Planning and Leading Mathematical Discourse

To engage students in productive mathematical conversations, teachers must plan, initiate, and orchestrate discourse in ways that encourage student learning.

# Five Practices for Orchestrating Productive Mathematical Discourse\*



## Anticipating:

"Actively envision how students might approach the mathematics task they will work on."



## Monitoring:

"[Pay] close attention to students' mathematical thinking and solution strategies as students work the task."



### Selecting:

"Select particular students to share their work with the rest of the class to get specific mathematics into the open for examination."



## Sequencing:

"Make decisions regarding how to sequence the student presentations."



## Connecting:

"Help students draw connections between their solution and other students' solutions as well as the key mathematical ideas in the lesson."

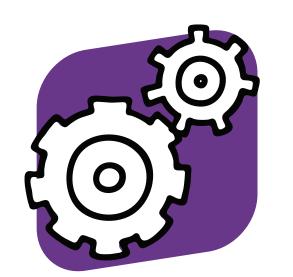
\*Smith, M. S., & Stein, M. K. (2018). *5 practices for orchestrating productive mathematics discussions* (2nd ed.). Corwin Press. © 2021 Curriculum Associates, LLC. All rights reserved. | 12/21 0K

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# Discourse-Based Lesson Guide

## Teacher Moves



#### **Individual Think Time**

Give students 10 seconds to two minutes to think about a question before discussing.



#### Turn and Talk

Give students time to process ideas with a partner and build their confidence to discuss their strategies.



#### Four Rs

Ask students to repeat, rephrase, reword, or record what classmates share to help them process each others' thinking and build understanding.

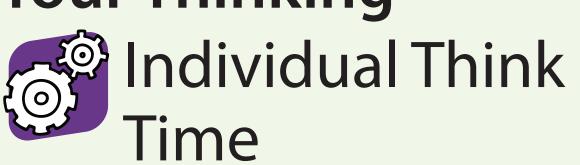
## Try-Discuss-Connect Routine



Make Sense of the **Problem** 



Solve and Support Your Thinking





#### **Share Your Thinking** with a Partner





#### **Compare Strategies**



4Rs Four Rs



Turn and Talk



#### **Make Connections** and Reflect on What You Have Learned



4Rs Four Rs



#### **Apply Your Thinking** to a New Problem



R Four Rs



Turn and Talk

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