

SUBJECT	SUMMARY DEFINITIONS FOR WEBB'S DEPTH OF KNOWLEDGE (DOK)			
	DOK 1	DOK 2	DOK 3	DOK 4
Social Studies	<p>Requires students to recall facts (who, what, when, and where), terms, concepts, trends, generalizations, and theories. May require students to recognize or identify specific information contained in maps, charts, tables, graphs, drawings, or other graphics.</p> <p>Examples:</p> <ul style="list-style-type: none"> Recall or recognize an event, map, or document. Identify key figures in a particular context. Recognize different types of sources. Identify the roles and responsibilities of individuals, groups, parties and institutions. Explain the meaning of a key term, such as <i>unemployment</i>. 	<p>Requires students to explain, compare, and/or contrast people, places, events, and concepts; give examples, classify or sort items into meaningful categories; describe or explain issues, problems, patterns, reasons, causes, effects, significance, impact, costs, benefits, relationships, points of view, and/or processes.</p> <p>Examples:</p> <ul style="list-style-type: none"> Describe the causes/effects of particular events. Identify patterns in events or behavior. Categorize events or figures into meaningful groupings. Draw connections between and among concepts and ideas and/or parts of a system. 	<p>Requires students to use social science practices to evaluate events and decisions from divergent perspectives; justify arguments through deliberation and evidence. May involve making connections across time and place; modeling relationships, identifying assumptions, and determining probable consequences of different courses of action.</p> <p>Examples:</p> <ul style="list-style-type: none"> Analyze how changes have influenced people or places. Construct questions suitable for inquiry. Use evidence to develop and/or critique claims and counter-claims. Propose and/or evaluate solutions to problems. Gather and evaluate sources of information for credibility and other factors. Analyze factors that shape perspectives. 	<p>Requires abstract and involved reasoning over an extended time (days, weeks). A project that requires extended time but only repetitive and lower-DOK tasks is not DOK 4. Involves planning, developing, and revising. Involves authentic use of social science constructs to investigate a historical, political, cultural, economic, and/or geographic phenomenon, trend, event, and/or era. I</p> <p>Examples:</p> <ul style="list-style-type: none"> Use evidence and sound reasoning to develop explanations and arguments, propose solutions, or evaluate and communicate the causes of problems at different scales. Evaluate political, social, historical, cultural, economic, and/or geographical themes and how they interrelate. For example, build and communicate an argument about the economic consequences of war on the U.S. economy in the 21st century.

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Mathematics	<p>Requires students to recall or observe facts, definitions, and terms. Includes simple one-step procedures and also well-defined multi-step procedures. Includes computing simple algorithms (e.g., sum, quotient).</p> <p>Examples:</p> <ul style="list-style-type: none"> Recall or recognize a fact, term, or property. Represent in typical words, pictures, or symbols a common math object or relationship. Perform a routine procedure such as measuring. At higher grades, use a common procedure to solve a quadratic equation or a system of two linear equations with two unknowns. 	<p>Requires mental processing beyond a habitual response; decision-making about how to approach a problem. May require students to compare, classify, or organize data. Deriving a solution requires underlying conceptual understanding.</p> <p>Examples:</p> <ul style="list-style-type: none"> Specify and explain relationships between facts, terms, properties, or operations. Use prior knowledge and information provided to generate reasonable estimates. Use visualization skills to rotate or transform a figure. Use concepts to solve routine problems that require consideration of necessary and relevant contexts. 	<p>Requires reasoning, planning, or use of evidence to solve a non-routine problem. May require drawing a conjecture or restructuring of problems. Involves forming original (to the student) evidence-based conclusions from observations and developing logical arguments for concepts.</p> <p>Examples:</p> <ul style="list-style-type: none"> Formulate an original problem, given a particular situation. Produce a sound and defensible mathematical argument. Devise an original proof to a common theorem. Critique a mathematical argument. Propose a mathematical model to represent an abstract or involved situation or relationship. 	<p>Requires abstract and involved reasoning over an extended time (days, weeks). A project that requires extended time but only repetitive and lower-DOK tasks is not DOK 4. Involves planning, developing, and revising. May involve meaningful restructuring of data, establishing and evaluating criteria to solve problems.</p> <p>Examples:</p> <ul style="list-style-type: none"> Develop, refine, and use a mathematical model to illuminate a problem, situation. Conduct a project that specifies a problem, identifies solution paths, solves the problem, and reports results. Design, test, and revise a mathematical model to inform and solve a practical or abstract situation.

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Science	<p>Requires students to recall or reproduce facts, definitions, or processes. Involves rote responses, use of a well-known formula, or following a set procedure.</p> <p>Examples:</p> <ul style="list-style-type: none"> Recall or recognize a fact, term, structure, or property. Reproduce in words or diagrams a typical or routinely used representation or model of a scientific idea or relationship. Provide or recognize a standard scientific representation for common phenomena or relationships. Perform a (grade level-appropriate) routine procedure, such as measuring length or completing a basic Punnett square. 	<p>Requires knowledge-in-use rather than in isolation of purpose or context. Students must apply conceptual understanding and make some decisions as to how to approach a task or make sense of a phenomenon.</p> <p>Examples:</p> <ul style="list-style-type: none"> Specify, explain, and/or predict the relationship between ideas, concepts, properties, or variables, drawing meaning from observations and citing evidence. Engage in sense-making in the context of a fairly routine phenomenon or problem, given data and conditions. Organize and represent data to show relevant patterns or relationships. Interpret or explain phenomena in terms of science concepts. 	<p>Requires students to justify scientific arguments with appropriate evidence. Involves aspects of authentic experimental or engineering design processes. Involves using science and engineering practices to solve non-routine problems; abstract sense-making.</p> <p>Examples:</p> <ul style="list-style-type: none"> Identify appropriate research questions and/or design brief investigations to help make sense of a phenomenon or problem. Develop, critically analyze, and/or use a model of a non-routine phenomenon or concept. Evaluate alternative design solutions to an engineering problem. Analyze data to inform revisions to a proposed process or system. 	<p>Requires abstract and involved reasoning over an extended time (days, weeks). A project that requires extended time but only repetitive and lower-DOK tasks is not DOK 4. Involves planning, developing, and revising. Likely involves ongoing, non-linear, and interdependent components of authentic science inquiry and engineering design.</p> <p>Examples:</p> <ul style="list-style-type: none"> Plan and conduct an authentic scientific investigation to answer scientific questions related to real-world phenomena. Analyze the results of multiple studies on a particular science topic or design solution to form an original conclusion about the subject. Use trials of a scientific investigation or design solution to evaluate strengths and weaknesses of an experimental design and develop a revised and more optimized approach.

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English Language Arts	<p>Requires students to recall, observe, question, or represent facts, follow conventions of standard English, and demonstrate other simple or routine skills. Requires only surface understanding of text, often verbatim recall or slight paraphrasing.</p> <p>Examples:</p> <ul style="list-style-type: none"> • Support ideas by reference to verbatim (or only slightly paraphrased) details in text. • Use a dictionary to find meanings of words. • Recognize figurative language in a passage. • Identify correct spelling or meaning of words. 	<p>Requires drawing meaning from text. Involves both comprehension and subsequent processing of text or portions of text to explain and connect ideas. May require ordering and classifying text as well as identifying patterns, relationships, and main points.</p> <p>Examples:</p> <ul style="list-style-type: none"> • Use context to infer meanings of unfamiliar words. • Predict a logical outcome. • Identify and summarize main points. • Compose accurate summaries of the major events in a narrative. • Make direct inferences, for example about simple cause and effect relationships. 	<p>Requires students to go behind or beyond the text. Involves deep inferencing, prediction, and elaboration. Requires students to support hypothetical positions using prior knowledge and evidence and to manipulate abstract themes across passages.</p> <p>Examples:</p> <ul style="list-style-type: none"> • Determine effect of author's purpose on text elements. • Synthesize information from multiple sources to address a particular topic. • Critically analyze a passage. • Compose focused, organized, coherent, purposeful prose. • Evaluate the internal logic or credibility of a message. 	<p>Requires abstract and involved reasoning over an extended time (days, weeks). A project that requires extended time but only repetitive and lower-DOK tasks is not DOK 4. Involves planning, developing, and revising. May require generating hypotheses and interweaving analyses and connections among texts.</p> <p>Examples:</p> <ul style="list-style-type: none"> • Analyze and synthesize information from multiple sources to address an original research question. • Develop a thesis to compare how different texts address a theme across cultures and/or time periods. • Create and revise compositions including narratives, arguments, and explanatory texts.

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