

TEAM-Math and AMSTI Professional Mathematics Learning Communities
Discourse – Sequencing Student Work

Title of Activity/Lesson	Discourse – Sequencing Student Work
Time Allotment	60 minutes
Audience	All grade levels
Content Objectives	Building proportional reasoning (this could be tailored for other grade levels)
Pedagogical Objectives	To better understand: <ul style="list-style-type: none"> • How to analyze and organize student thinking in order to promote discourse. • Teacher and student actions that support a discourse-rich classroom environment.
Overview of Big Ideas	The teacher needs to carefully consider student responses and how they can build the ideas of the group.
Materials	Candy Jar problem, sample responses, and “what happened” Five Practices overview Chart of teacher and student actions

Outline/Plans	What Might Happen/Dialogue
Discuss in groups, then full group: What does the typical math class look like? (slide 3)	“What is the daily routine for the typical mathematics classroom?” “What is the teacher’s role? What is the students’ role?” (Get to the idea of the teacher presenting the new idea, working examples, then having the students practice.)
Discuss in groups, then full group: What are the limitations of this approach? (slide 3 cont.)	“What are the limitations of this organization?” “What might be an alternative approach?” (Get to the idea of a discourse-rich classroom)
Introduction to discourse (slides 4-5) – have participants discuss, then show quotes from <i>Principles to Actions</i>	“What do we mean by discourse?” “What are the advantages to a classroom that focuses on building student discourse?”
Introduce the “Phases of a Lesson” (slide 6)	“What do we organize a classroom that builds student discourse?”
Overview the “Five Practices” (slide 7)	“What do teachers need to do to effectively incorporate student responses into their classrooms?”
Introduce the Candy Jar problem and ask participants to solve it in their small groups. Then come back as a full group to discuss their responses.	“Solve the problem as many ways as you can.” “What do you think of that approach?” “Did anyone do this a different way?”
Ask the participants to work in groups to analyze possible responses that groups may have come up with and think about how they might use those responses in a discussion. Then come back to discuss.	“Analyze the sample student solutions.” “The discuss the sequence in which you would have students present their solutions.” “Who can explain what the students did in Response A?” (etc.) “How do these strategies compare?” “What did you think about Response C?” (it’s incorrect!) “How might you order the presentations? Why?” “Did anyone have a different order?”
Ask participants to read the brief overview of the class and compare to what they thought.	“How does what he did compare to the 5 Practices?” “How did his order compare to yours?” “Does his approach make sense?” “What might you have done differently?” “What did you think about what he did with Response C?”
Wrap-up: Look at chart of teacher and student actions	“How does this compare to what we have been looking at in this session?” “Do any of these particularly stand out?” “What did we discuss today?” “What will you try in your classroom?”