

Level 3: Strategic Thinking & Reasoning

Tasks and classroom discourse falling into this category demand the use of planning, reasoning, and higher order thinking processes, such as analysis and evaluation, to solve real-world problems or explore questions with multiple possible outcomes. Stating one's reasoning and providing relevant supporting evidence are key markers of DOK 3 tasks. The expectation established for tasks at this level require an in-depth integration of conceptual knowledge and multiple skills to reach a solution or produce a final product. DOK 3 tasks and classroom discourse focus on in-depth understanding of one text, one data set, one investigation, or one key source, whereas DOK 4 tasks expand the breadth of the task using multiple texts or sources, or multiple concepts/disciplines to reach a solution or create a final product.

Verbs	Teacher Role	Student Role
Critique, appraise, revise for meaning, assess, investigate, cite evidence, test hypothesis, develop a logical argument, use concepts to solve non-routine problems, explain phenomena in terms of concepts, draw conclusions based on data	Questions to probe reasoning and underlying thinking, asks open-ended questions, acts as a resource and coach, provides criteria and examples for making judgments and supporting claims, encourages multiple approaches and solutions; determines when/where (text, concept) depth and exploration is most appropriate	Uncovers and selects relevant and credible supporting evidence for analyses, critiques, debates, claims and judgments; plans, initiates questions, disputes, argues, tests ideas/solutions, sustains inquiry into topics or deeper problems, applies to the real world

Possible Products

- Complex Graph
- Set up a database
- Conduct or critique a designed investigation
- Video cast or podcast
- Analyze survey results
- Debate from a given perspective
- Develop storyboard for film or cartoon animation
- Multi-paragraph essay or short story
- Literary critique
- Play, book, music, or movie review
- Informational report with several subtopics
- Fact-based argument (Is this criticism supported by the historical facts?)
- Create a Wiki or website

Potential Activities

- Analyze results of a questionnaire or survey (e.g., survey classmates/ industry members to find out what they think about a current issue)
 - Prepare an informational report about an area of study
 - Write a letter to the editor after evaluating a product
 - Prepare for and participate in a debate
 - Use evidence to generate criteria for making judgments
 - Make a booklet or brochure about a topic, organization, or issue
 - Participate on a panel to discuss differing viewpoints on...
 - Prepare a speech to support your perspective about ...
 - Explain and apply abstract terms and concepts to real-world situations
- Solve complex, non-routine problems that draw upon multiple skills, concepts, and processes
 - Write an essay, short story, poem, or play
 - Create complex graphs or databases where reasoning and approach to data organization is not obvious
 - Design, conduct, or critique an investigation to answer a research question
 - Propose an alternate solution to a problem studied

Potential Questions

What are the possible design flaws in ...?
What is the theme/the lesson learned ... ?
How would the theme change if ...?
What underlying bias is there ... ?
What inferences will these facts support ... ?
How does the author create tension/suspense...?
What is the author's chain of reasoning or point of view for ...?

What is the impact on the reader /viewer for use of this (rhetorical device, analogy, figurative language use, visual image, etc.)?
What conclusions can you draw ... ?
How can you prove that your solution or estimate is reasonable?
What evidence can you find to support ... ?
What ideas justify this position ... ?

ELA, History & Social Studies Alignment to Bloom's Taxonomy (sources: Hess ELA-SS and Writing CRMs)

Revised Bloom's Taxonomy	Webb's DOK Level 1 Strategic Thinking & Reasoning
<p>REMEMBER Retrieve knowledge from long-term memory, recognize, recall, locate, identify</p>	<p>Not Applicable</p>
<p>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</p>	<ul style="list-style-type: none"> ▪ Explain, generalize, or connect ideas using supporting evidence (e.g., quote, example, text reference) ▪ Identify/make inferences about explicit or implicit themes ▪ Describe how word choice, point of view, or bias may affect the readers' interpretation of a text ▪ Write multi-paragraph composition for specific purpose, focus, voice, tone & audience
<p>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</p>	<ul style="list-style-type: none"> ▪ Apply a concept in a new context ▪ Revise final draft for meaning or progression of ideas ▪ Apply internal consistency of text organization and structure to composing a full composition ▪ Apply word choice, point of view, style to impact readers'/viewers' interpretation of a text
<p>ANALYZE Break into constituent parts, determine how parts relate, differentiate between relevant-irrelevant, distinguish, focus, select, organize, outline, find coherence, deconstruct (e.g. for bias or point of view)</p>	<ul style="list-style-type: none"> ▪ Analyze information within a text or source ▪ Analyze interrelationships among concepts, issues, problems ▪ Analyze or interpret author's craft (literary devices, viewpoint, or potential bias) to create or critique a text or to support text interpretations ▪ Use reasoning and evidence to generate criteria for making and supporting an argument of judgment (e.g., Was FDR a great president? Who was the greatest ball player?)
<p>EVALUATE Make judgments based on criteria, check, detect inconsistencies, or fallacies, judge, critique</p>	<ul style="list-style-type: none"> ▪ Cite evidence and develop a logical argument for conjectures ▪ Describe, compare, and contrast solution methods ▪ Verify reasonableness of results ▪ Justify or critique conclusions drawn
<p>CREATE Reorganize elements into new patterns/structures, generate, hypothesize, design, plan, produce</p>	<ul style="list-style-type: none"> ▪ Synthesize information within one source or text ▪ Develop a complex model for a given situation ▪ Develop an alternative solution

Math & Science Alignment to Bloom's Taxonomy (source: Hess Math-Science CRM)

Revised Bloom's Taxonomy	Webb's DOK Level 3 Strategic Thinking & Reasoning
<p>REMEMBER Retrieve knowledge from long-term memory, recognize, recall, locate, identify</p>	<p>Not Applicable</p>
<p>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</p>	<ul style="list-style-type: none"> ▪ Use concepts to solve non-routine problems ▪ Explain, generalize, or connect ideas using supporting evidence ▪ Make and justify conjectures ▪ Explain thinking when more than one response/solution is possible ▪ Explain phenomena in terms of concepts
<p>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</p>	<ul style="list-style-type: none"> ▪ Design investigation for a specific purpose or research question ▪ Conduct a designed investigation ▪ Use concepts to solve non-routine problems ▪ Use and show reasoning, planning, and evidence ▪ Translate between problem & symbol notation when not a direct translation
<p>ANALYZE Break into constituent parts, determine how parts relate, differentiate between relevant-irrelevant, distinguish, focus, select, organize, outline, find coherence, deconstruct</p>	<ul style="list-style-type: none"> ▪ Compare information within data sets or texts or across related data sets ▪ Analyze and draw conclusions from data, citing evidence ▪ Generalize a pattern ▪ Interpret data from complex graph ▪ Analyze similarities/differences between research procedures or solutions
<p>EVALUATE Make judgments based on criteria, check, detect inconsistencies or fallacies, judge, critique</p>	<ul style="list-style-type: none"> ▪ Cite evidence and develop a logical argument for concepts or solutions ▪ Describe, compare, and contrast solution methods ▪ Verify reasonableness of results
<p>CREATE Reorganize elements into new patterns/structures, generate, hypothesize, design, plan, construct, produce</p>	<ul style="list-style-type: none"> ▪ Synthesize information within one data set, source or text ▪ Formulate an original problem given a situation ▪ Develop a scientific/mathematical model for a complex situation