

REAL Practical Module: Facilitating Student Problem Solving

(using the [5 Es Planning Template](#))

Desired Outcomes	
Learning Target	Teachers will be able to construct a problem solving experience to engage students in the learning process.
Task	Participants will apply their learning to develop an opportunity for students to solve a challenging problem.
Tentative Timing	15-30 minutes
Instructional Plan	
Engage (2 minutes)	Consider the following questions: - In what ways does student problem-solving play a role in your classroom? - In what ways do you provide instruction about the process of solving problems? - How do you provide feedback to your students about their problem-solving skills?
Explore (3 minutes)	Do a quick Google search for “Most Important Career Skills” and scroll through some of the websites/articles that pop up. How often does problem solving, critical thinking, creativity, and/or decision-making appear on these lists?
Explain (5 minutes)	Read 4 Tips on Teaching Problem Solving (from a student) - Anna Pelletiere, Edutopia
Elaborate (5 - 10 minutes)	Choose a unit or set of learning targets that you have used in the past or plan to use in the future. • Articulate a problem or challenge for students aligned with these learning targets or think of a problem or challenge that students could engage with in order to demonstrate their mastery of the selected skills-based learning targets. • Outline how your students would engage with this problem or challenge (consider using the Design Thinking for D127 framework and Design Thinking Planning Template to structure the experience.) Note: These experiences could be structured to take 15 minutes or weeks of time; design for the time you have available.
Evaluate (5 minutes)	What scaffolding would need to be done to ensure students could be successful with this type of experience? How could you assess and provide feedback on student growth with problem-solving skills? What might be holding you back from implementing more problem-solving experiences in your classroom?
Additional Resources	- REAL Hub Design Thinking for D127 - D127 Design Thinking Verbs Handout - REAL Hub Project Ideas - REAL Hub The 4Cs Rubrics - 12 Strategies for Creating an Atmosphere of Problem-Solving in Your Classroom (TeachThought)

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| | <ul style="list-style-type: none">- The Power of Letting Students Solve Problems in School - (education week) Outlines the LAUNCH Cycle- How to Teach Kids Better Problem Solving Michael Arnold TEDxGreenville (Video)- Guiding Students to Be Independent Problem-Solvers in STEM Classrooms: Teaching high school students how to plan to solve a problem in science, technology, engineering, and math is a crucial step. (edutopia)- Problem Solving Strategies for Education (Teaching in Education Video)- Strategies and Methods to Teach Students Problem Solving and Critical Thinking Skills by Matthew Lynch for The Edvocate- Learn more about Genius Hour & 20% Time- Or, just do a Google search for Design Thinking Challenges for ideas and resources. |
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