

# Math Practices Overview

## (School District/Building Leader Facilitation Guide)

### Presenter:

### Intended Use

This facilitation guide is designed for district and school leaders to use when delivering sessions on the Standards for Mathematical Practice (MPs). The document can be used by district and building leaders to facilitate broader conversations on the use of local data, focusing on the broader impact of the MPs across building and district levels. Its purpose is to help broaden discussions with staff members on the MPs to a building and district level.

### Reproducing the Facilitation Guide

If you make copies of any portion of this facilitation guide or accompanying PowerPoint presentation, please credit the Ohio Department of Education and Workforce.

### During Facilitation: Discussion Questions

Pause at the times indicated in the presentation and have discussions in smaller groups, and then in the larger group.

#### DISCUSSION QUESTION

*PowerPoint Slide 15*

- What comes to your mind when you think about the Standards for the MPs at the building and district level?
- How can we ensure that the MPs are consistently implemented across all classrooms in our district?

#### DISCUSSION QUESTIONS

*PowerPoint Slides 17, 23, 29, 35, 41, 47, 53, and 59*

- What local data do we currently collect that can help us understand the implementation of the MPs?
- How can we use this data to improve our instructional practices and student outcomes?

#### DISCUSSION QUESTIONS

*PowerPoint Slides 20, 26, 32, 38, 44, 50, 56, 62*

- What are the specific learning needs of our students across the building and district levels?
- How can we address these needs to ensure that students regularly demonstrate their understanding of the MPs in the classroom?

## DISCUSSION QUESTIONS

### *Feedback on Additional Supports*

- What additional support(s) do our teachers and students need to effectively implement the MPs?
- How can building and district leaders provide these supports?

## Engagement Activities

The following are optional activities for district and school leaders to use as part of their facilitation session(s) to further engage their audience.

### *Data Analysis Activity*

- Analyze local data to identify trends and areas for improvement in the implementation of the MPs.
  - Divide participants into small groups and provide them with local data sets. Ask each group to analyze the data and identify key trends, strengths, and areas for improvement. Have each group present their findings and discuss how the data can inform instructional practices.

### *Role-Playing Scenarios*

- Practice addressing common challenges in implementing the MPs.
  - Create role-playing scenarios that reflect common challenges faced by teachers and students in implementing the MPs. Assign roles to participants and have them act out the scenarios. After each scenario, facilitate a discussion on effective strategies and solutions.

### *Math Improvement Initiative Pitch*

- Discuss best practices for implementing the MPs.
  - Develop and pitch an initiative aimed at improving the usage of the MPs across your district or building. Present their ideas and receive feedback from other groups.

## Data Collection Opportunities

The following are potential data collection strategies that districts and schools can use to gather data around the MPs. The list is not intended to serve as a requirement, but rather a series of ideas or conversation starters for educators to consider if they want to have local data on the MPs. By using these data collection opportunities, districts and school buildings can effectively assemble and utilize data to make mathematics instruction more student-centered through the regular inclusion of the MPs.

- Classroom Observations
  - Conduct regular classroom observations using a standardized rubric to assess the implementation of the MPs.
  - Focus on specific practices during each observation cycle to gather detailed data on each practice.
- Student Work Analysis
  - Collect and analyze samples of student work to identify evidence of the MPs.

- Use rubrics to evaluate how well students are demonstrating the practices in their work.
- Teacher Self-Assessment and Reflection
  - Encourage teachers to self-assess their implementation of the MPs and reflect on their instructional strategies.
  - Use surveys or reflection journals to gather teachers' insights and experiences.
- Student Surveys and Interviews
  - Administer surveys or conduct interviews with students to gather their perspectives on how the MPs are being implemented in their classrooms.
  - Ask students to provide examples of how they use the practices in their learning.
- Professional Learning Communities (PLCs)
  - Establish PLCs where teachers can collaboratively analyze data, share best practices, and discuss strategies for improving the implementation of the Mathematical Practices.
  - Use PLC meetings to review and discuss data collected from observations, student work, and surveys.
- Formative Assessments
  - Develop and use formative assessments that specifically target the MPs.
  - Analyze assessment results to identify areas where students need additional support and adjust instruction accordingly.

## Resource Links

### *Ohio Department of Education and Workforce Documents*

- [Standards for Mathematical Practice](#)
- [Kindergarten - Grade 5](#)
- [Grades 6-8](#)
- [High School](#)

### *University of Arizona Progressions*

- [Standards for Mathematical Practice: Commentary and Elaborations for K-5](#)
- [Standards for Mathematical Practice: Commentary and Elaborations for 6-8](#)

### *Other National Resources*

- [Inside Mathematics](#)
- [Illustrative Mathematics](#)
- [Robert Kaplinsky: Math CCSS Math Practices Readable](#)

## References

Illustrative Mathematics. (2014, February 12). Standards for Mathematical Practice: Commentary and Elaborations for K–5. Tucson, AZ.

Illustrative Mathematics. (2014, May 6). Standards for Mathematical Practice: Commentary and Elaborations for 6–8. Tucson, AZ.

Koestler, C., Felton-Koestler, M. D., Bieda, K., & Otten, S. (2013). *Connecting the NCTM process standards and the CCSSM practices*. Reston, VA: The National Council of Teachers of Mathematics.

O'Connell, S., & SanGiovanni, J. (2013). *Putting the practices into action: Implementing the common core standards for mathematical practice, K-8*. Portsmouth, NH: Heinemann.

## Conversation Notes: