

Authentic Problem Solving How and Why to Provide Context to Mathematical Content

"The great thing about giving students tasks in the form of a problem is that problems lead to questions. Students learn to ask the right questions because I don't give them anything more than a rough outline of the problem to be solved. And those questions lead to ownership of the task by the students. And that ownership leads to independent thought, which is our goal"

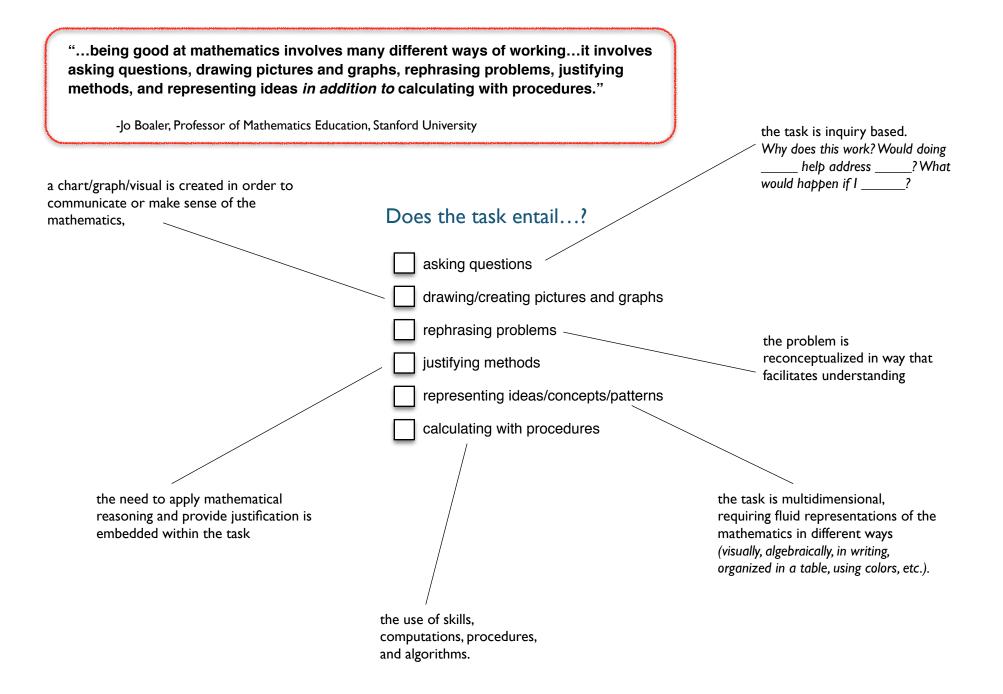
-Ted McCain, Teaching for Tomorrow: Teaching Content and Problem-Solving Skills

This session considers the power of context to foster real-world thinking skills, deep learning, continuing motivation, and long-term recall.

Guiding questions:

- How does placing course content in the context of a real-world scenario help make the mathematical content and processes enticing, meaningful, and memorable?
- How does applying mathematical learning to real-life situations *now* help students develop the skill of transferring such learning to the problem-solving, projects, and tests they will face *in their future*?

Why move from "telling" to realistic problem-solving, sense making, and discovery?



Rich mathematical tasks

workspace / draw space

Planning guide for:

	Student Misconceptions	Guiding questions to support students
How would I figure this out? (method/steps)	-	
	-	
-	-	
-	-	
	-	
What information do I need to know?		
How can I get the information I don't have?		
M6.1.4		