

Three-Phase Lesson Structure

BEFORE THE PROBLEM

Role of the Teacher

- Review Math Practice Standard objectives.
- Activate prior knowledge.
- Review vocabulary.
- Pose the problem.
- Ensure that students understand the task.

Student Questions

- What am I trying to find?
 - I am trying to find...
- What do I know?
 - I know that...

DURING THE PROBLEM

Role of the Teacher

- Let go! Allow for productive struggle time.
- Circulate as students work independently and then collaboratively in pairs or groups.
- Ask questions to focus, assess, and advance student thinking.
- Decide which solutions will be selected for sharing.

Student Questions

- Did I solve the problem in more than one way?
- Did I explain my solution to a partner?
- Did I ask my partner questions so that I understand his/her solution?
- Did I make my solution or answer to the problem clear so that others will understand it?

AFTER THE PROBLEM

Role of the Teacher

- Facilitate the sharing of two or more solution paths.
- Order selected solutions to help generate a mathematically productive discussion.
- Ask questions to facilitate a student centered discussion. Ensure that students:
 - Develop an understanding of the solutions and mathematical concepts
 - Justify and explain strategies and mathematical ideas
 - Add on to, question, and make connections between the solutions shared
 - Identify patterns and make mathematical generalizations
- Formalize the main ideas.
- Identify next steps and future problems.

Student Questions

- What questions do you have for the mathematician?
 - I'm wondering... Why did you... How did you...
- Who can restate how ____ solved the problem?
 - First... Next... Then...
- Who can add on to what ____ has shared?
 - I would like to add ...
- What is the same about the solutions shared? What is different?
 - One similarity is... Both solutions... One difference between the solutions is...

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Student Questions

DURING

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AFTER

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Student Questions

Guiding Questions:

How does each phase engage students in the MPs?

How do the CELDs support ELs throughout the three phase lesson?