepts. 4. Students record the relationships between the visuals/objects and concepts through analogies or graphic representations.	• Analyze/Interpret • Make Connections
Connect the Dots 	1. Provide students with the Connect the Dots visual or have them draw the visual on notebook paper. 2. Organize students into pairs, triads, or groups of 4. 3. Students (or teachers) select four familiar titles, text excerpts, concepts, key academic vocabulary terms, math problems, lab experiments, etc. 4. Using the Connect the Dots organizer, students label each dot with one of the ideas. (Each dot has a different idea.) 5. Students follow the arrows to find ways in which the ideas connect. 6. Students find one similarity and one difference between the aligned dots.	• Analyze/Interpret • Compare/Contrast/ Categorize • Create/Develop • Infer • Make Connections

High Yield Strategy	Instructional Steps	Thinking (Process TEKS Rigor)
Consensogram	1. Develop an essential question. 2. Develop 3-4 degrees of response. 3. Students place a dot in the cell representing their initial response. 4. Students place a dot in the cell representing their response after instruction takes place. 	• Analyze/Interpret • Evaluate • Generalize
Comprehension Tower *(May use Jenga blocks)*	1. Groups of students are provided a set of wooden blocks (35 blocks). One number (1-35) or specific verbs from the highly tested process TEKS are written on each block. 2. Students build a tower with the blocks. 3. One student at a time removes a block from the structure trying not to collapse the tower. 4. Using a provided list of numbered (1-35) discussion prompts and/or questions associated with the verbs from the highly tested process TEKS, each student removes a block and addresses the corresponding prompt or question. 5. After the prompt or question has been addressed, the block is placed on the top section of the tower. 6. Teacher clarifies/verifies.	• *Thinking will vary depending on the verb that is selected*
Duos, Trios, Quartets (Simplified Kagan Collaborative Learning Strategy)	1. Students engage in focused discussion around specific questions… 2. First with a partner (duos) 3. Then in groups of three (trios) 4. Last in groups of four (quartets) 5. Teacher clarifies and verifies.	• *Thinking will vary depending on the task or question that is assigned*
Exit Ticket	1. Students are given a term, question, assessment item, or sentence stem to complete as an exit ticket. 2. Students analyze the task and apply what they learned. *Exit Ticket based on Key Understandings or Anchor Charts:* 1. Post the chart in the room. 2. Students create an Exit Ticket at the end of the lesson: The information we learned in today's lesson links to Key Understanding # _____ because _____.	• Analyze/Interpret • Draw Conclusions • Generalize • Make Connections • Summarize

lead4ward

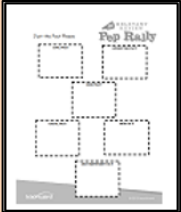| High Yield Strategy	Instructional Steps	Thinking (Process TEKS Rigor)
Fact or Fib Showdown (Adapted from Kagan Cooperative Learning)	1. Students write "fact" on one notecard or post-it note and "fib" on another notecard or post-it note. 2. Teacher presents a statement associated with the content. 3. Teacher allows 3-5 seconds for student processing to decide if the statement is a fact or a fib. 4. Teacher says, "1, 2, 3 Showdown!" 5. Students slap their response in the middle of their desk/table. 6. Students justify their response with a partner or small group. 7. Teacher clarifies/verifies correct response and dispels misconceptions.	• Analyze/Interpret • Draw Conclusions • Infer • Predict/Estimate
Factual/Practical	1. Students write on the back of each *Just the Facts Please* card how the information could be used in real life. 2. Students share their ideas with a partner. 3. Teacher asks for 3-4 "pop outs" so students can share ideas.	• Analyze/Interpret • Apply • Summarize
Find the Flaws/Fibs Activity (Adapted from Kagan Cooperative Learning)	1. Teacher develops a group of statements; some are true and others are flaws or fibs. 2. Students work cooperatively to determine which of the statements represent the flaws/fibs. 3. Students justify why the statements are true and why the flaws are fibs. 4. Teacher clarifies/verifies.	• Analyze/Interpret • Apply • Compare/Contrast/ Categorize • Infer • Predict/Estimate
Fishbone Graphic Organizer	1. Students analyze content in terms of big ideas and smaller, connected ideas through a graphic organizer. 	• Analyze/Interpret • Cause/Effect • Compare/Contrast/ Categorize • Create/Develop • Make Connections • Summarize
Four Corners (Adapted from Kagan Cooperative Learning)	1. Assign each corner of the room either a vacation destination, soft drink, candy bar, etc. 2. Ask students to select a corner and to "go on vacation" or to their favorite corner. 3. Once students are in their chosen corner, they form a partnership with someone who is vacationing at the same destination (or has selected that same corner preference.) 4. Teacher poses a question related to TEKS content, rigor, or specificity. 5. Students work with their partner to answer and justify their response and transfer the information to their notes/journals. 6. Teacher clarifies/verifies. NOTE: This strategy could be used to scaffold learning for 3-4 homework questions to ensure students are provided an opportunity to "practice without penalty."	• *Thinking may vary depending on the task or question that is assigned*

High Yield Strategy	Instructional Steps	Thinking (Process TEKS Rigor)
Frayer Model *(Dorothy Frayer)*	1. The Frayer Model is a visual organizer that helps students understand key words and concepts. The Frayer Model is a chart with four sections which can hold a definition, some characteristics/facts, examples and non-examples of the word/concept. 2. The purpose is to identify unfamiliar concepts and vocabulary and to create visual reference for concepts and vocabulary	• Analyze/Interpret • Compare/Contrast/Categorize • Create/Develop • Make Connections • Summarize
Genre Hang Ups	1. Sort picture cards by genre. 2. Hang pictures on the correct genre hangar. 3. Retell one story in the correct order. 3. Point to the 3 most important parts of the book and explain why they are important. 4. Support your conclusions with textual evidence. 5. Teachers are encouraged to add to/adapt this step with various probing questions and extension activities.	• Analyze/Interpret • Apply • Compare/Contrast/Categorize • Create/Develop • Infer • Make Connections

Get to the Point	1. Students get a graded test back and individually "code" the questions they missed as …
	   • Careless mistake (knew it and blew it!)
	   • Clueless mistake (didn't reach me; need to teach me!)
	2. For students who made a 100%, ask them to code the 3 most difficult questions and explain WHY they were complex.
	3. Post a blank test on a wall in the classroom.
	4. Students are provided 3 garage sale dots to place on the 3 questions they struggled with the most and want the teacher to review.
	5. The teacher selects 5-6 questions for review/deconstruction.
	6. The teacher uses an engaging strategy to review the items to help students understand the stimulus, vocabulary, concept/skill, the correct answer, and WHY it is the correct answer and the others are incorrect. (IQ Slap Down, IQ Mystery, 4 Corners, Rock & Roll Item Review, Show Me What You Know, Item Sorts, Trashcan Basketball, Yet to Yes Game.)
		• Analyze/Interpret
		• Evaluate

Graffiti	1. Students draw a 1 minute "graffiti" representing the major concept taught during the lesson. 2. Students add 1 sentence to make 1 inference, draw 1 conclusion, or make 1 prediction based on their understanding of the content.	• Analyze/Interpret • Create/Develop • Summarize

High Yield Strategy	Instructional Steps	Thinking (Process TEKS Rigor)
He Said – She Said *with* **Stand Up! Hand Up! Pair Up!** *(Adapted from Kagan Cooperative Learning)*	1. Students are provided with an assessment item or a problem that has 3-4 conclusions associated with the item. 2. Students then write two additional "valid conclusions" about the item. (Valid conclusions may align to concepts from the TEKS, formulas, rules, theorems, processes, key understandings, etc.) 3. Students then participate in a Stand Up! Hand Up! Pair Up! to find a partner. 4. Student partners share their valid conclusions. 5. Students participate in another round of Stand Up! Hand Up! Pair Up! to get a second partner. 6. New partners share valid conclusions. 7. The teacher clarifies/verifies.	• Analyze/Interpret • Apply • Create/Develop • Draw Conclusions • Evaluate • Generalize • Infer
Hierarchy Graphic Organizer	1. Students organize, summarize, and analyze information by transferring information into a graphic organizer that shows the relationship between the ideas through a hierarchical structure.	• Analyze/Interpret • Apply • Compare/Contrast/ Categorize • Create/Develop • Make Connections

Hot and Cold	1. A piece of text is divided by paragraph, page, chapter, etc.
	 2. Students rank each section based on their level of understanding.
	    • 10=hot (I understood all of the text.)
	    • 0=cold (I did not understand any of the text.)
	
	 NOTE: This provides a learning strategy to support transfer of comprehension strategies into all levels of understanding during reading.
		• Analyze/Interpret
		 • Evaluate

Hot Seat	1. Provide a deck of **Say It** cards (cards with questions), one number cube, and a piece of text for each group of 4 to 5 students. 2. Students read the text independently stopping at an agreed upon place in the text. 3. Each student rolls the number cube. The student rolling the highest number is in the Hot Seat. 4. The student in the Hot Seat draws one card from the deck and responds to the prompt. 5. Students in the group listen to the response and provide feedback using a point system of 1-5. 6. The student in the Hot Seat records his/her points. The student with the highest points at the end of the game wins.	• Analyze/Interpret • Evaluate • Generalize • Infer • Make Connections • Summarize

High Yield Strategy	Instructional Steps	Thinking (Process TEKS Rigor)
Human Timelines	1. Students are placed into groups. 2. Groups are given a set of pictures, events, ideas, processes, etc., aligned to the content. 3. Group members huddle to determine the correct sequence of the pictures, events, ideas, or processes. 4. Student reveal their human time line to the class and justify their sequence.	• Analyze/Interpret • Apply • Sequence/Order • Summarize
Inner/Outer Circle (Adapted from Kagan Cooperative Learning)	1. One-half of the class forms a circle facing out. 2. The other half of the class form a circle facing in. 3. The inside circle students are each provided a vocabulary term associated with the unit content. 4. Outside circle students describe the term, compare the term to one other term from the unit, and create an analogy with the term. 5. Inside circle clarifies/verifies the outside circle's answer. 6. At the teacher's signal, the outside circle rotates one person to the left to have a new partner with a new question. 7. Repeat steps #3–#6 until the outside circle returns to their original positions. 8. Inside circle hands their question card to their outside circle partner. 9. Circle trade positions. (Outside become inside/inside become outside.) 10. Process repeats with the new circles. 11. Teacher clarifies/verifies as appropriate.	• *Thinking may vary depending on the task or question that is assigned*
Investigating the Question (IQ) Slap Down Game	1. Organize students into groups of 3 or 4. 2. Each member should get a set of "ABCD" cards. 3. Round 1: At the teacher's signal, students slap down the answer choice that represents the **worst answer** and then justify their response. 4. Round 2: At the teacher's signal, students slap down the answer choice that represents the **best wrong/incorrect answer** and then justify why many students may have mistakenly chosen that answer. 5. Round 3: At the teacher's signal, students slap down the answer that represents the **correct answer** and then justify why this is the appropriate response. NOTE: It is critical that students justify their responses to articulate the processing/application errors students may make when answering items.	• Analyze/Interpret • Apply • Compare/Contrast/ Categorize • Draw Conclusions • Evaluate • Infer • Predict/Estimate

High Yield Strategy	Instructional Steps	Thinking (Process TEKS Rigor)
Item Sorts	1. Organize students into pairs. 2. Present each group with a set of assessment items, targeting concepts students need to review. 3. Students sort (classify/categorize) the items in a 3-5 different ways including but not limited to the following: As a Group: • By Knowledge and Skills Statement (1-4 word summary of the K & S) • By Student Expectation • By Standard type (Readiness, Supporting, Process) • By single vs. dual-coding • By stimulus (chart, graphs, images, models, text, etc.) • By thinking (infer, compare/contrast, generalize, predict, cause/effect, etc.) • By topic • By vocabulary terms 4. As an individual student: • By careless (I knew it and blew it) and Clueless (didn't reach me; someone teach me) • Best to worst (items I knew the best to items I struggles with) • By "Know," "Kind of Know," "Don't Know"	• Analyze/Interpret • Compare/Contrast/Categorize • Create/Develop • Evaluate • Make Connections • Predict/Estimate • Sequence/Order • Summarize
I've Got This!	1. Students are placed in groups of at least six. 2. Each student is assigned a number; #1-6. Students become the expert for their assigned portion and return to their home group to teach their part of the problem solving process. #1: Given a word problem, students are asked to retell the problem in their own words. #2: Given the same word problem already solved, students are asked to explain how the problem was solved. #3: Given the same word problem already solved, students are asked to defend the solution as reasonable. #4: Given the same word problem already solved, students are asked to solve the problem another way. #5: Given the same word problem already solved, students are asked to change a component of the word problem and discuss how that would impact the solution. #6: Given the same word problem already solved, students are asked to add an additional step to the word problem and discuss how that would impact the solution. 3. Students return to their home groups to teach what they learned in their expert groups. Students should share their information in chronological order as it will yield the problem solving process.	• Analyze/Interpret • Apply • Create/Develop • Predict/Estimate • Sequence/Order • Summarize

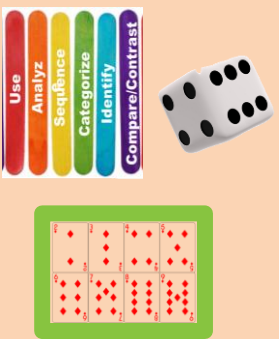| High Yield Strategy	Instructional Steps	Thinking (Process TEKS Rigor)
Jig Saw	1. Organize students into "home groups." 2. Students number-off to form "expert groups." 3. Assign each numbered group a topic or step in a process. 4. Expert groups have 4-5 minutes to summarize assigned information. 5. Experts return to home groups. 6. Each expert teaches the group his/her summary. 7. After all experts have presented, students compare/contrast, analyze cause/effect, sequence, and evaluate the combined information. 8. Teacher clarifies/verifies.	• *Thinking may vary depending on the task or question that is assigned*
Just the Facts Please	1. Working in pairs, students record (on the handout) facts from the text. 2. Student share their findings with two more pairs of students. The groups compare, discuss, and determine the best fact for each category. 3. Using the selected facts, pairs of students use two facts in different combinations to see how many different inferences they can make. 4. Students share their inferences with the original group of six students. The other students in the group try to determine the two facts used for each inference. 5. Each group of six students create a *Why it Matters* statement about the text. 6. The *Why it Matters* statements are shared with the whole class.	• Analyze/Interpret • Create/Develop • Draw Conclusions • Infer • Make Connections
Justified List (Keeley's Science Formative Assessment)	1. Provide students with a question stem associated with a big idea, concept, or difficult Readiness Standard. (Example: Which of the following is a mixture?") 2. Provide students a list of examples and non-examples associated with the question. 3. Students check all the items that are positive examples associated with the question stem. 4. Students then create a RULE validating/justifying why they checked the items. 5. Student groups share/compare RULES and pick the best rule from their group. 6. The group rules are presented to the class, and the class votes on the best. 7. The teacher clarifies and verifies.	• Analyze/Interpret • Compare/Contrast/ Categorize • Create/Develop • Draw Conclusions • Evaluate • Infer • Predict/Estimate
Justified True False (Keeley's Science Formative Assessment)	1. Students are presented with 5-7 statements aligned to specific concepts, skills, or ideas represented in the TEKS for the unit of study. 2. Students must decide if each statement is true or false. 3. Students then JUSTIFY their response in writing, indicating WHY they believe the statement is true or false. 4. Students share their justifications with a partner. 5. The teacher clarifies/verifies. NOTE: This strategy may be combined with Fact or Fib Showdown.	• Analyze/Interpret • Apply • Evaluate • Infer • Make Connections
Justify Your Answer *(Adapted from Keeley's Science Formative Assessment)*	1. Provide students a common text. 2. Provide groups of students a question about the reading. (Some groups will have the same question.) 3. Provide groups either a correct or an incorrect answer to the question. 4. Students justify as to why the answer they were given could be the correct answer. 5. Student groups share/compare their justifications. 6. The justifications are presented to the class, and the class votes on the best.	• Analyze/Interpret • Draw Conclusions • Evaluate • Generalize • Infer • Make Connections

High Yield Strategy	Instructional Steps	Thinking (Process TEKS Rigor)
KWL Chart	1. Students identify what they know about the content/topic. 2. Students list what they want to learn about the topic. 3. Students explain what they learned and how it will impact future learning.	• Analyze/Interpret • Apply • Draw Conclusions • Make Connections • Summarize
Last Word *(Kathy Short, Jerome Harste, Carolyn Burke)*	1. Each student copies on chart paper in large letters a passage (section), piece of text, or summary of information he/she finds thought provoking. 2. Taking turns, each student holds the chart so that the group members can read it and respond orally, one at a time, explaining why they think the information is significant. 3. After each group member has responded, the student who selected the passage justifies why it was chosen as significant.	• Analyze/Interpret • Create/Develop • Draw Conclusions • Evaluate • Infer • Make Connections • Summarize
Make an Appointment 	1. Teacher presents students with a clock graphic with appointments for 2:00, 4:00, 6:00, 8:00, and 10:00. 2. Students mingle around the room to find appointments for each of the 5 time slots. 3. Students write the names of their appointments on the lines. 4. Teacher poses a guiding or clarifying question related to the TEKS content, rigor, and specificity. 5. Teacher asks students to meet with one of the appointment partners to discuss/answer the questions, justifying their responses, and adding new information to their journals. 6. Teacher clarifies/verifies. NOTE: This strategy could be used to scaffold learning for 3-4 homework questions to ensure students are provided an opportunity to "practice without penalty."	• *Thinking may vary depending on the task or question that is assigned*
Match It Up!	1. Organize students into pairs or triads. 2. Teacher finds 5-7 assessment items that represent various stimuli (charts, graphs, labels, images, tables, models, etc.). The teacher then cuts the stimulus of the item apart from the actual test question. This results in two sets of cards: stimulus cards and assessment item cards. 3. Student groups place the stimulus cards in one stack and place the assessment items face up on their tables/desks. 4. Taking turns, students draw a stimulus card and match it to as many assessment items as possible. 5. Students justify their matches. 6. Teacher clarifies/verifies.	• Analyze/Interpret • Apply • Cause/Effect • Compare/Contrast/ Categorize • Infer • Make Connections • Predict/Estimate
Match Mine *with Mix-Freeze-Group*	1. Provide students with a matching activity. 2. MIX - Play music for about 10 seconds and students mix around the room. 3. FREEZE – students freeze where they are. 4. GROUP – students form a pair or triad with the students closest to them. 5. Students independently match the first four items. 6. Students compare to see if the "match mine" and justify their responses. (Students may change their minds after discussing justification with partners.) 7. Teacher clarifies/verifies to see if the students "match mine," 8. MIX-FREEZE-GROUP again and repeat steps with the next four matching items.	• Analyze/Interpret • Apply • Cause/Effect • Compare/Contrast/ Categorize • Draw Conclusions • Infer • Make Connections • Predict/Estimate

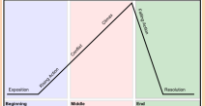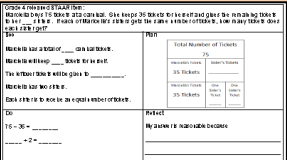| High Yield Strategy	Instructional Steps	Thinking (Process TEKS Rigor)
Matching Double Trouble	1. Organize students into pairs or groups of 3. 2. Provide students with a set of WORD cards, TEXT cards (descriptions of the terms) and GRAPHIC cards (images representing the terms) representing 5-10 key vocabulary terms. 3. Students distribute the cards. 4. Taking turns, students match the WORD card to the TEXT card, justifying their matches. 5. Student then take turns matching the TEXT cards to the GRAPHIC cards, justifying their matches. 6. At the end of the activity, students evaluate their hands-on matrix of terms, descriptions, and graphic representations and make adjustments/revisions as appropriate. 7. Teacher clarifies/verifies matches. 8. Students transfer the hands-on matrix into their interactive notebooks, by restating the descriptions in their own words, and adding NEW graphic images/sketches.	• Analyze/Interpret • Compare/Contrast/ Categorize • Create/Develop • Generalize • Infer • Make Connections
Math Problem Solving Graphic	1. Provide students with an assessment item or math problem. 2. BEFORE students actually do the math, they identify the steps of how they plan to solve the problem using a problem solving graphic. 3. Students write exactly what they plan to do first, second, third, etc. 4. After articulating their plan, they solve the problem mathematically and make adjustments to their original plan if necessary.	• Analyze/Interpret • Apply • Sequence/Order • Summarize
Millionaire Game	1. Using a Millionaire PowerPoint game template, teachers create a Millionaire game to review vocabulary, concepts, processes, and skills. 2. Organize students into partners. 3. Students create a set of ABCD cards using a sheet of notebook paper. 4. After the question has been read, and the answer choices presented, students THINK as the Millionaire music plays. 5. At the end of the music and at the teacher's signal, the students slap down … 6. The worst answer – justify; teacher clarify and verify 7. The best wrong answer – justify; teacher clarify and verify 8. The correct answer – justify; teacher clarify and verify	• Analyze/Interpret • Apply • Infer • Make Connections • Predict/Estimate
Mix-Freeze-Group (Musical)	1. Play music while students "mix" around the room. 2. Stop music and say, "Freeze!" so students will freeze wherever they are in the room. 3. Say, Group!" and ask students to turn to the person closest to them to form a partnership. 4. Teacher conducts a "mini teach" piece and presents a question for practice or reflection associated with content. 5. Students work with their partner to answer the question. 6. Teacher clarifies/verifies. NOTE: This strategy could be used to scaffold learning for 3-4 homework questions to ensure students are provided an opportunity to "practice without penalty."	• *Thinking will vary depending on the task or question that is assigned*

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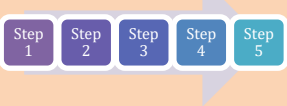| High Yield Strategy	Instructional Steps	Thinking (Process TEKS Rigor)

Mystery [Content Area]
 	
Math Mystery
Science Mystery
Reading Mystery
Social Studies Mystery
	1. Organize students into four groups using a 4-Corners activity:
	
	   • *Corner 1 – like Coca Cola best*
	   • *Corner 2 – like Sprite best*
	   • *Corner 3 – like Dr. Pepper best*
	   • *Corner 4 – like Gatorade best*
	   • *Corner designations may be various types of candy, soft drinks, vacation destinations, sports, types of food, etc.*
	
	2. Students practice one assessment item, targeted toward a standard that students find difficult according to data.
	
	3. Corner groups are assigned one answer choice and must either …
	
	   • DEFEND the answer to the class as "innocent of a crime" by explaining why it is the correct response.
	   • PROSECUTE the answer in front of the class as "guilty of a crime" explaining why their answer is the incorrect response.
	     - *Corner 1 – focus on answer choice A*
	     - *Corner 2 – focus on answer choice B*
	     - *Corner 3 – focus on answer choice C*
	     - *Corner 4 – focus on answer choice D*
	
	4. The teacher clarifies/verifies.
	
	NOTE: Student groups MAY choose to try and trick the class by purposefully defending an incorrect answer to make the other students identify a flaw in their reasoning.
		• Analyze/Interpret
		• Draw Conclusions
		• Evaluate
		• Generalize
		• Infer
		• Make Connections

Mystery Envelope (*Deeper Reading* Kelly Gallagher)	1. Each group is presented with an envelope with a different prompt, question, assessment item, process, or concept to discuss. 2. Each group collaborates to respond to the mystery envelope information. 3. Groups share and discuss their conclusions with the class. 4. Students evaluate each group's conclusions as valid or invalid.	• Analyze/Interpret • Compare/Contrast/ Categorize • Create/Develop • Draw Conclusions • Evaluate • Summarize
Name Game	1. Students are provided a word or phrase bank to a fill-in-the blank activity in order to work through a given assessment item. 2. The activity can be modified for different level of learners by providing all terms, some terms, adding additional terms, or given no word bank.	• Analyze/Interpret • Apply • Create/Develop • Draw Conclusions • Make Connections • Predict/Estimate • Sequence/Order

Nine Squares
 	
	1. Students read a text or view an image.
	2. Students then analyze the text or image by determining and writing the following:
	   • *5 details (what does it say?)*
	   • *2 inferences (what does it mean?)*
	   • *2 valid conclusions (why does it matter?)*
	3. Students may trade nine squares with a partner to see if each can "guess" the 5 details, the 2 inferences, and the 2 conclusions.
	
	NOTE: As a scaffolding activity, teachers may choose to complete the nine square statements for the students, but present them in a mixed up order. Students would cut the "word bank" cards apart and sort the details, inferences, and conclusions into the nine squares game board.
		• Analyze/Interpret
		• Create/Develop
		• Generalize
		• Infer
		• Make Connections
		• Predict/Estimate
		• Summarize

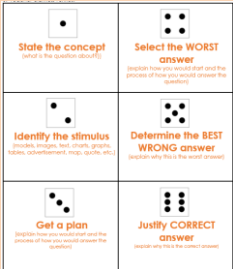| High Yield Strategy	Instructional Steps	Thinking (Process TEKS Rigor)
Number Up, Stand Up, Team Up! *(Adapted from Kagan "Stand Up, Hand Up, Pair Up")*	1. Students number off or make a number selection. 2. Students stand up holding the number of fingers up that represents their designated number. 3. Students make their way around the room to find and form teams of 2-4 students who are holding the same number of fingers up. 4. Teams of students work together to complete teacher assigned task or to answer teacher provided question.	• *Thinking may vary depending on the task or question that is assigned*

Odd One Out *(Keeley's Science Formative Assessment)*	1. Organize students into home groups of 4 and ask them to number off 1-2-3-4.
	2. Provide students with four pictures or assessment items with various stimulus.
	3. Students analyze the 4 pictures and make a generalization of what the pictures are about.
	4. Students then "jig saw" the 4 pictures.
	5. In their expert groups, students brainstorm what they know about their assigned picture and then summarize at least 5 key points or big ideas.
	6. Student experts return to home groups and communicate their summaries with the teacher clarifying and verifying between each expert's summary.
	7. Students compare/contrast the 4 pictures and select one that is "odd one out" and justify why the example is different from the others.
	8. Students then layer their thinking and select a second picture as "odd one out" and justify.
	NOTE: To add rigor and infuse additional verbs from the highly tested process TEKS, teachers may choose to extend the Odd One Out activity to include the following additional thinking activities.
	   • Identify 1 vocabulary term to summarize each picture
	   • Tear the pictures apart and rank/sequence them in some way - justify
	   • Classify/Categorize the pictures in some way - justify
	   • Select 1 picture and communicate a cause/effect relationship
	   • Select 1 picture and predict how history would have changed if the event/person/concept represented in this picture had never been known. Predict what might happen because of this event/person/concept 100 years in the future.
	   • As an exit ticket, complete a 3-2-1 summary
	     - 3 facts/details you learned
	     - 2 inferences (what does all of this mean?)
	     - 1 conclusion (why does this matter?)
		• Analyze/Interpret
		• Apply
		• Cause/Effect
		• Compare/Contrast/ Categorize
		• Create/Develop
		• Draw Conclusions
		• Evaluate
		• Generalize
		• Infer
		• Make Connections
		• Predict/Estimate
		• Sequence/Order
		• Summarize

One Question, One Comment, Last Word	1. Each student creates a question and a comment about a selected text. 2. In random rows, each student (one at a time) presents his/her question and comment. 3. The next person in the row must answer the question, respond or add value to the comment, and present his/her own question or comment.	• Analyze/Interpret • Apply • Create/Develop

High Yield Strategy	Instructional Steps	Thinking (Process TEKS Rigor)
Order Up	1. Students are provided a set of cards to sequence. 2. The sequence or order should represent the steps of a process associated with a major concept, content idea, or assessment item. NOTE: The activity can be differentiated for different levels of learners by cutting cards different ways or by providing a set of clues that reveal a few of the steps in sequence.	• Analyze/Interpret • Apply • Predict/Estimate • Sequence/Order • Summarize
Pair-Square-Share	1. Students are organized into partners. 2. Student pairs work collaboratively to answer a question, solve a problem, complete a graphic organizer, etc. 3. Student pairs stand up to find another pair to form a square. 4. Student pairs share their step-by-step process of answering the question, solving the problem, completing the graphic organizer, etc. 5. Students compare/contrast their responses, evaluate the accuracy, and justify which is more accurate. 6. Students may revise their original responses based on their discussions. 7. Teacher clarifies/verifies.	• Analyze/Interpret • Compare/Contrast/ Categorize • Evaluate

Pick a Process	1. Students can be organized into partners and/or small groups.
	2. Following a lesson, direct teach, reading or activity, each group is assigned a thinking verb based on the highly tested process standards.
	3. The thinking verb can be assigned using several methods including, but not limited to…
	  • picking a number or rolling a die from 1-6 where each number corresponds to a designated verb;
	  • pulling a craft stick that is labeled with a verb;
	  • picking a card where each number corresponds to a verb
	4. Cards, numbers, sticks correspond to a verb included in a question that is presented to the students. (Example below – customize to the verbs in YOUR highly tested process SEs.
	  • 1 = Infer
	  • 2 = Generalize
	  • 3 = Draw a Conclusion
	  • 4 = Analyze & Interpret
	  • 5 = Predict
	  • 6 = Compare/Contrast
	5. Students work individually or with a partner to answer the question associated with the selected verb.
	6. Assist students by offering them sentence stems/frames to help answer questions with a specific verb.
	7. Teacher clarifies/verifies.
		• Analyze/Interpret
		• Compare/Contrast/ Categorize
		• Draw Conclusions
		• Generalize
		• Infer
		• Predict/Estimate
		• Sequence/Order

High Yield Strategy	Instructional Steps	Thinking (Process TEKS Rigor)

Pick 3 That Stump Me	1. Pick 3 that Stump me is designed for students to identify the questions they are more than likely to have difficulty answering and provide strategies to talk through the problem.
	2. Before taking a quiz or a test, students read and identify 3 items they feel they will have difficulty solving. Students circle the number of the questions. They will receive credit for answering the question correctly IF they annotate their thought process.
	3. As they work through the test and they get to a circled question, rather than answering the questions they will annotate their following:
	  • Why is the question difficult for you?
	  • What do you know about the question?
	  • What do you THINK the answer might be?
		• Analyze/Interpret
		• Apply
		• Draw Conclusions
		• Evaluate

Pick Up the Slip Up	1. Students create A B C cards using notebook paper. 2. Students place the cards on their desks in front of them. 3. Teacher presents 3 statements: 2 are true and 1 is a "slip up" or false statement. 4. The teacher tells the students to "Think! Hover! (students hover their hand over their ABC cards), and 1-2-3 pick up the slip up!" 5. All at the same time, students grab the letter and hold it high in the air that corresponds with the "slip up" or fib. 6. Students must justify with a thinking partner WHY the statement is a slip up. 7. The teacher clarifies and verifies.	• Analyze/Interpret • Compare/Contrast/ Categorize • Draw Conclusions • Infer • Make Connections • Predict/Estimate
Picture It	1. Students are provided only the visual stimulus portion of an assessment item (graph, table, pictorial example, model, advertisement, map, graphic, etc.). 2. Students record all the information they know based on the stimulus. 3. Students record all questions they have about the stimulus. 4. Students answer the assessment item associated with the visual stimuli. 5. Students create a justified list of all the information they had to know to answer the question completely. 6. Students get a partner to share their list and justify the ideas that they wrote.	• Analyze/Interpret • Apply • Create/Develop • Draw Conclusions • Evaluate • Generalize

Picture-Text-Picture Analysis	1. Students are provided an assessment item.
	2. Students analyze the item according to its format of the stimulus (pictures, models, graphics, charts, diagrams, and text).
	3. Students code the item according to its format:
	  • Text – Answer Choices (TA)
	  • Text – Picture – Answer Choices (TPA)
	  • Text – Picture – Text – Answer Choices (TPTA) *Historically the format students struggle with most often
	  • Picture – Text – Answer Choices (PTA)
		• Analyze/Interpret
		• Apply

Instructional Strategies – Comprehensive List

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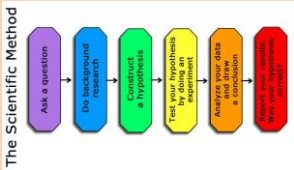| High Yield Strategy	Instructional Steps	Thinking (Process TEKS Rigor)
Picture Worth 1000 Words	1. Teacher takes a picture of an important part of a lesson (graphic organizer, cooperative activity, part of a lab experiment, etc.) 2. In their journals students write the following: • description of the actual picture • description of what they were doing • description of what they were learning • inference of why it was an important part of the lesson 3. Students find a partner through a musical Mix-Freeze-Group and share their descriptions and inference. 4. Students add to their descriptions and inferences after two rounds of Mix-Freeze-Group. 5. Teacher clarifies/verifies.	• Analyze/Interpret • Create/Develop • Infer
Play it – Say it!	1. Present each student with 5-7 terms, classification chart that they cut into strips, or several different assessment items. Students place these cards/strips in their hands like a set of playing cards. 2. Organize students into partners. 3. Present students with a statement that matches or can be associated with one of the cards/strips in their hands. 4. Allow students 10-12 seconds to make an inference about which card matches the statement. 5. Teacher says, "1 – 2 – 3, **play it**!" 6. All at the same time, students then slap down the card or strip on their desk that they infer matches the statement best. 7. Students then "**Say it**!" by justifying to their partner why they slapped that answer down. 8. Teacher clarifies and verifies.	• Analyze/Interpret • Apply • Draw Conclusions • Generalize • Infer • Make Connections • Predict/Estimate
Plot Diagram	1. Students analyze the elements of plot using a graphic representation. 2. Students identify each element of plot and write it on the diagram. 3. Students participate in 2 rounds of Mix-Freeze-Group to share and compare responses with a partner. 4. Students add to their original diagram as appropriate. 5. Teacher clarifies and verifies. 6. Students glue the diagram in their Interactive Notebooks	• Analyze/Interpret • Sequence/Order • Summarize
Pocket Guide	1. Students cut two sheets of paper in half horizontally. 2. Students fold the half-sheets in half and staple edge in two places like a book spine. 3. Label and decorate the cover: My Pocket Guide to Social Studies. 4. First 2 pages (when opened) are meant to represent a timeline of the major eras/topics. 5. Each era/topic is assigned to a page. 6. Students brainstorm people, events, court cases, legislation, etc. related to that era/topic. 7. Mini book should serve as their "pocket guide" for the review period.	• Create/Develop • Summarize
Problem Solving Board	1. For every problem, students work through a process that includes chunking the process into 4 quadrants - "see, plan, do, and reflect." • See: Analyze the question • Plan: Formulate a plan for solving the problem and using the appropriate tools • Do: Apply mathematical skills to generate a solution • Reflect: Evaluate if the plan and solution are reasonable	• Analyze/Interpret • Apply • Evaluate

High Yield Strategy	Instructional Steps	Thinking (Process TEKS Rigor)
Problem-Solving Graphic Step 1 Step 2 Step 3 Step 4 Step 5	1. Provide students with an assessment item or math problem. 2. BEFORE students actually do the math, they identify the steps of how they plan to solve the problem using a problem solving graphic. 3. Students write exactly what they plan to do first, second, third, etc. 4. After articulating their plan, they solve the problem mathematically and make adjustments to their original plan if necessary.	• Analyze/Interpret • Apply • Sequence/Order • Summarize
Question/Genre Sort	1. Teacher provides questions from a variety of texts and genres. 2. Students categorize the questions by genre. 3. Provide time for students to discuss and justify their thinking, as well as participate through active listening.	• Analyze/Interpret • Compare/Contrast/ Categorize • Make Connections
Quiz-Quiz-Trade (Adapted from Kagan Cooperative Learning)	1. Students are given different assessment items to practice over a targeted concept or Knowledge and Skills family. 2. Students answer the item they are assigned and get clarification/verification from the teacher as necessary. 3. Students then Stand up! Hand up! Pair up! 4. Student A quizzes student B over his question. 5. Student B quizzes student A over his question. 6. Students trade questions. 7. Students Stand up! Hand up! Pair up! again and repeat the process, this time quizzing their new partner over the new item they just received. NOTE: This strategy could be used to scaffold learning for 3-4 homework questions to ensure students are provided an opportunity to "practice without penalty."	• Analyze/Interpret • Apply
Reading Log	1. Students create an organizer to record texts that have been read and list texts to read in the future. 2. The log includes the title of the text, the author's name, a response about the significance of the text, challenges encountered, strategies used to gain meaning, etc.	• Analyze/Interpret • Apply • Summarize
Reading Symbols	1. Students predetermine symbols to represent the following: question, reread, sensory experience, background knowledge, connection, inference, etc. 2. As students read, symbols are placed in the text to represent the students "in-head" actions.	• Analyze/Interpret • Apply • Infer • Make Connections
Recast (*Deeper Reading* Kelly Gallagher)	1. Rewrite a fictional story changing one aspect of the plot. 2. Rewrite an article using a different organizational approach. 3. Record information in the article using a variety of different organizational graphic organizers. 4. Rewrite a play, making it a short story. 5. Change the form of the poem. (e.g., narrative poem into a limerick) 6. Rewrite a persuasive piece, making it expository. 7. Rewrite an expository piece, making it persuasive. 8. Write the question another way.	• Analyze/Interpret • Apply • Create/Develop • Make Connections • Predict/Estimate

High Yield Strategy	Instructional Steps	Thinking (Process TEKS Rigor)
Rank 'Em!	1. Organize students into small groups. 2. Provide groups with a set of 4-6 terms, assessment items, charts, graphs, or images. 3. Students cut the items apart and distribute them among the group members. 4. Students then must rank the cards and justify their ranking to the class. Type of ranking may include but is not limited to… • Rank by importance • Rank by time period • Rank by how well you understand them • Rank by when you learned them • Rank by significance	• Analyze/Interpret • Compare/Contrast/Categorize • Create/Develop • Infer • Predict/Estimate • Sequence/Order
Rank It	1. Students read a text with a partner and write one inference on a sticky note. (Students may need a sentence stem to help them make an inference: "From the fact and details I read, I think that _____ is important because _____.") 2. Groups of 6-8 students share their inferences and rank them in order of importance for understanding the author's meaning or purpose. 3. Student groups post their ranking around the room. 4. Students engage in a walk around the room to examine all of the ideas.	• Analyze/Interpret • Infer • Make Connections • Predict/Estimate • Summarize
Reflection/Response Museum Walk	1. Students write about their THINKING/OPINION after a focused discourse or reading. 2. Students write about something LEARNED after a focused discourse or reading. 3. Before reading, groups of students select an unfamiliar word from the text. 4. Students research the meaning and create a visual of the word from clay or play dough. 5. Display the images and words. 6. Students engage in a museum walk to view the visual representations of the words. 7. Each team shares why they chose to represent the word in the way they did.	• Analyze/Interpret • Apply • Create/Develop • Make Connections • Summarize
RERUN Chart	1. R = Students RECALL important activity, lab, demonstration, or investigation. 2. E = Students EXPLAIN the importance of the activity. 3. R = Students explain the RESULTS or outcome. 4. U = Students note their UNCERTAINTIES or questions. 5. N = Students share two NEW things they learned.	• Analyze/Interpret • Apply • Draw Conclusions • Evaluate • Summarize

High Yield Strategy	Instructional Steps	Thinking (Process TEKS Rigor)
Rock and Roll Item Review 	1. Organize students into pairs. 2. Provide students with a numbered cube (die). 3. Present students with an assessment item aligned to a challenging concept or skill. 4. Student pairs take turns rolling the die and analyzing the item. 5. The number rolled dictates the activity they complete with the assessment item. 1 - state the concept or big idea of the item 2 – identify the stimulus 3 – communicate your plan for answering the item 4 – select the worst answer choice – justify why 5 – determine the best wrong answer - justify why 6 – determine the correct answer – justify why 6. Students continue rolling the die until they have completed all the activities. 7. Teacher clarifies and verifies correct responses for each of the numbers rolled NOTE: Another option for student analysis is listed below: 1 - They determine if the problem looks like a sample their teacher has used in class or if it looks different and why 2- They describe the problem solving model/strategy they used to solve 3- They identify one wrong answer and explain WHY it is wrong 4- They create a new problem similar to the one they solved 5- They state how the stimulus could change 6- They identify all academic vocabulary they needed to solve and then describe the terms in their own words	• Analyze/Interpret • Apply • Cause/Effect • Create/Develop • Draw Conclusions • Evaluate • Generalize • Infer • Make Connections • Predict/Estimate • Sequence/Order
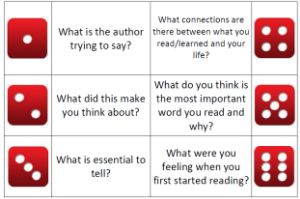
High Yield Strategy	Instructional Steps	Thinking (Process TEKS Rigor)
Rock and Roll Vocabulary	1. Organize students into pairs. 2. Provide students with a numbered cube (die). 3. Present students with a vocabulary term aligned to a difficult concept or skill. 4. Student pairs take turns rolling the dice. 5. The number rolled dictates the activity they complete with the term. • 1 - state the meaning of the term in your own words • 2 – provide a synonym • 3 – provide an antonym • 4 – create a sentence using the word • 5 – create an analogy • 6 – act it out 6. Students continue rolling the die until they have completed all the activities. 7. Teacher clarifies and verifies correct responses for each of the numbers rolled. NOTE: to help struggling learners, the teacher may choose to differentiate the activity by offering students a synonym/antonym word bank and sentence stems for the analogy.	• Analyze/Interpret • Apply • Compare/Contrast/Categorize • Create/Develop • Draw Conclusions • Infer • Make Connections • Predict/Estimate • Sequence/Order

Roll With It	1. Organize students into pairs or triads and provide each a die.
	
	2. Select several STAAR released assessment items that represent the concepts you want to review. Select several items for each big concept and ask students to cut the items apart into assessment "cards" that are placed face-up on their table.
	
	3. Assign the 6 big concepts a number (1-6) on the die and provide each group with a key showing which number represents which topic/concept.
	
	4. Game Instructions:
	
	 • Taking turns, students roll the die; the number rolled corresponds with the concept/topic.
	
	 • The student who rolled completes the following tasks:
	  - *analyze the assessment items that are face-up on the table*
	  - *compare/contrast to find those that match that concept/topic rolled*
	  - *justify his/her reasoning for selecting those items*
	  - *pick those assessment items up and place them into his/her stack*
	
	 • The next student rolls until he gets a new number and selects the items that correspond to his concept/topic.
	
	 • This procedure continues until all students have rolled and selected items that match the concept they rolled.
	
	 • Student may "STEAL" assessment items from another player's stack if they can justify a connection to both the original concept and the new concept.
	
	5. Teacher clarifies/verifies as appropriate.
		• Analyze/Interpret
		• Apply
		• Compare/Contrast/Categorize
		• Draw Conclusions
		• Infer
		• Make Connections

Instructional Strategies – Comprehensive List

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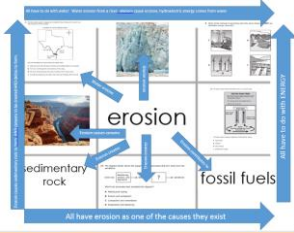| High Yield Strategy	Instructional Steps	Thinking (Process TEKS Rigor)
Round Robin (or Rotating) Review	1. Organize students into groups of 4 or 5. 2. Present students with a stimulus (image, term, chart, graph, table, passage, problem, etc.), assessment items, or open-ended questions. 3. Each student individually analyzes and interprets their stimulus, assessment item, or question. 4. Each student in the group must then offer ideas to explain, solve, provide examples, generate solutions, offer ideas, share generalizations, or remember past teaching experiences related to the content, etc. 5. Students continue going around and around offering ideas until the teacher calls, "Time." 6. Students share their best responses. 7. Teacher clarifies/verifies.	• Analyze/Interpret • Compare/Contrast/ Categorize • Create/Develop • Evaluate • Summarize
Rule of 3 – Effective Praise	1. Instead of praising students' correct answers, praise students for effort and perseverance, following the rule of three. • Rule 1: Praise students who can formulate and justify 3 possible answers. • Rule 2: Praise students who can explain 3 ways to get to the correct response. • Rule 3: Praise students who can construct the correct answer in 3 different ways (words, numbers, chart, graph, sketch, graphic representation, diagram, etc.)	• Analyze/Interpret • Apply • Create/Develop • Draw Conclusions • Make Connections • Predict/Estimate
Scientific Method Graphic 	1. Students articulate their understanding of the scientific method as they journey through a specific topic. 2. Students write their ideas, understandings, summaries, and questions on a graphic such as the one below.	• Analyze/Interpret • Apply • Create/Develop • Draw Conclusions • Sequence/Order • Summarize
Sentence Frames/Starters/Stems 	1. Teacher presents students with a question about the content recently taught, infusing one of the verbs from the highly tested process standards such as infer, generalize, draw a conclusion, compare/contrast, cause/effect, analyze and interpret, predict, classify/categorize, or sequence. 2. Students analyze the question and first identify the "thinking" verb. 3. Students are then provided a sentence stem/starter with fill-in-the-blank spaces to help them accomplish the thinking involved in the question. 4. Students analyze the question independently and attempt to fill in the blanks to complete the "thinking." 5. As an additional scaffold, teacher may provide a word bank, and students verify/revise their original responses. 6. Students "Turn and Talk" with each other to communicate and justify their responses and make further revisions. 7. Teacher clarifies/verifies.	• Analyze/Interpret • Apply • Cause/Effect • Compare/Contrast/ Categorize • Create/Develop • Draw Conclusions • Evaluate • Generalize • Infer • Make Connections • Predict/Estimate • Sequence/Order • Summarize

High Yield Strategy	Instructional Steps	Thinking (Process TEKS Rigor)
Sequencing Sentence Frames	1. Present a process to students in a step-by-step graphic organizer, leaving one blank for a Key Word in each step. 2. Students independently attempt to fill in the blanks. 3. Teacher presents a word bank, and students verify/revise their original responses. 4. Students partner with each other to share response and make further revisions. 5. Teacher clarifies/verifies.	• Analyze/Interpret • Apply • Create/Develop • Draw Conclusions • Infer • Summarize
Shake and Share	1. Teacher presents students with a question, term, or assessment item. 2. Students stand up and walk at least 5 steps. 3. Students find a partner and shake hands. 4. Students analyze and interpret the question and then share their responses. 5. Students then SWITCH – Shake and Share with a new partner to deepen understanding. 6. Teacher clarifies/verifies.	• *Thinking will vary depending on the task or question that is assigned*

Show Me What You Know	1. Students analyze and interpret practice assessment items.
	2. Student then classify/categorize the items into 2 categories:
	  • Looks the way my teacher taught it
	  • Looks different from the way my teacher taught it
	3. Student justify their classification by explaining WHY the question is different from the way the teacher taught it. (Different stimulus, terms, wording, the way the answer choices are phrased, etc.)
	4. Students then answer the items and classify the items a second time:
	  • Which ones did I get right?
	  • Which ones did I miss?
	  • Why might that be?
		• Analyze/Interpret
		• Apply
		• Compare/Contrast/ Categorize
		• Create/Develop
		• Draw Conclusions
		• Infer
		• Make Connections
		• Predict/Estimate

High Yield Strategy	Instructional Steps	Thinking (Process TEKS Rigor)
Sketch It	1. Students are presented several key vocabulary terms or concepts. 2. The teacher describes the terms. 3. Students draw a quick sketch or graphic representation of the terms on separate notecards or post it notes. 4. Students then place the sketch it cards into their interactive notebooks and add a restatement of the term descriptions in their own words. Extend the Strategy with *Who Am I? with Mix-Freeze-Group*: • To extend the strategy, layer it with the *Who Am I?* and *Mix-Freeze-Group* strategies. • Teacher collects students' sketch it cards. • Teacher redistributes one set of the sketch it cards to the students – face down • Students do not look at the sketch it cards but pick it up and hold them to their foreheads. • Students then mix-freeze-group (mix around the room, freeze when the teacher says, "Freeze!" and group with the student closet to them. • Partner pairs look at the sketch on their partner's forehead and provide clues about the term it represents. When students guess the correct term, they take the card from their forehead and look at it. • Teacher collects the cards, and redistributes new sketch it cards for round 2. • The *Who Am I"* with *Mix-Freeze-Group* continues until all cards have been used, • The teacher then collects all the sketch it cards and returns them to their owners for them to include in the interactive notebooks.	• Analyze/Interpret • Apply • Compare/Contrast/ Categorize • Create/Develop • Draw Conclusions • Generalize • Infer • Make Connections • Predict/Estimate
Snyectics Snowball Synectics Snowball Activity The concept of Manifest Destiny is most like… because _____	1. Place students into cooperative groups of 4. 2. Provide students with a sentence stem aligned to a major, complex concept represented in a Readiness Standard such as, "The Pythagorean theorem is like…" or "Forming an inference is like…" 3. Provide students 4 -5 pictures unrelated to the concept. 4. Ask students to circle one picture and to form a relationship or analogy to the complex concept in some way. 5. Students justify their analogy by writing a "because statement." 6. When all students have completed their Synectics analogy, they stand up and push their chairs in. 7. Students crush their paper into a "snowball." 8. The teacher should provide clear instructions for the Snowball sharing activity. • *At the teacher's signal, students toss their snowball at a classmate.* • *Students pick up a random snowball and toss it.* • *Students pick up another random snowball and toss it.* • *After tossing 3 snowballs, students pick up a 4th snowball, read it, and share it with their group.* • *Cooperative groups evaluate their 4 analogies and select the best to share with the class.*	• Analyze/Interpret • Apply • Cause/Effect • Compare/Contrast/ Categorize • Create/Develop • Draw Conclusions • Evaluate • Infer • Make Connections

High Yield Strategy	Instructional Steps	Thinking (Process TEKS Rigor)
Stage It *(Dramatic Presentation)*	1. The teacher provides a script or students identify an important passage from the text and create their own script. 2. Students are provided time to create and practice the scenes. 3. The students' job is to create a "freeze frame" that captures the characters, action, and emotion of each scene. 4. A student or teacher can play the role of narrator.	• Analyze/Interpret • Apply • Create/Develop • Draw Conclusions • Generalize • Infer • Make Connections • Summarize

Stand up — Hand up — Pair up! (Adapted from Kagan Cooperative Learning)	1. The teacher provides students with a vocabulary term, question, assessment item, etc. and asks students to complete a thinking task. Suggested are listed below, but are not limited to just these ideas:
	  • analyze and interpret the item (Stimulus? Key words? Concepts?)
	  • explain how to solve/answer the item
	  • apply/use recently learned skills to answer the item
	  • evaluate what is difficult about the item
	  • develop a synonym, antonym, or analogy for a term
	2. Students then Stand up! Hand up! Pair up!
	3. Hands go down then they have a partner.
	4. Student A offers ideas, solutions, etc.
	5. Student B offers ideas, solutions, etc.
	6. Students stand up – hand up – pair up again and repeat the process, this time collaborating with their new partner over a new question.
	NOTE: The teacher will need to closely monitor the pairing to ensure no student is left out. A triad can be formed if there is an uneven number of students in the class.
	NOTE: This strategy could be used to scaffold learning for 3-4 homework questions to ensure students are provided an opportunity to "practice without penalty."
		• Analyze/Interpret
		• Apply
		• Compare/Contrast/ Categorize
		• Create/Develop
		• Evaluate
		• Generalize
		• Infer
		• Make Connections

Stop, Plop, Roll 	1. Students self-select a text to read independently. 2. Students read for a short period of time until the teacher gives a signal for *Stop, Plop, Roll*. 3. Students move to the *Stop, Plop, Roll* board taking turns rolling the die, answering the questions they get, and discussing their text. 4. Once everyone in the group has had an opportunity to roll and talk, students go back into independent reading. 5. Repeat.	• Analyze/Interpret • Create/Develop • Draw Conclusions • Generalize • Infer • Make Connections • Summarize

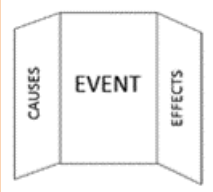| High Yield Strategy	Instructional Steps	Thinking (Process TEKS Rigor)
Story Map	1. Students analyze a selected text based specific criteria such as characterization, plot, theme, symbolism, etc. 2. Students record their analysis on a graphic organizer. 3. Students explain and justify their responses to a partner. 4. Students add value to their original ideas. 5. Teacher clarifies/verifies.	• Analyze/Interpret • Apply • Compare/Contrast/Categorize • Create/Develop • Draw Conclusions • Generalize • Infer • Make Connections • Summarize
Swipe It	1. Organize students into groups of 3 or 4. 2. Students elect a "leader" and the other members are "guessers." (Leader role may rotate after each round so that all students are "guessers" and all students are "leaders.") 3. Each group will have 2 sets of cards that have the exact same assessment items. 4. One card set and key will be for the team leader. The other set of items will be spread face up on the table for the team for members to observe. 5. The team leader will place his/her set of cards face down like a deck of cards and pick the top card without showing it to the group members. 6. Leaders then analyze the "secret" released test item, and provide clues about this item to the group. (Type of stimulus, topic, past learning activities, key vocabulary terms, etc.) 7. As they give clues, the group members will look through the items that are face up on the table and try and find a match based on the leader's clues. 8. If a student thinks he has found a match, he/she will pick up the card (or swipe it from the table) and justify why the item is a match. 9. The leader can use a key provided by the teacher as a checklist for item matches to say, "Good Match!" or "Bad Match!" 10. The team leader will verify if they have made a correct match or they will continue to play until a match is found. 11. Play several rounds of this activity. The roll of team leader can be passed among members with each round if desired.	• Analyze/Interpret • Compare/Contrast/Categorize • Draw Conclusions • Generalize • Infer • Make Connections • Predict/Estimate

High Yield Strategy	Instructional Steps	Thinking (Process TEKS Rigor)
Talk a Mile a Minute	1. Students are organized into pairs. 2. Student A is the clue-giver. Student B is the guesser. 3. Student A provides clues to the list of terms/words in category 1. 4. When all the words are guessed correctly, the student asks, "What's the category?" 5. When student B guesses the category, Student A pops up and says, "Whoo hoo!" and then sits back down to continue giving clues for the next category's terms. 6. Student pairs continue giving clues and guessing terms until all terms and categories have been correctly identified. NOTE: some students may need a word bank, vocabulary cards, or their notes to successfully participate in the activity. _Table:_ **Fossil Fuels** / **Alternative Energy** / **Landforms** Coal / Solar / Delta Oil / Hydro-electric / Canyon Gas / Geo-thermal / Sand Dune / Wind / / Biofuels /	• Analyze/Interpret • Compare/Contrast/ Categorize • Create/Develop • Draw Conclusions • Infer • Make Connections

Talking Chips or Babbling Beans Card Game
(Adapted from Kagan Cooperative Learning)
	1. Organize students into small groups.
	2. Each student gets 2 chips or beans.
	3. Teacher provides students with a set vocabulary terms, questions, concepts, or assessment items.
	4. One at a time, each student plays a card and reads the information/question listed on the card to the group.
	5. Students silently analyze and interpret the question.
	6. Students apply prior knowledge to formulate a response to the card:
	  • Identify/interpret key terms
	  • identify/interpret stimuli
	  • predict the topic
	  • communicate how to start
	  • develop a synonym or antonym for a key term
	  • sequence the steps in solving/answering the question
	  • explain a solution
	7. When a student responds to the card or question, he must play a chip/bean in the center of the table.
	8. Once a student plays both chips/beans, he must be silent until all students have played their chips/beans in contributing to the discussion card game.
	9. Teacher clarifies/verifies as appropriate.
	NOTE: This strategy could be used to scaffold learning for 3-4 homework questions to ensure students are provided an opportunity to "practice without penalty."
		• Analyze/Interpret
		• Create/Develop
		• Draw Conclusions
		• Infer
		• Make Connections
		• Predict/Estimate
		• Sequence/Order
		• Summarize

lead4ward

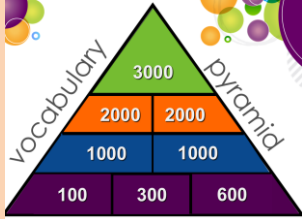| High Yield Strategy	Instructional Steps	Thinking (Process TEKS Rigor)
T-Chart	1. Write one subject on either side of the middle line. 2. Compare and contrast the 2 subjects by adding details to each column.	• Analyze/Interpret • Compare/Contrast/Categorize • Create/Develop • Make Connections • Summarize
Tea Time	1. Teacher selects multiple texts from like or different genres. 2. Each text is represented by a color. 3. Teacher creates color cards with important words from each text, correlating with the text color. 4. Each student receives a card. 5. Students with same color cards gather, discuss the words listed on their cards, and then make a generalization about the common attributes their cards share. 6. Student then predict the topic and content of the text represented.	• Analyze/Interpret • Compare/Contrast/Categorize • Draw Conclusions • Generalize • Infer • Make Connections • Predict/Estimate
Team-Pair-Solo	1. Students are placed into groups of 4. 2. Teacher poses a question, and the group analyzes the question, applies what they have learned, make inferences, and draw conclusions to answers as a TEAM. 3. Teacher clarifies/verifies. 4. Teacher poses a question, and students break into partners and answer as a PAIR repeating the thinking they did on the team question. 5. Teacher clarifies/verifies. 6. Teacher poses a question, and students answer the question SOLO repeating the thinking they did on the team and pair questions. 7. Teacher clarifies/verifies.	• Analyze/Interpret • Apply • Draw Conclusions • Generalize • Infer • Make Connections
Tic-Tac-Tally *Adapted from Law Related Education* 	1. Provide student triads a handout with nine rectangles associated with content and representing various stimuli: images, terms, assessment questions, etc. 2. Students cut out the nine cards and distribute them among the group members. 3. Students draw a large Tic-Tac-Toe board on a large sheet of paper. 4. Students analyze their cards by stimulus and vocabulary words and then predict the content of the question. 5. Students individually take turns playing a card on the board, arranging the cards on the board so that they make connections. 6. Students draw a line from the connected cards and write the connection on the board. 7. When three connections have been made vertically, horizontally, or diagonally, they shout, "Tic-Tac-Tally!" 8. Teacher clarifies/verifies students' connections. 9. Students continue to play cards and look for connections from one card to the next to create more connections and more Tic-Tac-Tallies!	• Analyze/Interpret • Apply • Cause/Effect • Compare/Classify/Categorize • Create/Develop • Draw Conclusions • Generalize • Infer • Make Connections • Summarize

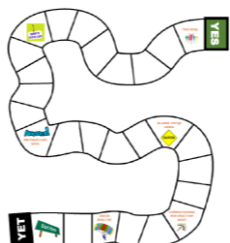| High Yield Strategy	Instructional Steps	Thinking (Process TEKS Rigor)
Tic Tac Talley *(Adapted from Law Related Education Reading Adaptation)*	1. Teacher provides students a nine square chart. 2. Students brainstorm to identify titles of text the class has read. 3. Students write a title in each of the squares. 4. Pairs of students compare/contrast the titles to determine ways in which the texts connect and draw lines to make a TIC-TAC-TALLY.	• Analyze/Interpret • Apply • Cause/Effect • Compare/Classify/ Categorize • Create/Develop • Draw Conclusions • Generalize • Infer • Make Connections • Summarize
Think–Pair–Square-Share (Adapted from Kagan Cooperative Learning)	1. Students are organized into pairs. 2. Students work cooperatively to answer a question the teacher has posed or an assessment item. 3. Student pairs stand up and find another pair to create a square. 4. Pairs share their response in their square and add new information to their original responses. NOTE: This strategy could be used to scaffold learning for 3-4 homework questions to ensure students are provided an opportunity to "practice without penalty."	• *Thinking will vary depending on the task or question that is assigned*
Think Strip	1. Teacher provides students four different color sticky strips. 2. Students write on each strip: *Enter, Wonder, Sensory, or Background.* 3. As students read, each of the strips is placed on the text when the strategy is used. 4. Students compare and discuss how each strategy supported understanding through a cooperative structure such as Stand up! Hand up! Pair up! or Mix-Freeze-Group.	• Analyze/Interpret • Apply • Compare/Contrast/ Categorize • Draw Conclusions • Generalize • Infer • Make Connections

Thinking Maps®	1. Students create a Thinking Map® aligned to the cognitive rigor of the content.
	   • Circle Map – Brainstorm
	   • Bubble Map – Describe
	   • Double Bubble Map – Compare/Contrast
	   • Flow Map – Sequence
	   • Multi-Flow Map – Cause/Effect
	   • Bridge Map – Analogies
	   • Brace Map – Part to Whole Relationships (hierarchy)
	 2. Students may work cooperatively to complete the maps.
	 3. Students may create the maps with pen/paper, or they may make the maps color-coded and 3-dimentional.
	 NOTE: To receive training in Thinking Maps®, contact Thinking Maps® at www.thinkingmaps.com.
		• Analyze/Interpret
		 • Apply
		 • Cause/Effect
		 • Compare/Contrast/ Categorize
		 • Create/Develop
		 • Draw Conclusions
		 • Evaluate
		 • Generalize
		 • Infer
		 • Make Connections
		 • Predict/Estimate
		 • Sequence/Order
		 • Summarize

High Yield Strategy	Instructional Steps	Thinking (Process TEKS Rigor)
Toss a Question (Adapted from Kagan Cooperative Learning)	1. Students are organized into small groups and assigned a specific marker color. 2. Students work cooperatively to answer a question posed by the teacher or an assessment item aligned to lesson content. 3. Teacher verifies/clarifies correct answers. 4. Student groups apply what they have learned to create a DIFFERENT question over that same content differentiating the stimulus (charts, graphs, images, maps, tables, labels, text, etc.) 5. Groups "toss" their question to the next designated group. 6. Groups analyze, collaborate, and answer the new question. 7. At the teacher's signal, groups continue "tossing" the questions to the next group every group has answered each group's originally designed question. 8. Groups evaluate the previous response and add value. 9. Original groups then synthesize all the other groups' responses into a 10 word summary that reflects the BEST responses from each group. 10. Teacher clarifies/verifies. NOTE: This strategy is excellent for helping students transfer learning to questions that are different from the form in which they practiced it with the teacher.	• Analyze/Interpret • Apply • Create/Develop • Draw Conclusions • Evaluate • Generalize • Infer • Summarize
Tour of Knowledge *(Version of Rotating Review)*	1. Students are organized into groups. 1. Each group is given a different colored marker. 2. Groups rotate through stations observing a given assessment item stimuli (i.e. graph, table, equation, geometric shape, clock, thermometer, text, model, etc.). 3. Groups have three minutes at each station to record anything they know about the given stimuli on the provided chart paper. Groups place a checkmark beside information they agree with from another groups and add new ideas. 4. Repeat steps #1-5; however, students now record a question that could be asked of the provided stimulus. 5. Students solve an assessment item associated to the given stimulus, identifying what information was needed to answer the question.	• Analyze/Interpret • Apply • Create/Develop • Draw Conclusions • Evaluate • Generalize • Infer • Make Connections

High Yield Strategy	Instructional Steps	Thinking (Process TEKS Rigor)

Trashcan Basketball	1. Students are provided a set of review items aligned to focus Knowledge and Skills Statements.
	2. Teacher sorts questions based on complexity:
	  • Free Throws (1 point – easiest questions)
	  • Lay Ups (2 points – medium questions)
	  • 3 Pointers (3 points – complex questions)
	3. Teacher organizes students into pairs.
	4. Pairs play trashcan basketball:
	
	SET UP THE SHOT:
	  • Pairs choose a question and cut it out of their test handout.
	  • Pairs analyze the question, answer question cooperatively, showing the sequence of how they came to a solution/answer.
	
	CHECK THE SCORE:
	  • Pairs consult the teacher's "playbook" (answer key) to determine if their answer is correct.
	
	FOLLOW THROUGH: (If you missed – self correct)
	  • Pairs evaluate their response and explain why the original answer was incorrect on the back of the question: guessed, careless error, stopped too soon, or mixed stuff up
	  • Pairs explain why the correct answer <u>IS</u> the appropriate response on the back.
	
	TAKE THE SHOT:
	  • Pairs take turns "shooting" the questions into the appropriate "basket" (3 pointer, 2 pointer, 1 point free throw).
	  • Students keep shooting until they make it.
		• Analyze/Interpret
		• Apply
		• Draw Conclusions
		• Evaluate

Trifold Organizer for Cause/Effect CAUSES EVENT EFFECTS	1. Students fold a piece of paper into thirds. 2. Students write and/or create an illustration of a significant event in the middle section. 3. Students write and/or create an illustration reflecting the CAUSES of the event on the left side. 4. Students write and/or create an illustration reflecting the EFFECTS on the right side. 5. Students use a cooperative structure (Stand up! Hand up! Pair up! or Mix-Freeze-Group) to share ideas and add value to their original trifold.	• Analyze/Interpret • Apply • Cause/Effect • Create/Develop • Generalize • Infer • Make Connections • Summarize

High Yield Strategy	Instructional Steps	Thinking (Process TEKS Rigor)

Triple Play	1. Form teams of 3 and assign each person an A, B, or C role.
	2. Teacher assigns each group a different vocabulary term.
	3. Team members help each other to complete the following tasks:
	  • Write the term on one paper
	  • Describe the term or give example on another paper
	  • Sketch the term on a 3rd paper
	
	WORD: Description or Examples: SKETCH:
	
	4. At the teacher's signal, students wad their papers up like snowballs and have a snowball fight!
	5. Students toss three (3) snowballs.
	6. On the 4th snowball, students open it, and try to make a "triple play" by finding the other students who have snowballs that complete the three parts: word, description, and sketch.
	
	WORD DESCRIBE SKETCH
	
	7. Students call out "Triple Play!" when they find the other students who fit with their paper.
	8. Students add value by drawing another sketch or adding to the description.
	9. Students then return to their original group of 3 and teach their Triple Play term to their friends.
		• Analyze/Interpret
		• Compare/Contrast/ Categorize
		• Create/Develop
		• Draw Conclusions
		• Generalize
		• Infer
		• Make Connections
		• Predict/Estimate

Turn & Teach	1. After instruction involving content that involves a sequence, ranking, timeline, process, or steps for application, students take turns being a "teacher" as they turn to a partner and summarize the process. 2. Partner A summarizes the steps in the process and teaches partner B with scenario/problem #1. 3. Partner B summarizes the steps in the process and teaches partner A with scenario #2. NOTE: This strategy is ideal when the process has distinctions in application based on specific situations, subjects, etc., so that all students get to practice and receive the teaching of the process within different scenarios, but where there is not excessive repetition.	• Sequence/Order • Summarize
Venn Diagram	1. Students compare and contrast two terms, concepts, titles, characters, formulas, assessment items, etc. 2. Students write details that explain how the subjects are the same in the overlapping circles and justify their responses with evidence. 3. Students write details that explain how the subjects are different in the outer circles and justify their responses with evidence.	• Analyze/Interpret • Apply • Compare/Contrast/ Categorize • Create/Develop • Draw Conclusions • Generalize • Infer • Make Connections • Summarize

Instructional Strategies – Comprehensive List

High Yield Strategy	Instructional Steps	Thinking (Process TEKS Rigor)
Visual Vocabulary	1. Teacher presents a visual to the class (painting, picture, object, etc.). 2. Students observe, record characteristics, brainstorm, and describe/define a visual. 3. Students then make a connection to vocabulary term or concept they have learned.	• Analyze/Interpret • Compare/Contrast/Categorize • Draw Conclusions • Generalize • Infer • Make Connections
Vocabulary Dominoes 	1. Teacher prepares a set of dominoes with academic vocabulary terms pasted on one side. 2. Students are placed in groups of four. 3. Vocabulary dominos are placed face down and scrabbled. 4. Each student is given six dominoes. 5. One domino is placed in the center to begin the game. 6. Each player takes a turn matching one of their vocabulary dominos with one on the board explaining how the two terms are related to each other. 7. Students continue to use the six dominoes they were given at the start of the game, making connections as players take turns. 8. Should a student not be able to make a connection, he/she draws another vocabulary domino and tries to make that one connect. 9. The first person to place all six of their vocabulary dominoes on the board wins!	• Analyze/Interpret • Cause/Effect • Compare/Classify/Categorize • Create/Develop • Draw Conclusions • Infer • Make Connections
Vocabulary Link	1. Students are organized into groups of 3-4. 2. Students are provided blank strips of colorful paper. 3. Students "divide and conquer" to write vocabulary terms designated by the teacher onto separate strips for their group. 4. Students collaborate to create a link between two terms. Student explain the connection between the two terms and staple them together. 5. Students continue making connections between the remaining vocabulary terms. 6. The group with the longest "vocabulary link" chain wins the game.	• Analyze/Interpret • Compare/Contrast/Categorize • Create/Develop • Infer • Make Connections
Vocabulary/Genre Sort	1. Teacher provide academic vocabulary cards specific to each genre represented in the Knowledge and Skills statement. 2. Students categorize the words by genre. 3. Provide time for students to discuss and justify their thinking, as well as participate through active listening.	• Analyze/Interpret • Apply • Compare/Contrast/Categorize • Create/Develop • Draw Conclusions • Generalize • Infer • Make Connections
Vocabulary Pyramid Game 	1. Students are organized into pairs. 2. Student A is the clue-giver and provides hints, phrases, and ideas related to the term revealed on the game board. 3. Student B is the guesser who provides possible answers. 4. When student B guesses the correct term, Student A pops up and says, "Whoo hoo!" and then sits back down to begin giving clues for the next term. 5. Student pairs continue giving clues and guessing terms until all terms have been correctly identified. NOTE: some students may need a word bank, vocabulary cards, or their notes to successfully participate in the activity.	• Analyze/Interpret • Compare/Contrast/Categorize • Create/Develop • Draw Conclusions • Infer • Make Connections • Predict/Estimate • Summarize

High Yield Strategy	Instructional Steps	Thinking (Process TEKS Rigor)
What Went Wrong? *(Learning from Student Mistakes Flow Map)*	1. Provide students with assessment items that have been incorrectly solved/answered. 2. Students determine what went wrong within the problem solving process and identify the incorrect answer as one of the following: • Guessing • Careless • Stopped too soon • Mixed things up 3. Students use the Problem Solving Flow Chart to address misconceptions. 4. Students apply the Problem Solving Flow Chart when evaluating their own work.	• Analyze/Interpret • Apply • Cause/Effect • Compare/Contrast/ Categorize • Draw Conclusions • Evaluate • Generalize • Infer
What's On Your Plate Brainstorming	1. At the end of an instructional unit, provide each student with a paper plate. 2. Ask students, "What was on our plate to learn during this unit?" Students then brainstorm everything they learned (or were supposed to learn) in this unit including major concepts, skills, vocabulary terms, etc. 3. **Rock Star Ideas**! Ask student to evaluate their understanding of these ideas by drawing a star beside the 2-3 ideas they believe they understand the best… in essence, they are a Rock Star at that concept, skill, or term. 4. **Loopback Ideas**: Students then circle 2-3 ideas they are still confused about or need to "loopback" to in order to deepen their understanding. 5. Students then participant in 3 rounds of *Mix-Freeze-Group* to… • Communicate their brainstormed ideas • Add new ideas to their plate • Explain any loopback ideas to their partners, if they can • If a student better understands a circled idea after his partner explains it, the student may cross out that circle. 6. Students return to their seats and summarize their learning on the back of the plate: • What is your #1 Rock Star idea – what do you know the BEST? • What is your #1 loopback idea – what do you need to review? • What is your plan to learn this loopback better? (Re-do an assignment, draw sketches of vocabulary terms, re-read the passage, get help from a peer, come to tutorials for that skill, etc.) 7. Teachers collect the paper plates and analyze student needs: • Any concept, skill, or term the majority of the students circled becomes a whole class re-teach/review item through bell ringers, warm ups, and loopbacks. • Any concept, skill, or term only a few students circle becomes an intervention item for that student.	• Analyze/Interpret • Compare/Contrast/ Categorize • Create/Develop • Draw Conclusions • Summarize

High Yield Strategy	Instructional Steps	Thinking (Process TEKS Rigor)
Who Am I?	1. Students and the teacher determine 6-10 terms that are the most difficult for the current unit. 2. Students secretly select one term from the list and write their word on a post it note. 3. Keeping the word hidden, students place the post it on a partner's forehead. 4. Students MIX-FREEZE-GROUP (see strategy) to find a new partner and ask, "Who Am I?" 5. Student partners communicate 1 or 2 clues (describe, explain, examples, etc.) at a time about the word on their partner's forehead. 6. Students synthesize all clues to make an inference about which word they have. 7. If the friend cannot guess his word, his partner finds another friend to come help give clues. 8. Play 2-3 rounds of this game so that each student is exposed to 2-3 difficult terms.	• Analyze/Interpret • Apply • Draw Conclusions • Infer • Make Connections
YET to YES Game ✓ Can you do it? ✓ Take the risk! ✓ Go from "not yet" to "yes!"	**Game Preparation:** 1. Students organized into pairs: A partner and B partner. 2. Assign 9 assessment items for review from 3 Knowledge and Skills Statements. 3. Play the game using pennies, bottle caps, or beans to mark progress. 4. Teacher clarifies/verifies as appropriate. **Game Procedures:** 1. Select an item. 2. A analyze item and identify the concept: move game piece 1 space 3. B analyze item and identify the stimulus: move game piece 1 space 4. A explain plan to start: move game piece 2 spaces 5. B explain how to continue to the solution/best response: move 2 spaces 6. A and B together: compare/contrast all answer choices and determine a solution 7. A and B confirm correct response with Teacher's Key 8. Answer correctly: move 3 spaces 9. Answer incorrectly but evaluate and explain your mistake: move 3 spaces	• Analyze/Interpret • Apply • Compare/Contrast/ Categorize • Draw Conclusions • Generalize • Infer

References:
Frayer, Dorothy. *Frayer Model for Understanding of New Words.* Available at wvde.state.wv.us/strategybank/FrayerModel.html.
Gallagher, Kelly (2004). *Deeper Reading: Comprehending Challenging Texts, 4-12.* Stenhouse Publishers.
Kagan Publishing and Professional Development. Available at www.kaganonline.com.
Keeley, Page (2008). Science Formative Assessment. Corwin Press.
Marzano, Robert J. and Pickering, Debra J. (2005). *Building Academic Vocabulary.* ASCD.