

5 Practices to Orchestrate Productive Mathematical Discussions

Anticipating

- Determining how students might approach a problem
- Considering the array of possible solution strategies both correct and incorrect student might use
- Deciding how student approaches relate to the mathematical ideas you want students to learn
- Consider how you'll respond to various student approaches and what you want to highlight

Monitoring

- Attend to what students are saying and doing
- Make note of particular strategies, representations, and other ideas that would be important to share during a whole class discussion
- Prepare a bank of questions to ask as needed to assess and advance students understanding

Selecting

- Decide which responses to share in order to insure that key ideas get discussed
- Determine if additional strategies not used by students should be introduced
- Decide if a common misconception should be aired

Sequencing

- Determine what order will allow you to best meet your mathematical goals
- Decide if putting an incorrect solution first will let you clear it up before you move on
- Decide if placing 2 solutions in succession would allow for mathematical comparison

Connecting

- Helping students make judgments about the consequences of different approaches in terms of accuracy and efficiency
- Helping students understand how the same mathematical idea is embedded in different strategies
- Helping students identify similarities and differences in different approaches.

Highlighting