

Implementing the Mathematics Common Core

Module 1 pt. 1 Facilitators Guide

What strategies can we use to enhance our instruction so students learn mathematics with understanding? What does this look and sound like?

Module 1: Sample Overview for 45 minute PD session (**Pink Wednesday: November 13th**)

<p>Intro + 2 sticky notes</p> <p>Engagement- as they walk into the room</p>	<ul style="list-style-type: none"> Engagement activity: As teachers walk in, hand each two sticky notes. Direct and invite them to engage in the posted engagement activity. <ul style="list-style-type: none"> Individually write down two verbs that describe “Doing Mathematics” One verb on each sticky note. 	<p>Sticky notes</p> <p>Directions for the engagement activity.</p> <p>(Slide 1)</p>
<p>Sort Sticky notes & begin look/sound like chart</p> <p>5 minutes</p>	<ul style="list-style-type: none"> In small groups sort and discuss the words on the sticky notes. <ul style="list-style-type: none"> Open sort- similar words together, words that are in the practices, general what they are noticing about what the group compiled. Choose the 5 best words (sticky notes) that describe learning mathematics with understanding. Place each on the chart in the far left hand column. Discuss and note what this might look and sound like in a mathematics classroom. 	<p>Large construction or chart paper.</p> <p>Model for teachers to create poster/table/matrix</p> <p>(Slide 3- Matrix)</p>
<p>Refer to essential question...</p> <p>2 minutes</p>	<p>Quickly make connections to the summer/fall opportunity to engage in the content focused CORE connections courses. These courses focused on differentiated grade specific critical content.</p> <p>The focus for our work today will be:</p> <p>What strategies can we use to enhance our instruction so students learn mathematics with understanding? What does this look and sound like?</p>	<p>(Slide 4)</p>
<p>Instructional Practice Guide</p> <p>10 minutes</p>	<ul style="list-style-type: none"> Intent of the Instructional Practice Guides Read the Core Action 3 (connect this with our continuing our district focus on the content and the mathematical practices). Quickly read indicators (only) Bracket what the teachers do and underline the behaviors of the students. Facilitator use Strategy: Turn-and-Talk What do you notice about what students need to do? What is the theme? (lead into connecting to classroom discussion) (Incorporate Facilitator use Strategy: Revoicing & Say more) What about teacher actions? 	<p>Instructional Practice Guide (all three pages).</p> <p>Modeled Strategies: Turn & Talk, Revoicing & Say More</p> <p>(Slides 5-8)</p>
<p>Video</p> <p>15 minutes</p>	<ul style="list-style-type: none"> Norms for viewing records of practice. Choose 1 video to use with staff: 1st grade (3A), 3rd grade (6A), 6th (4D) Grade. (maybe only 1st and 6th) Guiding question: What evidence do you observe that supports this indicator? (Consider breaking up the indicators so that each teacher at a table is looking for evidence from a different indicator or two). Discuss with table what evidence you saw that supported the indicators. Share out with whole group evidence that was seen. If you did not observe evidence, what type of evidence may support this indicator? <p>Some possible prompting questions for facilitators to include: What might that look like? If it was in your classroom what might you do? How would you get the students to do that? (Incorporate Strategy: Revoicing & Say more)</p>	<p>Possible Videos: 3A: 3:30 6A: 7:45 4D: 6:59</p> <p>Modeled Strategies: Revoicing & Say More</p> <p>(Slides 9 - 11)</p>

<p>Content:</p> <p>Talk Moves that Help Individual Students Clarify and Share Their Own Thoughts</p> <p>15 minutes</p>	<p>Guiding Question: Consider the indicators for Core Action 3: What do you do to assist students in clarifying their own thinking? (Use Strategy Stop & Jot- Individually)</p> <p>There are specific strategies that you can use to help individual students clarify and share their own thinking. Look at Reproducible 1.2. Discuss each strategy. (Help teacher's link prior knowledge to new knowledge (Turn and Talk is partner talk and think-pair-share). Consider walking around as teachers do the Stop and Jot and choosing a few teachers to share a strategy that you would have shared then taking them into the reproducible to take it deeper.</p> <ul style="list-style-type: none"> • Reproducible 1.2: Talk Moves That Help Individual Students Clarify and Share Their Own Thoughts. • Talk Moves: Turn-and-Talk, Revoicing, Say More, Stop & Jot <p>Possible extension questions: We have talked about these moves in terms of getting students to externalize their thinking and clarify their contributions. Can you see other functions these moves might serve (example formative assessment, evidence of learning, increase participation etc.)? How are they connected to the indicators in Core Action 3?</p> <p>Show all three videos clips. Teachers need to determine what strategy (from ones listed below) the video clip is showing.</p> <p>Support for facilitators:</p> <p>Turn-and-Talk: How do the interactions you see provide opportunities for formative assessment? For language development? For participation by students who may not speak otherwise? (1C- 0:44)</p> <p>Revoicing: How is revoicing different from simple repeating? What other ways did teachers verify and clarify? (1E- 3rd grade: So you're saying I can't buy one can...? :42 or 1F- 5th Grade: So you multiplied the length...? 0:50)</p> <p>Say More: What benefits do you see in these clips for the teacher? (1G- Kindergarten Can you tell me what you did? 1:02 or 1H- 3rd Grade: Tell me a little bit more. 0:39).</p> <p>Wait/Process time- Provide ample time for students to process and think. Stop & Jot: Recommended wait time 1 minute.</p>	<p>Reproducible 1.2</p> <p>(Slide 12-13)</p> <p>Facilitator Note: Wait/Process time and Stop & Jot are listed in Chapter 1 (page 14) yet are not part of the participants handouts as formal talk strategies.</p>
<p>Closing</p> <p>3 minutes</p>	<ul style="list-style-type: none"> • After working together today add at least two ideas to your matrix to extend your thinking/reasoning? Is there anything that you posted earlier that you are questioning? (Put a question mark by any ideas you are now wondering about). • Refer Back to the Essential Question. <p>As part of the closing have teachers:</p> <ul style="list-style-type: none"> • Read the first paragraph and 5 claims (slide). 	<p>Facilitator Note: Save group matrix.</p> <p>(Slide 14-15)</p>
<p>Application (Between session work)</p> <p>2 minutes</p>	<p>For the next session:</p> <ul style="list-style-type: none"> • The focus is for teachers to have time to reflect on their teaching and think about and discuss the content in this first section. As a grade level select one talk move you would like to try in your classroom. Be prepared to discuss it next time. • For the 2nd Mathematics pink Wednesday (Dec. 4th) as a grade level select and bring at least one lesson from the unit you are planning on teaching before break. 	<p>(Slide 16)</p>

Support for Module 1 facilitators: Ways to differentiate & Support

(Please go slow, so that we can go deeper)

Key content for district level support:

Please review and read the following before the pink Wednesday.

Resource	Prepare, Reflect & Connect...	Note
Classroom Discussions in Math: A Teacher's Guide for using talk moves to support the Common Core and more. (2013)	Read: Overview: xv- xxiii Section 1, Chapter 1: pages 1- 63 (as an overview). Skim/review/watch: xliv-li (to review classroom demographics in videos). Chapter 9: Troubleshooting Common Math Talk Problems and Concerns	The "must read" version: Pages 9-32 Look at summary Table: 49-54 Videos: 3A: 3:30; 6A: 7:45; 4D: 6:59
What Are Some Strategies For Facilitating Productive Classroom Discussions? (NCTM Research Brief, 2013).	Read the 1 st page only . (We will continue to connect to this document throughout the sessions).	

Potential Materials list:

- Instructional Practice Guide (must have Core Action 3).
- Directions for Matrix
- Reproducible 1.2
- Sticky notes/tabs

Instructional Tools to consider using with teachers:

- T³: Troubleshooting Talk Tips
- Reproducible 1.2 and 1.1c (We will use 1.1a in module 1-2)

Differentiation supports & Resources:

Reproducible 1.2: Talk Moves That Help Individual Students Clarify and Share Their Own Thoughts
(Coaching/Collaborating/Consulting)

Reproducible 1.1C: Professional Development Session 1.1 A first Encounter with Examples of Productive Math Discourse: Four Steps Toward Productive Classroom Discussions (Overview, Coaching, Collaborating)

- Focus on Step 1: Helping Individual students Clarify and share their own thoughts.
- Incorporate into presentation.

1.1.A: Establishing purpose for Discussion (Coaching/Collaboration/Consulting)

- Read the first paragraph and the five major reasons that talk is critical to teaching and learning.
- How do these ideas connect to the video and the IPG?

Additional Articles/Research to support:

National Council of Teachers of Mathematics- [What Are Some Strategies For Facilitating Productive Classroom Discussions?](#)

Additional Videos: (These will be used in future modules)

[Improving Participation with Talk Moves](#) (3rd Grade)

[Talk Moves: Developing Communication Skills](#) (5th grade)

Upcoming opportunities for teachers:

Mathematics Maniacs

November 21st, 2013

4:30-6:30

Matthews Elementary School- Room

Guest Speaker: Dr. Teruni Lamberg

Topic: Creating a Mathematics Community of Learners to support Classroom Discussions

These are informal and fun opportunities for teachers to engage in mathematics and then have the opportunity to reflect and connect with others teachers. Teachers will have an opportunity to ask questions and hear the latest information about what is happening in elementary mathematics. **Know of any potential mathematics leaders? If so, encourage them to attend.**