Is it the content, the text, or the task?

Strategies to Minimize "the Struggle" while Increasing (Content or Task) Complexity



Dr. Karin Hess

President, Educational Research in Action

www.karin-hess.com



@drkarinhess

Downloadable Resources - http://www.karin-hess.com

Posted on my blog

- A short paper same title (August 2018)
- Kid Tool: Collab Inquiry Plan

Posted on my Resources page

- Text Complexity Tools & Video (excerpt from Mod2, Local Assessment Toolkit book)
- Interactive Text Complexity Tools

Three Key Components of Cognitive Rigor

Cognitive Rigor: Cognitive rigor encompasses the complexity of the content, the cognitive engagement with that content, and the scope of the planned learning activity (Hess, Carlock, Jones, & Walkup, 2009). Module 1 provides an in-depth discussion of what makes learning and assessment tasks more or less complex.

- Content (making meaning of less complex versus more complex texts, concepts, or contexts)
- Cognitive engagement with the content (doing something to show understanding - Task demands / DOK)
- Scope or breadth of planned (learning or assessment) activity

Cognitive Demand: Cognitive demand describes the potential range of mental processing required to complete a given task, within a given context or scenario. Determining the intended cognitive demand of a test item or task requires more than simply identifying the "verbs" and the "nouns" describing the learning outcomes. Task developers must consider the reasoning and decision making required to complete a task successfully. "Tasks that ask students to perform a memorized" procedure in a routine manner lead to one type of opportunity for student thinking; tasks that require students to think conceptually and that stimulate students to make connections lead to a different set of opportunities for student thinking" (Stein & Smith, 1998, p. 269). During instruction, the cognitive demand of highly complex tasks can be lessened using strategic scaffolding strategies without significantly changing the constructs being assessed. This might include strategies such as chunking texts for a reading assessment, group data collection for a science investigation, and facilitated discussions as a prewriting activity. Module 1 provides an in-depth discussion of common misconceptions about rigor, depth-of-knowledge (DOK), and cognitive demand.

DETERMINE CONTENT COMPLEXITY:

Question #1: Is the Content...

Can you think of a text that falls under each heading?

Easier to learn/do/read/understand ---- OR---- Harder to learn/do/read/understand?

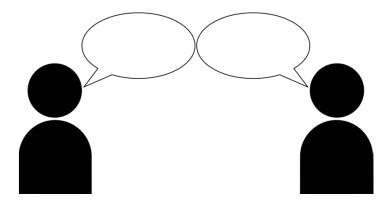
The Hess Text Complexity Tools #7-8 can be used to consistently identify text complexity features.

Easier content...
texts, concepts, contexts

Harder content ...
texts, concepts, contexts

What makes texts less or more complex?

- Language Features/Vocabulary
- Format & Layout
- Text Purpose (WWW: Who? Why? When?)
- Content / Meaning (Concrete Abstract)
- Text Structure(s) & Discourse Style
- Background Knowledge (Required)
- Multiple Texts/Sources?



The Anasazi people first settled in Colorado in 500 AD. Read the article to find out more about them.

The Lost People of Mesa Verde By Elisa Marston

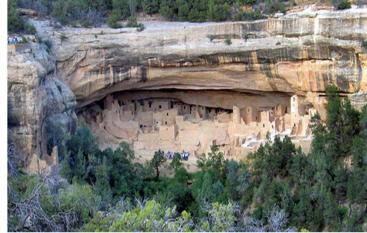
In the dry land of southwestern Colorado a beautiful plateau rises. It has so many trees that early Spanish explorers called it **Mesa Verde**, which means "green table." For about eight hundred years Native Americans called the Anasazi lived on this mesa. And then they left. Ever since the **cliff houses** were discovered a hundred years ago, scientists and historians have wondered why.

Anasazi is a Navajo word meaning "the ancient ones." When they first settled there, around 500 A.D., the Anasazi lived in alcoves in the walls of the high canyons. Later they moved to the level land on top, where they built houses of stone and mud mortar. As time passed, they constructed more elaborate houses, like apartment buildings, with several families living close together.

The Anasazi made beautiful pottery, turquoise jewelry, fine sashes of woven hair, and baskets woven tightly enough to hold water. They lived by hunting and by growing corn and squash. Their way of life went on peacefully for several hundred years.

Then around 1200 A.D. something strange happened, fo reasons are not quite clear. Most of the people moved from the down into alcoves in the cliffs. The move must have made their because they had to climb back up to the plateau to do the farmithe Anasazi planned to stay in the canyon walls, for they soon fi with amazing cliff dwellings. "Cliff Palace," the most famous of than two hundred rooms.

For all the hard work that went into building these new has Anasazi did not live in them long. By 1300 A.D. the cliff dwell Mesa Verde was deserted and remained a ghost country for almost years. Were the people driven out of their homes by enemies? or fighting, or even the presence of other tribes, has been found Archeologists who have studied the place now believe the



The Cliff Palace at Mesa Verde. It contains about 150 rooms.

6

5

1

2

3

4

Question #1: Is the Content... Less Complex? "Easier" to learn/do/read/understand

Texts (Use Hess Tools 7&8)	Concepts	Contexts
-Single purpose -Predictable -Supportive Layout, visuals -Genre-typical -Familiar vocab -Embedded definitions -Signal words for text structures	-Foundational -Concrete ideas -Single focus -Relational (e.g., cause-effect, compare-contrast)	-Familiar -Predictable -Follows pattern

Mystery of the Anasazi disappearance solved? Lost Native American civilisation from the 13th century may have migrated to New Mexico, DNA from turkey bones reveals

- Experts studied the genes of domesticated animals from two sites in the US
- Mitochondrial DNA passed down from mothers established their ancestry
- There was a huge influx of new DNA into New Mexico around 1280 AD
- This suggests the Anasazi migrated to the region where they became the Tewa
- This confirms a long-standing theory and legends passed down by the tribe

By TIM COLLINS FOR MAILONLINE

PUBLISHED: 11:27 EST, 10 August 2017 | UPDATED: 14:42 EST, 10 August 2017

The fate of a Native American culture that disappeared seven centuries ago may have been uncovered in an unexpected location.

It has long remained a mystery why the Anasazi, meaning ancient ones, vanished from Colorado's Mesa Verde National Park without a trace in the 13th century.

Experts studying the DNA of ancient turkey bones have found that the group, also known as the Ancestral Puebloans, may have moved out of their homeland to what is now New Mexico.

The find would confirm a long-standing theory and the legends passed down by the Tewa tribe, believed to be the surviving ancestors of this lost civilisation.

A team of researchers, including the University of Oklahoma, decided to compare DNA of domesticated animals like dogs and turkeys from two sites.

The scientists believed that they could provide evidence of ancient migration and reveal what happened to the Anasazi.

GENETIC ANCESTRY

To discover the fate of the Anasazi researchers extracted mitochondrial DNA, which is inherited from the mother, from turkey and dog bones uncovered at the Mesa Verde. This was compared to bones from a presumed postmigration site in New Mexico.

They tested the haplogroups, clusters of genes which cling together if they are inherited that make them useful for comparing ancestry. ...

Question #1: Is the Content... More Complex? "Harder" to learn/do/read/understand

Texts (Use Hess Tools 7&8)	Concepts	Contexts
-Multipurpose	-Abstract	-Issue-based
-Background needed	-Complex	-Problem-based
-Dense text, longer	-Multi-faceted	-Real-world
-Rhetorical/ literary	-Multiple or related	-References to
devices used	applications	historical, literary,
-Few or more		scientific, etc.
complex visuals	-Connected to	-Multi perspectives
-Complex vocab	Big Ideas/ Universal	
-Footnotes, citations	themes	



GRADIENTS IN COMPLEXITY:





Informational Text Analyzed (author, date):

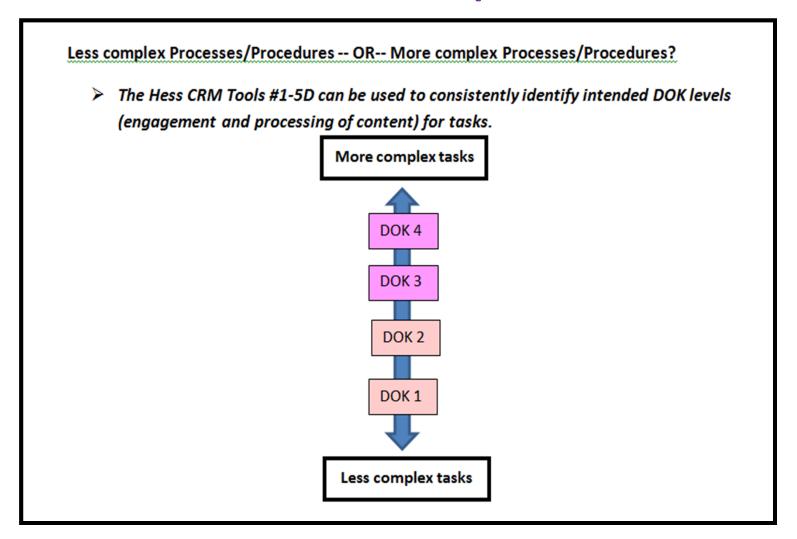
Overall Complexity Rating:

Notes:

	Simple Text [1]	Somewhat Complex Text [2]	Complex Text [3]	Very Complex Text [4]
Format Layout	Consistent placement of text, regular word and line spacing, often large plain font Graphics, captioned photos, labeled diagrams that directly support and help interpret the written text Simple indexes, short glossaries Supportive signposting and/or enhancements	May have longer passages of uninter- rupted text, often plain font Graphs, photos, tables, charts, dia- grams directly support the text Indexes, glossaries, occasional quotes, references Reduced signposting and enhance- ments	Longer passages, uninterrupted text may include columns or other variations in layout, often smaller more elaborate font Essential integrated graphics, tables, charts, formulas (necessary to make meaning of text) Embedded quotes, concluding appendices, indexes, glossaries, bibliography Minimal signposting and/or enhancements	Very long passages, uninterrupted text that may include columns or other variations in layout, often small densely packed print Extensive/complex, intricate, essential integrated tables, charts, formulas necessary to make connections or synthesize concepts presented Abstracts, footnotes, citations and/or detailed indexes, appendices, bibliography Integrated signposting conforming to disciplinary formats. No enhancements
Purpose and Meaning	A single or simple purpose conveying clear or factual information Meaning is clear, concrete with a narrow focus	Purpose involves conveying a range of ideas with more detailed information or examples Meaning is more involved with a broader focus	Purpose includes explaining or interpreting information, not just presenting it Meaning includes more complex concepts and a higher level of detail	Purpose may include examining/evaluating complex, sometimes theoretical and contested information Meaning is intricate, with abstract theoretical elements
Structure & Discourse	Discourse style & organization of the text is clear or chronological and/or easy to predict Connections between ideas, processes, or events are explicit and clear One primary text structure is evident (e.g., sequence, description)	Organization of the text may include a thesis or reasoned explanation in addition to facts Connections between some ideas, processes, or events are implicit or subtle includes a main text structure with 1-2 embedded structures	Organization of the text may contain multiple pathways, more than one thesis and/or several genres Connections between an expanded range ideas, processes, or events are deeper and often implicit or subtle Includes different text structure types of varying complexity	Organization of the text is intricate or specialized for a particular discipline or genre Connections between an extensive range ideas, processes, or events are deep, intricate and often implicit or subtle includes sustained complex text structure types and/or specialized, hybrid text types, including digital texts
Language Features	Mainly simple sentences Simple language style, sometimes with narrative elements Vocabulary is mostly familiar or defined in text	Simple and compound sentences with some more complex constructions Increased objective style and passive constructions with higher factual content Includes some unfamiliar, context-dependent or multiple meaning words	Many complex sentences with increased subordinate phrases and clauses or transition words Objective/passive style with higher conceptual content and increasing nominalization Includes much academic (nuanced) vocabulary and/or some domain specific (content) vocabulary	Mainly complex sentences, often containing multiple concepts specialized disciplinary style with dense conceptual content and high nominalization Includes extensive academic (nuanced, precise) and/or domain specific (content) vocabulary
Bk Knowledge Demands	General topic is familiar, with some details known by reader Simple, concrete ideas	General topic is familiar, with some details new to reader (cultural, historical, literary, political, legal, etc.) Both simple and more complicated, abstract ideas	General topic is somewhat familiar but with many details unknown to reader (cultural, historical, literary, political, legal, etc.) A range of recognizable ideas and challenging abstract concepts	General topic is mostly unfamiliar with most details unknown to reader (cultural, historical, literary, political, legal, etc.) Many new ideas, perspectives and/or complex, challenging, abstract and theoretical concepts

ESTABLISH TASK COMPLEXITY & DEPTH (DOK):

Question #2: How complex is the task?





One way to think about the PURPOSE of mental processing used at each DOK level

 DOK 1 = Acquire Foundation: Recall, list, restate, or locate facts, terms, concepts, literary elements; apply rule, edit (routine)

> NEAR Transfer

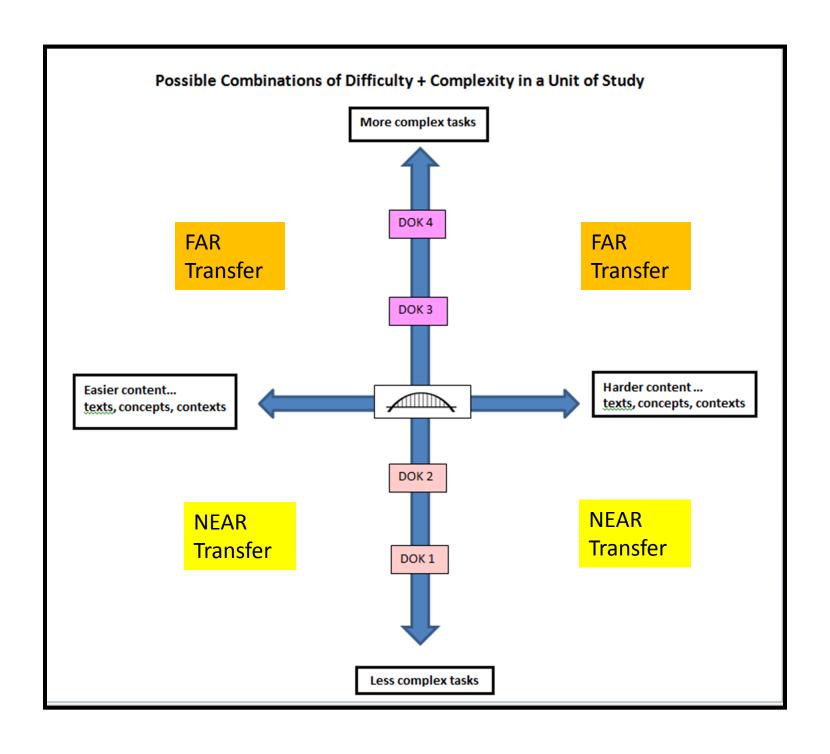
• DOK 2 = Apply, Connect, Conceptualize: Summarize, organize, infer, or predict; state main idea; write paragraph (routine)

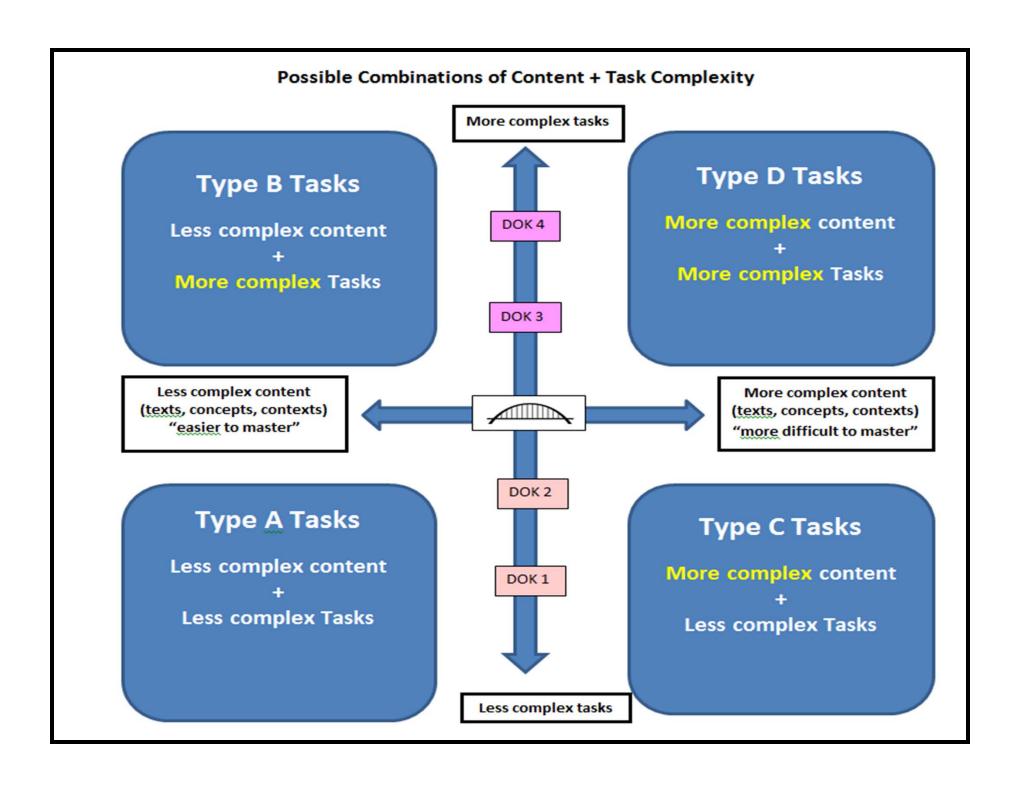


One way to think about the PURPOSE of mental processing used at each DOK level

Transfer

- DOK 3 = Deepen & Construct Meaning: requires planning/ decision making, and justification; more abstract, complex; often more than one possible response —develop or analyze theme, bias, purpose, author's craft; write essay (non-routine)
- DOK 4 = Extend & Broaden Meaning: research, problem solve, and process multiple conditions of the issue or task; justify conclusions drawing from multiple sources/content areas (non-routine)





More complex tasks Type B Tasks Type D Tasks ELA: Read 1 or more less ELA: Read 1 or more complex texts to analyze complex texts to analyze DOK 4 themes, issues, author's abstract themes, issues, craft, style, reasoning, etc.; author's craft, discourse write in-depth responses style, reasoning, etc.; with supporting evidence write in-depth responses DOK 3 with supporting evidence More complex content ... Less complex content... texts, concepts, contexts texts, concepts, contexts Type C Tasks Type A Tasks DOK 2 ELA: Read a longer/ more **ELA:** Read a short/less complex text to locate complex text to locate details, summarize, DOK 1 details, summarize, compare-contrast; write describe compare-contrast; sentences, paragraphs write phrases, sentences, paragraphs as responses Less complex tasks

CONSIDER SUPPORTS:

Question #3: Should I reduce the cognitive demand?

Strategic Scaffolding creates a "bridge" for students by

- supporting language development
 - Think aloud to model...
 - Sentence frames
 - Word splash



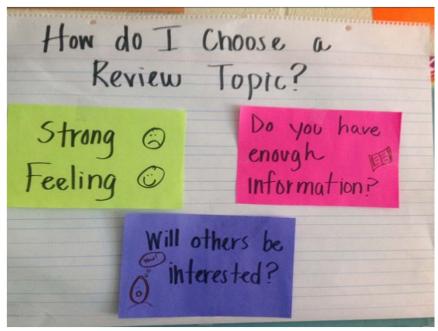
- supporting executive function/processing of content
 - Structured note taking (e.g., note facts, 2-column)
 - Breaking task into smaller steps
 - Chunking text
 - Providing a "customized" diagram to match purpose/specific text
- deepening content knowledge
 - Audio book/shared reading of complex texts, issues
 - Build background knowledge
 - Group inquiry, carousel

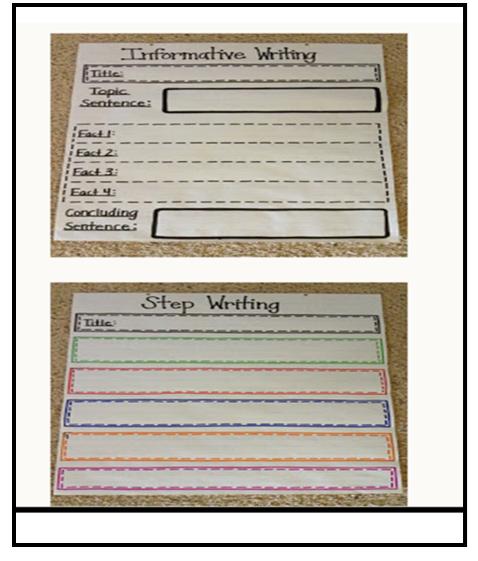
Lesson planning requires that you think about WHY you scaffold...

For example...

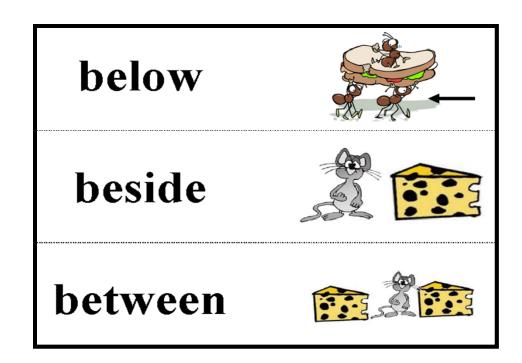
Scaffolding with Anchor Charts [1]

Review multi-step task processes; Organize ideas/build schema;





Scaffolding with Anchor Charts [2] or visually define terms/build language



Example: supporting executive function

Moving from DOK 1 (locating) to DOK 2 (organizing)

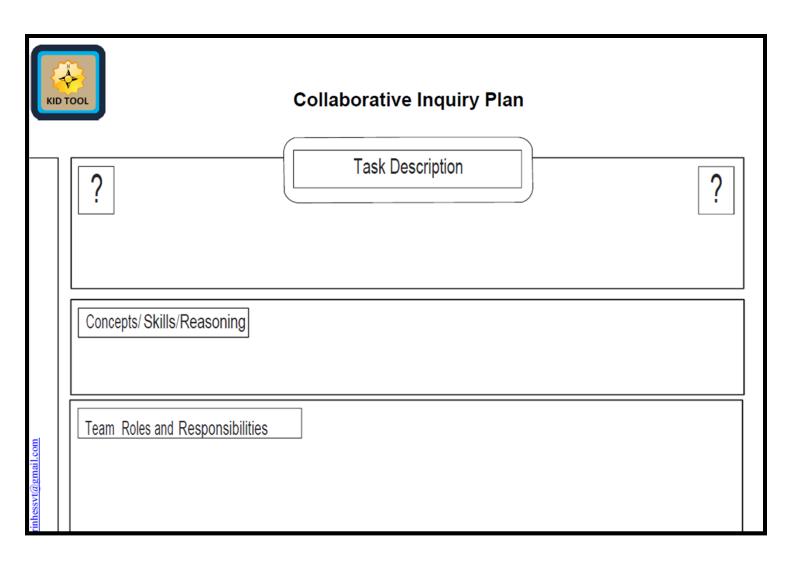
Structured note taking - note facts (for each

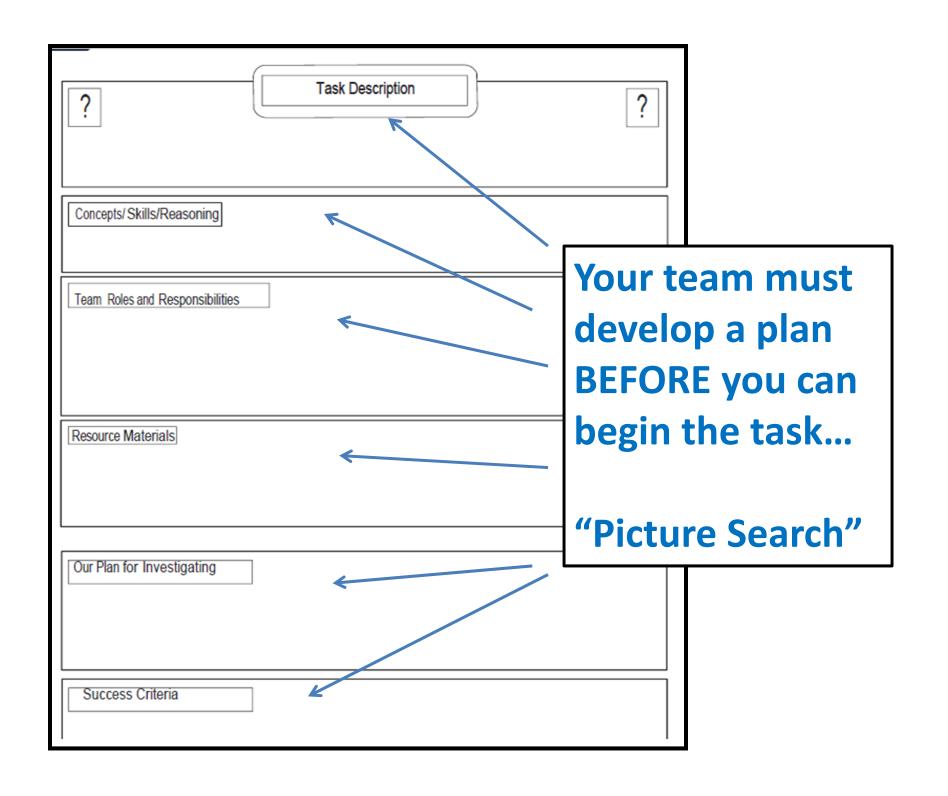
source)	Name Use the lines below to write your facts and details. Cut each fact apart. Decide how to make groups of the facts, such as how things look or where they live. Use the fact groups to write about each key idea in your report.
When might you plan to use a strategy like this?	My Note Facts about

		RESEARCH-BASED STRATEGIC SCAFFOLDING IDEAS TO SUPPORT DEEPER UNDERSTANDING			
	Matching Strategies to Purpose	Strategies to Development How to Apply Skills, Processes		Developing Content Knowledge & Connecting to "Big Ideas"	Possible Student Activities/Products
	Acquire a Foundation	Use bilingual tools/apps to find definitions, synonyms, word families, cognates Build word walls with visuals (photos, drawings, symbols) Build prior knowledge of content-specific vocabulary (Tier 3) using different modalities, word banks	o Post 1-2 daily "I can" statements for specific skills to be applied today o Co-create (color-coded) anchor charts visually breaking down steps or parts o Model how to apply "cademic" terms in each content area: list, define, brainstorm, locate, follow steps/rule o Structured note-taking (2-columns, visuals)	 Build prior knowledge with field trips, video, concrete objects, hands-on explorations, skits/roles Create class tableaus for events, ideas, concepts (e.g., division) Use KWHL charts: H= how can we find out (this leads into the lesson activities - read, build model, etc.) 	Use different modalities or resources (visuals, gestures, manipulatives or word banks) to respond to basic questions Create personal picture dictionaries/glossaries Use frames and word banks to practice short responses: restate, describe, list Label photos, artifacts
	Use, Connect, Conceptualiz	Model using word solving strategies, patterns, context cues "Think aloud" to model how to do a key word search Move from definitional to conceptual, abstract, non-literal, or multiple meanings (Tier 2) Check understanding with Turn & Talk (frames) every 10-12 min.	o Model how to a content area: p examples & no record/organizes, summarize, record/organizes, and software tools to organize ideas/data o Break tasks into steps & checkpoints o "Chunk text" and insert questions to sustain engagement	 Preview texts prior to listening, viewing, reading – discuss how to use text features: diagrams, visuals, subheadings, bold print, etc. Model use of graphic for main idea-details, cause-effect, cause-effect, concept or story maps Use gallery walks to add/build on ideas of others 	O Peers build anchor charts for characters/ events/key concepts O Use anticipation guides to predict and then check what text says O Make cartoon strip showing sequence of a process or story line (draw, cut out pictures) O Complete/create a timeline, etc.
	Deepen & Construct Meaning	O Use Hess TBEAR model to use supporting evidence: Topic/Thesis, Bridge to evidence/Brief summary, Evidence/examples, Analyze examples, Reflect O Use sentence frames to share each part of TBEAR O Create TBEAR vocabulary posters O Reinforce 5 new vocabulary/day: repeat, use in context, define, connect root meaning to similar words, use in responses	o Model how to apply "academic" terms in each content area: analyze by breading into parts, use criteria, find evidence o Provide "hint cards" with definitions, bilingual cues, illustrated examples to use when solving problems, completing tasks o Provide guided practice for whole class and later small group performance tasks o Regularly monitor progress using performance tasks while lessening scaffolding over time	o Guide small groups to co-develop inquiry plans to investigate open-ended research questions/tasks o Teach students to annotate texts (underline key idea, circle key terms, paraphrase each section) o Provide structured ways to re-read texts for different purposes o Use "carousels" for peers to critique reasoning or solutions o Provide guidelines for use of visuals	guides to gather evidence I ideas after reading use turn a talk frames, inner-outer circles to practice listening skills, connect or support ideas o Use jigsaw for groups to take apart exemplars or models o Create captioned photo essay for topic, with given criteria/or frames provided o Groups create "text dedss" as close interpretive reading of short texts
)	Extend, Transfer, Broaden Meaning	O Use "word splashes" to reinforce and integrate word meanings and concepts across a unit or project O Use anchor charts with stems for research / listening activities (e.g., This text says; How does this compare?; This source doesn't agree with; This fact/source is important/credible because) O Use video/audio recordings to self-assess, or	o Model how to apply "academic" terms in each content area: analyze across sources or data sets, research, investigate, check sources/credibility; first drafts; revising for clarity, flow of ideas or Provide graphic organizers and models that encourage cross-text analyses or Use a structured process/steps for multiple readings/viewing of texts or to self-assess task	o Provide simulations (e.g., GRASPS), investigations, or debate formats to show varying perspectives or possible causes-effects o Pair content-specific texts so more basic print/ non-print texts provide background for second text o Use a structured process/steps for self-assessment of content acquisition and understanding	o Small groups complete a One Pager to illustrate and connect the meaning of a selected quote o Small groups complete a " Picture-Photo Search " activity where an unknown visual is presented with a series of inquiry-based questions to be answered (e.g., what event is depicted, when was this taken, why is it significant, what sources did you check)

Example: deepening content knowledge

Moving from DOK 3 (planning) to DOK 4 ("sourcing")







Photo/Picture Search



- What is this a picture of?
- Approximately what time period (date) is it depicting?
- How do you know? <u>Use at least three different</u> <u>sources of evidence to support your thinking.</u>

 BONUS: Can you find an additional interesting fact that most people have not found?

Questions??? Thoughts???

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Resources Referenced

- Hess Cognitive Rigor Matrix/DOK Tools 1-5, Module 1, A Local Assessment Toolkit to Promote Deeper Learning http://www.karin-hess.com/free-resources
- Hess Text Complexity Tools 6-7-8, Module 2,
 A Local Assessment Toolkit to Promote Deeper Learning
 http://www.karin-hess.com/free-resources
- Kid Tool: Collaborative Inquiry Plan, Module 1, A Local Assessment Toolkit to Promote Deeper Learning http://www.karin-hess.com/blog
- Is the task, the content, or both? http://www.karin-hess.com/blog
- Flipbook: Rigor by Design, Not Chance: Laying The Foundation for Deeper Understanding (Hess, 2018)

If ordering A Local Assessment Toolkit, use this

20% DISCOUNT CODE before the end of March: **N18AT7**

