

Leveling Up to Depth of Knowledge

Students in 2025 – 2026 are counting on us to guide them to ask/answer rigorous questions and think deeply to ensure that every student discovers their potential to succeed. EXIT Tickets (daily) should provide evidence to students and teachers where they are with the rigor, knowledge, and vocabulary of the learning intention and success criteria.



The intended DOK level can be assigned to anything from an instructional question to broader course objectives and assessment items/tasks using the following general guidelines:

- The DOK level assigned should reflect the level of work students are most commonly required to perform in order for the response to be deemed proficient, such as in rubric descriptions describing proficient performance.
- The DOK level should reflect the complexity of cognitive processes demanded by the learning or assessment objective and task, rather than its difficulty. Ultimately, the DOK level describes the depth of understanding required by a task, not whether or not the task is considered “difficult.”
- If there is a question regarding which of two levels a standard addresses, such as Level 1 - Level 2, or Level 2 - Level 3, it is appropriate to assign the highest level as the “DOK ceiling” for the task, but also provide opportunities at the lower DOK levels as an instructional progression (e.g., summarizing a text/DOK 2 before analyzing a text/DOK 3; making observations/DOK 2 before conducting investigation/DOK 3) (Hess, 2004-2006).
- The DOK level should be assigned based upon the cognitive demand (mental processing) required by the central performance described in the objective or task.
- The task’s or objective’s central verb(s) alone is/are not sufficient to assign a DOK level. Developers must consider “what comes after verb” - the complexity of the task and content/concepts -- in addition to the mental processing required by the requirements set forth in the objective (Webb’s Depth of Knowledge Guide).

We can use the Think Aloud Strategy to verbalize our thoughts during higher-order thinking, questioning, or performing a rigorous task. In the process, we should try to differentiate support but avoid stealing their thinking.

DOK 1 Recall and Reproduction

Curricular elements that fall into this category involve basic tasks that require students to recall or reproduce knowledge and/or skills. The subject matter content at this level usually involves working with facts, terms, details, calculations, principles, and/or properties. It may also involve use of simple

procedures or formulas. There is little or no transformation of the target knowledge or skill required by the tasks that fall into this category. **A student answering a Level I item either knows the answer or does not; that is, the answer does not need to be figured out” or “solved.**

<p>DOK 1 Verb Clues Locate, calculate, define, identify, list, label, match, measure, copy, memorize, repeat, report, recall, recite, recognize, state, tell, tabulate, use rules, answer who, what, when, where, why, how</p>					
<p>DOK 1 Teacher Role Questions to direct or focus attention, shows, tells, demonstrates, provides examples, examines, leads, breaks down, defines</p>	<p>DOK 1 Student Role Recognizes, responds, remembers, memorizes, restates, absorbs, describes, demonstrates, follows directions, applies routine processes, definitions, and procedures</p>				
<p>DOK 1 Possible Products</p> <table border="1"> <tr> <td> <ul style="list-style-type: none"> ● Fill-in-the-blank tasks ● Recite-math facts, poems, etc. ● Plot/locate points on a graph ● Edit sentences ● Identify/write sentence types ● Highlight key words ● Bookmark websites ● Use key word search ● Use dictionary, thesaurus ● Follow steps/directions (e.g., recipe, long division, make model) ● Explain, demonstrate </td> <td> <ul style="list-style-type: none"> ● Show & Tell ● Locate or recall quotes ● Document /cite sources ● Brainstorm related ideas ● Represent math relationships in words, pictures, or symbols ● Write complete sentences ● Identify parts of speech ● Label or locate parts in diagram ● List related parts or kinds (e.g., triangles) </td> <td> <ul style="list-style-type: none"> ● Calculate, compute ● Measure, record data ● Reproduce map or diagram ● Use map key to locate information ● Oral reading fluency ● Decoding words ● Use formulas ● Evaluate expressions ● Vocabulary definitions-look up, recall, use in sentences </td> </tr> </table>			<ul style="list-style-type: none"> ● Fill-in-the-blank tasks ● Recite-math facts, poems, etc. ● Plot/locate points on a graph ● Edit sentences ● Identify/write sentence types ● Highlight key words ● Bookmark websites ● Use key word search ● Use dictionary, thesaurus ● Follow steps/directions (e.g., recipe, long division, make model) ● Explain, demonstrate 	<ul style="list-style-type: none"> ● Show & Tell ● Locate or recall quotes ● Document /cite sources ● Brainstorm related ideas ● Represent math relationships in words, pictures, or symbols ● Write complete sentences ● Identify parts of speech ● Label or locate parts in diagram ● List related parts or kinds (e.g., triangles) 	<ul style="list-style-type: none"> ● Calculate, compute ● Measure, record data ● Reproduce map or diagram ● Use map key to locate information ● Oral reading fluency ● Decoding words ● Use formulas ● Evaluate expressions ● Vocabulary definitions-look up, recall, use in sentences
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<p>DOK 1 Potential Activities</p> <table border="1"> <tr> <td> <ul style="list-style-type: none"> ● Use step-by-step directions to make a model, plant seeds, bake a cake, etc. ● Describe an event, character, setting, etc. in a story ● Write a list of keywords you know about... ● Recite/recall a fact or date related to ... ● Write/retell in your own words ... ● Cut out, draw, or match a picture that illustrates an event, process, or story ● Report or present findings to the class ● Memorize lines for a play ● Skim for facts/details/dates about an event ● Retell in your own words/paraphrase </td> <td colspan="2"> <ul style="list-style-type: none"> ● Complete basic /routine calculation tasks (e.g., addition, subtraction, division, etc.) ● Locate or retrieve information in verbatim form to answer a question ● Recognize or identify features, objects, or steps that don't vary greatly in form (e.g., recognizing features of basic tools or shapes, properties of materials or objects) ● Edit applying a standard set of conventions and/or criteria that should eventually be automated (e.g., applying rules for punctuation, grammar, spelling) </td> </tr> </table>			<ul style="list-style-type: none"> ● Use step-by-step directions to make a model, plant seeds, bake a cake, etc. ● Describe an event, character, setting, etc. in a story ● Write a list of keywords you know about... ● Recite/recall a fact or date related to ... ● Write/retell in your own words ... ● Cut out, draw, or match a picture that illustrates an event, process, or story ● Report or present findings to the class ● Memorize lines for a play ● Skim for facts/details/dates about an event ● Retell in your own words/paraphrase 	<ul style="list-style-type: none"> ● Complete basic /routine calculation tasks (e.g., addition, subtraction, division, etc.) ● Locate or retrieve information in verbatim form to answer a question ● Recognize or identify features, objects, or steps that don't vary greatly in form (e.g., recognizing features of basic tools or shapes, properties of materials or objects) ● Edit applying a standard set of conventions and/or criteria that should eventually be automated (e.g., applying rules for punctuation, grammar, spelling) 	
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<ul style="list-style-type: none"> • Locate information found in a map, chart, tables, graph, diagram, caption • Use a dictionary, glossary, or thesaurus to find word meanings • Make conversions between metric and customary units • Recall, restate, remember, or recognize facts, terms, properties heard, viewed, or read 	<ul style="list-style-type: none"> • Complete measurement tasks (e.g., use a ruler to measure length; thermometer or temperature probe to measure temperature) • Memorize and recognize formulas and algorithms • Use a formula where at least one of the unknowns are provided (e. g., area formula, $y=mx + b$)
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DOK 1 Potential Questions

<ul style="list-style-type: none"> • Can you recall ____? • When did ____ happen? • Who was ____? • How can you recognize ____? • What is ____? • How can you find the meaning of ____? • Can you recall ____? 	<ul style="list-style-type: none"> • How would you write ____? • What might you include on a list about ____? • Who discovered ____? • What is the formula for ____? • Can you identify ____? • How would you describe ____? • Can you select ____?
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DOK 1 Content Specific aligned to Bloom's Taxonomy (source: Hess)

Revised Bloom's Taxonomy	ELA and Social Studies	Math and Science
REMEMBER Retrieve knowledge from long-term memory, recognize, recall, locate, identify	<ul style="list-style-type: none"> • Recall, recognize, or locate basic facts, details, events, or ideas explicit in texts • Read words orally in connected text with fluency & accuracy 	<ul style="list-style-type: none"> • Recall, observe & recognize facts, principles, properties • Recall/identify conversions among representations or numbers (e.g., customary and metric measures)
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	<ul style="list-style-type: none"> • Identify or describe literary elements (e.g., characters, setting, problem-solution, conflict, Select appropriate words when intended meaning/definition is clearly evident • Describe/explain who, what where, when, or how • Define/describe facts, details, terms, principles • Write simple sentences 	<ul style="list-style-type: none"> • Evaluate an expression • Locate points on a grid or number on a number line • Solve a one-step problem • Represent math relationships in words, pictures, or symbols • Read, write, compare decimals in scientific notation
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	<ul style="list-style-type: none"> • Use language structure (pre/suffix) or word relationships (synonym/antonym) to determine meaning of words 	<ul style="list-style-type: none"> • Follow simple procedures (e.g., recipe-type directions) • Calculate, measure, apply a rule (e.g., rounding) • Apply algorithm or formula (e.g., area, perimeter)

	<ul style="list-style-type: none"> • Apply rules or resources to edit spelling, grammar, punctuation, conventions, word use • Apply basic formats for documenting sources 	<ul style="list-style-type: none"> • Solve linear equations • Make conversions among representations or numbers, or within and between customary and metric measures
<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"> • Identify whether specific information is contained in graphic representations • (e.g. map, chart, table, graph, T-chart, diagram) or text features (e.g., headings, subheadings, captions) • Decide which text structure is appropriate to audience and purpose 	<ul style="list-style-type: none"> • Retrieve information from a table or graph to answer a question • Identify whether specific information is contained in graphic representations (e.g. table graph, T-chart, diagram) • Identify a pattern/trend
<p>EVALUATE Make judgments based on criteria, check, detect, inconsistencies, or fallacies, judge, critique</p>	Not applicable	Not applicable
<p>CREATE Reorganize elements into new patterns/structures, generate, hypothesize, design, plan, produce</p>	<ul style="list-style-type: none"> • Brainstorm ideas, concepts, or perspectives related to a topic or concept. 	<ul style="list-style-type: none"> • Brainstorm ideas, concepts, or terms related to a topic

AZ Math Essential Standard: 3.OA.D.3

Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Utilize understanding of the Order of Operations when there are no parentheses.

DOK 1 question:

If you have 5 apples and then receive 3 more, how many do you have in total? Write an equation to show this.

AZ Reading Essential Standard: 7.RI.1

Cite several pieces of textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.

DOK 1 question:

Identify a quote from the text that explicitly states the main idea.



DOK 2 Skill/Concept

Level 2 includes the engagement of mental processing beyond recalling, reproducing, or locating an answer. This level generally requires students to compare or differentiate among people, places, events, objects, text types, etc.; apply multiple concepts when responding; classify or sort items into meaningful categories; describe or explain relationships, such as cause and effect, character relationships; and provide and explain examples and non-examples. A Level 2 “describe or explain” task requires students to go beyond a basic description or definition to predict a possible result or explain “why” something might happen. The learner makes use of information provided in context to determine intended word meanings, which tools or approach is appropriate to find a solution (e.g., in a math word problem), or what characteristics to pay attention to when making observations.

At this level, students are asked to transform/process target knowledge before responding. Example mental processes that often denote this particular level include: summarize, estimate, organize, classify, extend, and make basic inferences

DOK 2 Verb Clues

Infer, categorize, organize and display, compare-contrast, modify, predict, interpret, distinguish, estimate, extend patterns, interpret, use context clues, make observations, summarize, translate from table to graph, classify, show cause/ effect, relate, edit for clarity

DOK 2 Teacher Role

Questions to differentiate, infer, or check conceptual understanding, models, organizes/reorganizes, explores possible options or connections, provides examples and non-examples

DOK 2 Student Role

Solves routine problems/tasks involving multiple decision points and concepts, constructs models to show relationships, demonstrates use of conceptual knowledge, compiles and organizes, illustrates/explains with examples or models, examines

DOK 2 Possible Products

- Captioned Photos Summary
- Graphic organizer
- Survey developing

<ul style="list-style-type: none"> ● Timeline ● Demonstration ● Presentation interview ● Diary Entry 	<ul style="list-style-type: none"> ● Reverse-Engineering ● Cracking Codes Online ● Relationship Mind Maps ● Blog Commenting 	<ul style="list-style-type: none"> ● Spreadsheet ● Science logs
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DOK 2 Potential Activities

<ul style="list-style-type: none"> ● Sequence a key chain of events and supporting details using a timeline, cartoon strip, outline or flow chart ● Write a summary /informational report or develop an outline of central ideas and supporting details ● Develop a concept map or diagram showing a process or describing relationships about a topic of study ● Explain a series of steps used to find a solution ● Construct a model to demonstrate how it looks or works ● Make a diorama to illustrate/explain an event ● Write a diary/blog entry for a character or historical figure ● Make a captioned scrapbook or photo essay about the area of study ● Make a topographic map using data provided/data collected ● Make a puzzle or game about the topic ● Explain the meaning of a concept using words, objects, and/or visuals ● Demonstrate how to perform a particular task 	<ul style="list-style-type: none"> ● Complete complex recognition tasks that involve recognizing concepts and processes that may vary in how they “appear” ● Complex calculation tasks involving decision points (e.g., standard deviation) ● Identify appropriate strategies or sources for conducting research projects that involve locating, collecting, organizing and displaying, and summarizing information ● Create a questionnaire or survey to answer a question ● Conduct measurement or observational tasks that involve organizing the data collected into basic presentation forms such as a table, graph, Venn diagram, etc. ● Participate in a simulation in order to understand and describe differing perspectives
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DOK 2 Potential Questions

<ul style="list-style-type: none"> ● How or why would you use ...? ● What examples/non-examples can you find to ...? ● How would you organize_ to show ...? ● How could you show your understanding of ..? ● What approach/tools would you use to ...? ● How would you apply what you learned to develop ... ? ● What other way could you solve/find out...? 	<ul style="list-style-type: none"> ● What is your prediction ... and why? ● How would you organize these facts/observations? ● If you changed these elements ... what would/might happen ? ● What facts are relevant to show ...? ● What questions would you ask in an interview /survey about ...? ● What question is being asked in this problem?
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<ul style="list-style-type: none"> • Can you explain how ___ affected ___? • How would you apply what you learned to develop ___? • How would you compare ___? • Contrast ___? • How would you classify ___? • How are ___ alike? Different? • How would you classify the type of ___? • What do you notice about ___? 	<ul style="list-style-type: none"> • What can you say about ___? • How would you summarize ___? • How would you summarize ___? • What steps are needed to edit ___? • When would you use an outline to ___? • How would you estimate ___? • How could you organize ___? • What would you use to classify ___?
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DOK 2 Content Specific aligned to Bloom's Taxonomy (source: Hess)

Revised Bloom's Taxonomy	ELA and Social Studies	Math and Science
REMEMBER Retrieve knowledge from long-term memory, recognize, recall, locate, identify	Not Applicable	Not Applicable
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	<ul style="list-style-type: none"> • Specify, explain, show relationships, explain why, cause-effect • Give non-examples/examples • Summarize results, concepts, ideas in one text or one data set • Make basic inferences or logical predictions from data or texts • Identify main ideas or accurate generalizations of texts or issues • Locate information to support explicit-implicit central idea 	<ul style="list-style-type: none"> • Specify and explain relationships (e.g., non-examples/examples, cause-effect) • Make and record observations • Explain steps followed • Summarize results or concepts • Make basic inferences or logical predictions from data/observations • Use models (e.g., diagrams to represent or explain mathematical concepts) • Make and explain estimate
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	<ul style="list-style-type: none"> • Use context to identify the meaning of words/phrases • Obtain and interpret information using text features • Develop a text that may be limited to one paragraph • Apply simple organizational structures (paragraph, sentence types) in writing 	<ul style="list-style-type: none"> • Select a procedure according to criteria and perform it • Solve routine problem applying multiple concepts or decision points • Retrieve information from a table, graph, or figure and use it to solve a problem requiring multiple steps • Translate between tables, graphs, words, and symbolic notations (e.g., graph data from a table) • Construct models given criteria

<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"> • Categorize/compare library elements, terms, facts/details, events • Identify use of literary devices • Analyze format, organization & internal text structure (e.g., signal words, transitions, semantic cues) of different texts • Distinguish relevant-irrelevant information, fact/opinion • Identify characteristic text features; distinguish between texts, genres 	<ul style="list-style-type: none"> • Categorize, classify materials, data, figures based characteristics • Organize or order data • Compare/contrast figures or data • Select appropriate graph and organize & display data • Interpret data from a simple graph • Extend a pattern
<p>EVALUATE Make judgments based on criteria, check, detect, judge, inconsistencies, or fallacies, judge, critique</p>	<p>Not applicable</p>	<p>Not applicable</p>
<p>CREATE Reorganize elements into new patterns/structures, generate, hypothesize, design, plan, produce</p>	<ul style="list-style-type: none"> • Generate conjectures or hypotheses based on observations or prior knowledge and experience 	<ul style="list-style-type: none"> • Generate conjectures or hypotheses based on observations or prior knowledge and experience

AZ Math Essential Standard: 3.OA.D.3

Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Utilize understanding of the Order of Operations when there are no parentheses.

DOK 2 question:

Mercedes has 12 cookies. She gives 4 cookies to her brother and then eats half of the remaining cookies. How many cookies does she have left? Write equations to represent each step.

AZ Reading Essential Standard: 7.RI.1

Cite several pieces of textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.

DOK 2 question:

Summarize how the author uses textual evidence to support their main argument.

DOK 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.

<p>DOK 3 Verb Clues 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</p>					
<p>DOK 3 Teacher Role 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</p>	<p>DOK 3 Student Role 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</p>				
<p>DOK 3 Possible Products</p> <table border="0" style="width: 100%;"> <tr> <td style="vertical-align: top; width: 33%;"> <ul style="list-style-type: none"> ● Complex Graph ● Set up a database ● Conduct or critique a designed investigation ● Video cast or podcast ● Analyze survey result </td> <td style="vertical-align: top; width: 33%;"> <ul style="list-style-type: none"> ● Debate from a given perspective ● Develop storyboard for film or cartoon animation ● Multi-paragraph essay or short story ● Design a webpage </td> <td style="vertical-align: top; width: 33%;"> <ul style="list-style-type: none"> ● Literary critique ● Play, book, music, or movie review ● Informational report with several subtopics ● Fact-based argument (Is this criticism supported by the historical facts) </td> </tr> </table>			<ul style="list-style-type: none"> ● Complex Graph ● Set up a database ● Conduct or critique a designed investigation ● Video cast or podcast ● Analyze survey result 	<ul style="list-style-type: none"> ● Debate from a given perspective ● Develop storyboard for film or cartoon animation ● Multi-paragraph essay or short story ● Design a webpage 	<ul style="list-style-type: none"> ● Literary critique ● Play, book, music, or movie review ● Informational report with several subtopics ● Fact-based argument (Is this criticism supported by the historical facts)
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<ul style="list-style-type: none"> ● Participate on a panel to discuss differing viewpoints on... 	<ul style="list-style-type: none"> ● Explain and apply abstract terms and concepts to real-world situations
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DOK 3 Potential Questions	
<ul style="list-style-type: none"> ● 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 ...? ● How is ___ related to ___? ● What conclusions can you draw ___? ● How would you adapt___ to create a different___? ● How would you test___? ● Can you predict the outcome if ___? ● What is the best answer? Why? ● What conclusion can be drawn from these three texts? ● What is your interpretation of this text? Support your rationale. 	<ul style="list-style-type: none"> ● 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 ... ? ● How would you describe the sequence of___? ● What facts would you select to support___? ● Can you elaborate on the reason___? ● What would happen if___? ● Can you formulate a theory for___? ● How would you test___? ● Can you elaborate on the reason___?

DOK 3 Content Specific aligned to Bloom's Taxonomy (source: Hess)

Revised Bloom's Taxonomy	ELA and Social Studies	Math and Science
REMEMBER Retrieve knowledge from long-term memory, recognize, recall, locate, identify	Not Applicable	Not Applicable
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	<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 	<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"> ● Apply a concept in a new context ● Revise final draft for meaning or progression of ideas ● Apply internal consistency of text organization and structure composing a full composition ● Apply word choice, point of view, style to impact readers'/viewers' interpretation of a text 	<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 (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?) 	<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 conjectures ● Describe, compare, and contrast solution methods ● Verify reasonableness of results ● Justify or critique conclusions drawn 	<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, 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 	<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

AZ Math Essential Standard: 3.OA.D.3

Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Utilize understanding of the Order of Operations when there are no parentheses.

DOK 3 question:

A store sells pencils in packs of 5 and erasers in packs of 8. Jose buys 2 pencil packs and 3 eraser packs. He then uses 7 pencils. How many pencils and erasers does Jose have remaining. Write equations for each step.

AZ Reading Essential Standard: 7.RI.1

Cite several pieces of textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.

DOK 3 question:

Assess how well the author's use of textual evidence supports the main idea. Provide specific examples from the text.

DOK 4 Extended Thinking

Curricular elements assigned to this level demand extended and integrated use of higher order thinking processes such as critical and creative-productive thinking, reflection, and adjustment of plans over time. Students are engaged in conducting multi-faceted investigations to solve real-world problems with unpredictable solutions. Employing and sustaining strategic thinking processes over a longer period of time to solve the problem or produce an authentic product is a key feature of curricular objectives assigned to DOK 4. Key aspects that denote this particular level typically include authentic problems and audiences, and collaboration within a project-based setting.

DOK 4 Verb Clues

Initiate, design and conduct, collaborate, research, synthesize, self-monitor, critique, produce/present

DOK 4 Teacher Role

Questions to extend thinking and broaden perspectives; facilitates teaming, collaboration, self-evaluation

DOK 4 Student Role

Designs, takes risks, research, synthesizing multiple resources, collaborates, plans, organizes, and modifies, creates concrete tangible products

DOK 4 Possible Products

- | | | |
|--|---|---|
| <ul style="list-style-type: none"> • Short Film • Agency presentation • Research report | <ul style="list-style-type: none"> • Play • Video Game • Documentary | <ul style="list-style-type: none"> • Newspaper or series of articles • Multi-Media product • Anthology of original writing, art, music, etc. |
|--|---|---|

DOK 4 Potential Activities

- | | |
|--|---|
| <ul style="list-style-type: none"> • Applying information from more than one discipline to solve ill-defined problems in novel or real-world situations • Research tasks that involve generating questions, and formulating and testing hypotheses | <ul style="list-style-type: none"> • Tasks that involve drawing evidence from multiple sources to support solutions/conclusions • Conducting an internship in industry where students are faced with real-world, unpredictable problems |
|--|---|

<ul style="list-style-type: none"> • Tasks that require making multiple strategic and procedural decisions as new information is processed • Tasks that require multiple roles and collaboration and coordination with others (e.g., script writing, camera work, editing, and acting/talent) 	<ul style="list-style-type: none"> • Organizing/conducting a community service project or school-based event
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DOK 4 Potential Questions

<ul style="list-style-type: none"> • What changes would you make to solve or address this major problem/ or issue...? • How would you improve upon this invention or innovation? • Can you propose an alternative solution to...? • What could be done to minimize (maximize) ...? • In what way would you design or redesign ... and why ? • What evidence would you cite to defend the actions of ...? • How would you evaluate ... ? • How would you prioritize criteria for making this (local zoning) decision ... and why? • How would you evaluate the works by this author over time? • Can you formulate and test a conjecture for...? • What information can you gather to support your idea about___? • <i>DOK 4 would most likely be the writing of a research paper or applying information from one text to another text o develop a persuasive argument.</i> • <i>DOK 4 requires time for extended thinking</i> 	<ul style="list-style-type: none"> • Do you agree with the actions ...? with the outcomes ... ? with the decision to ...? • How would you prove ...? disprove ...? • Can you assess the value or importance of ...? • What information would you use to support a differing perspective ... ? • What can be learned about this time in history from reading and analyzing various cultural, political, and social perspectives? • Can you predict the potential benefits and drawbacks if this law does/does not pass ? • Can you construct a model that would change ...? • Can you think of an original way to apply... • Write a thesis, drawing conclusions from multiple sources. • Design and conduct an experiment. • Gather information to develop alternative explanations for the results of an experiment. • Write a research paper on a topic. • Apply information from one text to another text to develop a persuasive argument.
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DOK 4 Content Specific aligned to Bloom's Taxonomy (source: Hess)

Revised Bloom's Taxonomy	ELA and Social Studies	Math and Science
REMEMBER Retrieve knowledge from long-term memory, recognize, recall, locate, identify	Not Applicable	Not Applicable

<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 multiple sources to elaborate on how concepts or ideas specifically draw from other content domains or differing concepts (e.g., research paper, arguments of policy: should this law be passed? What will be the impact of this change?) ● Develop generalizations about the results obtained or strategies used and apply them to a new problem or contextual scenario 	<ul style="list-style-type: none"> ● Relate mathematical or scientific concepts to other content areas, other domains, or other concepts ● Develop generalizations of the results obtained and the strategies used (from investigation or readings) and apply them to new problem situations
<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"> ● Select or devise an approach among many alternatives to research and present a novel problem or issue ● Illustrate how multiple themes (e.g., historical, geographic, social) may be interrelated within a text or topic 	<ul style="list-style-type: none"> ● Select or devise an approach among many alternatives to solve a problem ● Conduct a project that specifies a problem, identifies solution paths, solves the problem, and reports results
<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 multiple sources of evidence, or multiple works by the same author, or across genres, or time periods ● Analyze complex/abstract themes, perspectives, concepts ● Gather, analyze, and organize multiple information sources ● Compare and contrast conflicting judgments or policies (e.g., Supreme Court decisions) 	<ul style="list-style-type: none"> ● Analyze multiple sources of evidence ● Analyze complex/abstract themes ● Gather, analyze, and evaluate information
<p>EVALUATE Make judgments based on criteria, check, detect, inconsistencies, or fallacies, judge, critique</p>	<ul style="list-style-type: none"> ● Evaluate relevancy, accuracy, and completeness of information across multiple sources ● Apply understanding in a novel way, provide argument or justification for the application ● Critique the historical impact (e.g., policy, writings, discoveries, etc.) 	<ul style="list-style-type: none"> ● Gather, analyze, & evaluate information in order to draw conclusions ● Apply understanding in a novel way, provide argument or justification for the application
<p>CREATE Reorganize elements into new patterns/structures, generate, hypothesize, design, plan, produce</p>	<ul style="list-style-type: none"> ● Synthesize information across multiple sources or texts in order to articulate a new voice, alternate theme, new knowledge or nuanced perspective 	<ul style="list-style-type: none"> ● Synthesize information across multiple sources or texts ● Design a mathematical model to inform and solve a practical or abstract situation

AZ Math Essential Standard: 3.OA.D.3

Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Utilize understanding of the Order of Operations when there are no parentheses.

DOK 4 question:

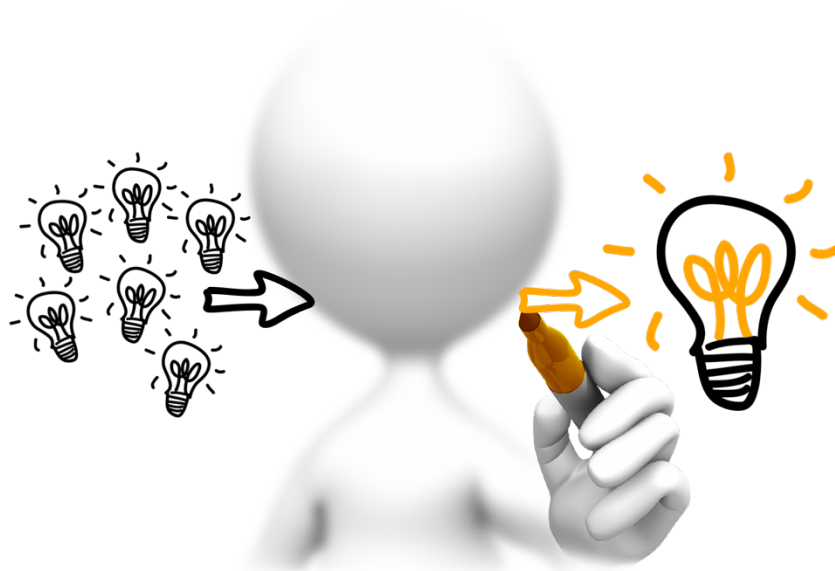
A bakery sells muffins for \$2 each. A customer buys 3 muffins and a cake. The total cost is \$12. How much does 1 cake cost? Write equations to represent the problem.

AZ Reading Essential Standard: 7.RI.1

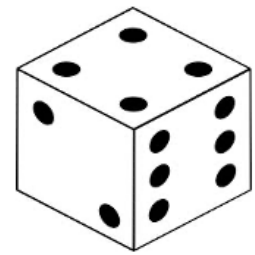
Cite several pieces of textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.

DOK 4 question:

Critique the effectiveness of inferences you have made from the text. Are they well-supported by the textual evidence?



LET'S CUBE IT!



TEAM NAME: _____

TOPIC: _____

1. DESCRIBE IT: *What is it?*

WORDS...	IMAGE...
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2. EXPLAIN IT: *HOW WOULD YOU MAKE IT CLEARER FOR SOMEONE TO UNDERSTAND IT?*

WORDS...	IMAGES...
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3. APPLY IT: *WHAT DOES IT MAKE YOU THINK OF? WHAT CAN YOU DO WITH IT?*

WORDS...	IMAGES...
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4. ANALYZE IT: *WHAT ARE ITS ESSENTIAL PARTS? HOW IS IT MADE? WHAT IS IT COMPOSED OF?*

WORDS...	IMAGES...
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5. JUDGE IT: *ARGUE FOR OR AGAINST IT. SUPPORT YOUR THINKING.*

WORDS...	IMAGES...
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6. CREATE WITH IT: *WHAT IS SOMETHING YOU CAN DO WITH IT?*

WORDS...	IMAGES...
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