Are We Asking The Right Questions?

Mississippi Literacy Association Conference December 2021 *Our Name is Our Mission and Our Vision for All K-12 Schools*

EDUCATION

Success Nodel

C³ Success Mode Collaborate Collaborate with school/district staff to determine the need(s) that will improve instruction which impacts learning and outcomes for KIDS through conducting The Kids First Analysis. Cost Model Create Create a personalized plan that includes strategies, action steps, milestones, Commit and measures of success. Qu Commit to the partnership to achieve the desired impact on student learning Labol 2200 and outcomes.



Why should we ask questions?

- Questions can diagnose student understanding of material.
- Questions are a way of engaging with students to keep their attention and to reinforce their participation.
- Questions can review, restate, emphasize, and/or summarize what is important.
- Questions stimulate discussion and creative and critical thinking, as well as determine how students are thinking.
- Questions help students retain material by putting into words otherwise articulated thoughts.





What are effective questions?

- Effective questions are meaningful and understandable to students.
- Effective questions can challenge students.
- Closed-ended questions can quickly assess comprehension.
- Open-ended questions probe and elicit expanded thinking and the processing of information.





Depth of Knowledge & MAAP

The Depth of Knowledge (DOK) level of items across the operational test form will be tracked to have as much variety as possible. The goal is for 75% of the items on the form to be DOK level 2 and approximately 25% of the items on the form to to be DOK level 1 and DOK level 3.







DOK Level Activity

Read the question stem that has been provided. As a group, determine if it is a DOK 1, 2, 3, or 4. Be prepared to share your group's decision and reasoning.



Depth of Knowledge (DOK) categorizes tasks according to the complexity of thinking required to successfully complete them.

What are DOK levels?

- Level 1. Recall and Reproduction: Tasks at this level require recall of facts or rote application of simple procedures. The task does not require any cognitive effort beyond remembering the right response or formula. Copying, computing, defining, and recognizing are typical Level 1 tasks.
- Level 2. Skills and Concepts: At this level, a student must make some decisions about his or her approach. Tasks with more than one mental step, such as comparing, organizing, summarizing, predicting, and estimating, are usually Level 2.

What are DOK levels?

- Level 3. Strategic Thinking: At this level of complexity, students must use planning and evidence, and thinking is more abstract. A task with multiple valid responses, where students must justify their choices, would be Level 3. Examples include solving non-routine problems, designing an experiment, or analyzing characteristics of a genre.
- Level 4. Extended Thinking: Level 4 tasks require the most complex cognitive effort. Students synthesize information from multiple sources, often over an extended period, or transfer knowledge from one domain to solve problems in another. Designing a survey and interpreting the results, analyzing multiple texts by to extract themes, or writing an original myth in an ancient style would all be examples of Level 4.







Verbs...

- DOK levels are NOT determined by the verbs, rather by the context in which the verb is used AND the depth of thinking that is required by the student.
- The **complexity** of the task needs to be considered more than the **difficulty** of the task.

Same Verb- Three Different Levels

- DOK 1- <u>Describe</u> three characteristics of metamorphic rocks. (Requires simple recall)
- DOK 2- <u>Describe</u> the difference between metamorphic and igneous rocks. (Requires cognitive processing to determine the differences in the two rock types)
- DOK 3- <u>Describe</u> a model that you might use to represent the relationships that exist within the rock cycle. (Requires deep understanding of rock cycle and a determination of how best to represent it)





Developing the Cognitive Rigor Matrix

Different states, schools, and teachers may use different models to describe cognitive rigor. Each may address something different. Bloom- What type of thinking (verbs)

is needed to complete a task?

• Webb- How deeply do you have to

understand the content to

successfully interact with it? How

complex or abstract is the content?

• Hess- Applies Webb's DOK to Bloom's cognitive process dimensions

(Cognitive Rigor Matrix)

Hess' Cognitive Rigor Matrix

Depth + thinking	Level 1 Recall & Reproduction	Level 2 Basic Skills & Concepts	Level 3 Strategic Thinking & Reasoning	Level 4 Extended Thinking
Remember	- Recall, locate basic facts, details, events			
Understand	- Select appropriate words to use when intended meaning is clearly evident	- Specify, explain relationships - summarize - identify main ideas	- Explain, generalize, or connect ideas using supporting evidence (quote, example)	- Explain how concepts or ideas specifically relate to other content domains or concepts
Apply	- Use language structure (pre/suffix) or word relationships (synonym/antonym) to determine meaning	 Use context to identify meaning of word Obtain and interpret information using text features 	- Use concepts to solve non-routine problems	- Devise an approach among many alternatives to research a novel problem
Analyze	- Identify whether information is contained in a graph, table, etc.	 Compare literary elements, terms, facts, events analyze format, organization, & text structures 	- Analyze or interpret author's craft (literary devices, viewpoint, or potential bias) to critique a text	 Analyze multiple sources or texts Analyze complex/abstract themes
Evaluate			 Cite evidence and develop a logical argument for conjectures 	- Evaluate relevancy, accuracy, & completeness of information
Create	- Brainstorm ideas about a topic	- Generate conjectures based on observations or prior knowledge	- Synthesize information within one source or text	- Synthesize information across multiple sources or texts

Hess Cognitive Rigor Matrix & Curricular Examples: Applying Webb's Depth-of-Knowledge Levels to Bloom's Cognitive Process Dimensions - ELA						
Revised Bloom's Taxonomy	Webb's DOK Level 1 Recall & Reproduction	Webb's DOK Level 2 Skills & Concepts	Webb's DOK Level 3 Strategic Thinking/ Reasoning	Webb's DOK Level 4 Extended Thinking		
Remember Retrieve knowledge from long- term memory, recognize, recall, locate, identify	 a. Recall, recognize, or locate facts, terms, details, events, or ideas explicit in texts b. Read words orally in connected text with fluency & accuracy 	The Hess CRM uses des frameworks. BOLD TE	criptors for ELA/Literacy that in XT indicates commonly assessed	ntegrate Bloom-Webb d ELA/literacy content.		
Understand Construct meaning, clarify, paraphrase, represent, translate, illustrate, give examples, classify, categorize, summarize, generalize, infer a logical conclusion), predict, compare/contrast, match like ideas, explain, construct models	 c. Identify or describe literary elements (characters, setting, dialogue, problem, etc.) d. Select appropriate words when intended meaning/definition is clearly evident e. Describe/explain who, what, where, when, or how f. Define/describe facts, details, terms, principles g. Write simple sentences 	 a. Specify/explain, relationships; explain why (e.g., cause-effect) b. Give non-examples/examples c. Summarize results, concepts, ideas, steps in a process d. Make basic inferences or logical predictions from data or text e. Identify main ideas or accurate generalizations of a text f. Locate information to support explicit-implicit central ideas 	 a. Explain or generalize purpose or theme of 1 text, <u>using supporting</u> <u>evidence</u> (quote, examples, text reference) b. Describe how word choice, point of view, or potential bias may affect the readers' interpretation of a text c. Write multi-paragraph composition for specific purpose, focus, voice, tone, & audience 	 a. Explain how concepts or ideas specifically relate to other content domains (e.g., social, political, historical) or concepts or other texts, using evidence from multiple sources b. Develop generalizations of the results obtained or strategies used and apply them to new problem-based situations 		
Apply Carry out or use a procedure in a given situation; carry out (apply to a familiar task), or use (apply) to an unfamiliar task	 h. Use language structure (pre/suffix), word relationships (synonym/antonym) to determine meaning of words Apply rules or resources to edit spelling, grammar, word use, punctuation, conventions j. Apply basic formats for documenting sources 	 g. Use context to identify the meaning of words/phrases h. Obtain, interpret, explain information using text features i. Develop a text that may be limited to one paragraph j. Apply simple organizational structures (paragraph, sentence types) in writing 	 d. Apply a concept in a new context e. Revise final draft for meaning, logic, or progression of ideas f. Apply internal consistency of text organization and structure to composing a full composition g. Apply word choice, point of view, style to impact readers' /viewers' interpretation of a text 	 c. Illustrate how multiple themes across texts (historical, geographic, social, artistic, literary) may be interrelated, using evidence from multiple sources d. Select or devise an approach among many alternatives to research a novel problem 		
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Let's Practice!

Write the questions that

your group created on the

anchor chart paper that has

been provided. Be prepared

to share!

Using the Matrix and the text provided,

you will create the following:

(1) DOK 1 question

(2) DOK 2 questions

(1) DOK 3 question

(1) DOK 4 question





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