WHAT IS STEM EDUCATION?

	STEM IS...	STEM IS NOT...
1	connecting science, technology, engineering, and mathematics to real-world phenomena	a "siloed" approach where subjects like biology, programming, electrical engineering, and algebra are each taught separately as disconnected content
2	appropriate for all students, across all grade levels	appropriate only for high-performing secondary students
3	science: the testing and subsequent explanation of real-world phenomena	science: a list of scientific terms and disconnected/irrelevant facts
4	technology: any tool that expands human abilities and/or solves problems (e.g., scissors)	technology: electronics or other digital tools (e.g., a tablet)
5	engineering: a process for developing solutions to real-world problems	engineering: related only to coding or robots
6	mathematics: a common language to measure, describe, and identify patterns in what we observe	mathematics: addition and subtraction (plug-and-chug problem solving)
7	a storyline of connected concepts that build ideas about phenomena in the real world	discrete, disconnected learning objectives
8	content standards taught through relevant, purposeful, project-based learning	content standards taught through textbooks, lecture, and worksheets
9	teacher-facilitated constructivist learning	teacher-driven direct instruction
10	provides explanations and options for an evolving career path	provides an academic pathway for naturally talented students
11	discovering or creating solutions to real-world problems	identifying prescribed correct answers from lectures or text material
12	discourse and argumentation, giving students voice and choice	only one answer
13	assessed through rubrics and personalized feedback	assessed through multiple choice and single-word responses
14	creativity and innovative thinking	conformity and routine

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