Teaching Lab

Co-Craft Questions Guide

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CRITERIA	PLAN	APPLY	OPTIMIZE	EXTEND
MATHEMATICAL LANGUAGE				
The teacher leads students to progress to the mathematical learning goal through mathematical language.	The teacher plans to identify a grade-level task worthy of cultivating conversation and maximizing meta- awareness, describe how conversation and meta-awareness contribute directly to the mathematical learning goal, and generate interest in using mathematical language.	The teacher leads students touse mathematical vocabulary required by the mathematical learning goal and make connections between mathematical vocabulary and the task context.	The teacher leads students to use mathematical vocabulary required by the mathematical learning goal and make connec-tions between mathematical vocabulary and the task context; **AND** justify how their questions are mathematical.	The teacher leads students to use mathematical vocabulary required by the mathematical learning goal and make connections between mathematical vocabulary and the task context; **AND** justify how their questions are mathematical; **AND** increase the use of mathematical vocabulary throughout the lesson.
QUESTIONING				
The teacher leads students to deeply understand a mathematical task through producing and analyzing questions.	The teacher plans a task-aligned "hook," time for students to write questions, time for students to compare questions, the task reveal and anticipated student questions, and methods to generate interest in problem-posing as opposed to answer-getting.	The teacher leads students to propose, review, and compare mathematical questions in response to a "hook" and to understand what the actual task question requires of them.	The teacher leads students to propose, review, and compare mathematical questions in response to a "hook" and to understand what the actual task question requires of them; **AND** reflect on how the actual question compares to the proposed questions.	The teacher leads students to propose, review, and compare mathematical questions in response to a "hook" and to understand what the actual task question requires of them; **AND** reflect on how the actual question compares to the proposed questions; **AND** create an entirely new task(s) using a proposed question(s) tosolve.
COGNITION				
The teacher leads students to cognitive engagement through cultivated conversation and meta-awareness.	The teacher plans opportunities and supports for constructive mathematical conversations (e.g., pairs, groups, and whole class) and time to strengthen the "meta-"connections and distinc-tions between mathematical ideas, reasoning, and language.	The teacher leads students to internalize a clear and compelling purpose for conversation, mutually share ideas about questions, and focus on how to improve communication and/or reasoning about mathematical concepts.	The teacher leads students to internalize a clear and compelling purpose for conversation, mutually share ideas about questions, and focus on how to improve communication and/or reasoning about mathematical concepts; **AND** clarify their own reasoning and that of others.	The teacher leads students to internalize a clear and compelling purpose for conversation, mutually share ideas about questions, and focus on how to improve communication and/or reasoning about mathematical concepts; **AND** clarify their own reasoning and that of others; **AND** reinforce a culture that values introspection and communication effort.

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