



Elementary Mathematics Professional Learning

Problem Solving aka Puzzlers



"Any new situations where students respond to questions of the type "How would you ...? or How could you ...?"

"In order for an activity to be problem-solving based, it must ask students to determine a way to get from what is known to what is sought. If students have already been given ways to solve a problem it is not a problem, but practice. A true problem requires students to use prior learnings in new ways and contexts." Source



Problem solving is a powerful teaching tool that fosters multiple, creative and innovative solutions. Source

Problem solving requires and builds depth of conceptual understanding and student engagement. <u>Source</u>



Idea 1: Introduce "Puzzlers": Start with a simpler question that students can do then introduce a slightly more complex problem without explaining "how to" do it. Just say it's a puzzler. Read more about it in the Classroom Puzzlers Poster.

Idea 2: Take the question you would give at the end of a unit and start with it. Give students Think-Pair-Share time, looking for strategies and ideas for solving it.



Teaching to Inspire Webpage: <u>Solving Word Problems Without Relying on</u> Key Words

Video: A student relies on key words to help solve a question

Articles Books Research

Nrich Article:

<u>Developing a Classroom Culture That Supports a Problem-Solving Approach</u> to Mathematics

Annenberg Webpage: Problem-Solving "Session"