WebbAlign®

WCEPS
WISCONSIN CENTER for EDUCATION PRODUCTS & SERVICES

SUBJECT	SUMMARY DEFINITIONS OF DEPTH OF KNOWLEDGE (DOK)			
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4
Mathematics	Requires students to recall or observe facts, definitions, and terms. Includes simple one-step procedures. Includes computing simple algorithms (e.g., sum, quotient). ***Examples:*** • Recall or recognize a fact, term, or property. • Represent in words, pictures, or symbols a math object or relationship • Perform a routine procedure, such as measuring • At higher grades, solve a quadratic equation or a system of two linear equations with two unknowns	Requires students to make decisions on how to approach a problem. Requires students to compare, classify, organize, estimate, or order data. Often involves procedures with two or more steps. ***Examples:*** • Specify and explain relationships between facts, terms, properties, or operations • Select procedure according to criteria and perform it • Use concepts to solve routine multiple-step problems.	Requires reasoning, planning, or use of evidence to solve a problem or algorithm. May involve an activity with more than one possible answer. Requires conjecture or restructuring of problems. Involves drawing conclusions from observations, citing evidence and developing logical arguments for concepts. Uses concepts to solve non-routine problems. ***Examples:*** • Formulate original problem, given situation • Formulate mathematical model for complex situation • Produce a sound and valid mathematical argument • Devise an original proof • Critique a mathematical argument	Requires complexity at least at the level of DOK 3 but also an extended time to complete the task. A project that requires extended time but repetitive or lower-DOK tasks is not at Level 4. Requires complex reasoning, planning, developing, and thinking. May require students to make several connections and apply one approach among many to solve the problem. May involve complex restructuring of data, establishing and evaluating criteria to solve problems. ***Examples:*** • Apply 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 a mathematical model to inform and solve a practical or abstract situation

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