



Building on Discourse Virtual – Session 5

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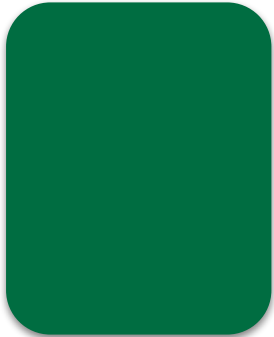
Rev 5/31/23 (ce)

Welcome to Building on Discourse!

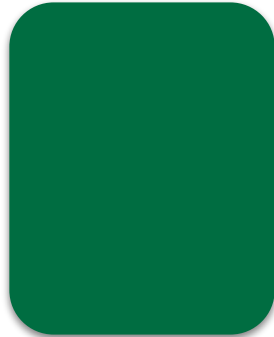
Session 5: Connect Learning to the Mathematical Goal



Session Facilitators

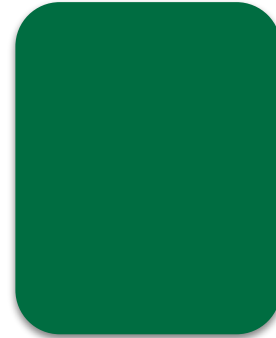


Name



Name

Support

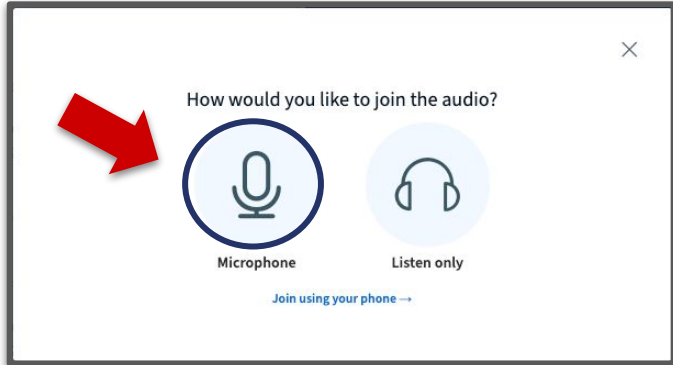


Regional
Professional
Learning
Coordinator

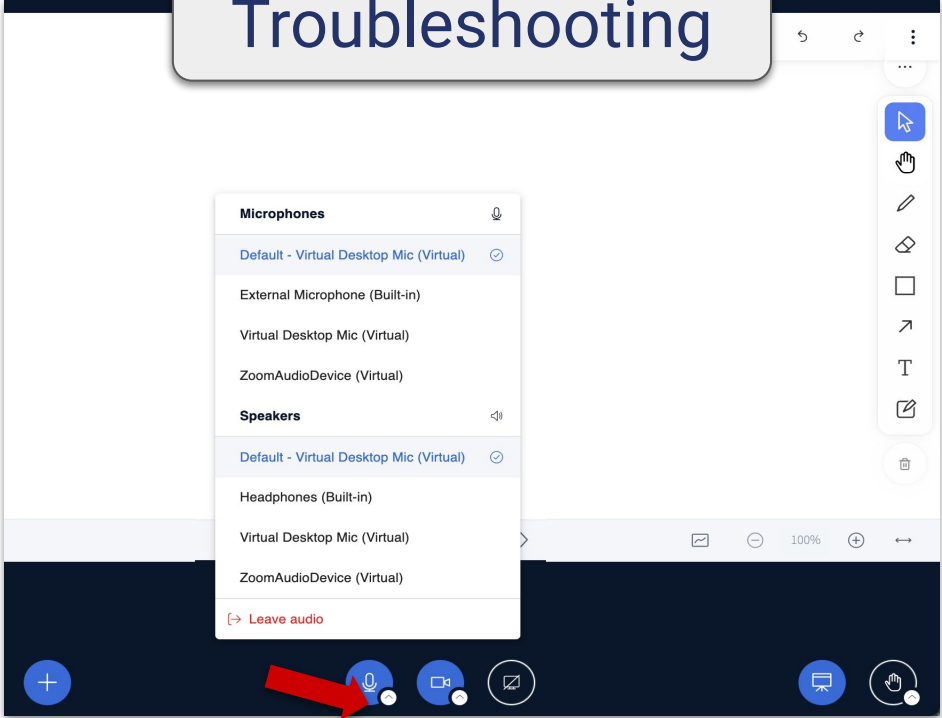
Tech Tip



Audio



Troubleshooting



Opening

Session 5 Outcomes



Together we will:

- + Experience the Effective Mathematics Teaching Practices through the design of the *5 Practices*.
- + Better understand how facilitating meaningful mathematical discourse develops an equitable, student-centered classroom.
- + Gain strategies to address important elements of implementing mathematical discourse in the classroom.

Agenda

Session 5



Focus: Building on Discourse

- Icebreaker
- Math Task
- Asset-Based Feedback
- The *5 Practices* in Practice
- Closure

Welcome

Equity Principles



- + The goal of teaching is to help all students transition from dependent to independent learners.
- + Relationships are of vital importance.
- + Student uniqueness is an asset, not a deficit.
- + Reflection is a crucial part of growth.

Click on your name and set your status to thumbs up if you are ready to begin.



CPM uses these principles to guide our vision and mission of More Math for More People.

Agenda

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Icebreaker

Things I Do Well



Individual Task:

1. List *up to three* things you do well. (*i.e. play a musical instrument*)
2. What are some actions you do in order to be good at these things? (*i.e. practice daily*)

1:00

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Math Task & Asset-Based Feedback

Focusing Learning

Learning Target:

Connect positive feedback strategies to meaningful discourse.

Math Task

CC1

Lesson 5.3.4 – Problem 5-99



Student Math Goal:

Apply what you know about area to a complex shape.



Team Collaboration Goal:

Be willing to try multiple strategies, and critique the reasoning of others.

Math Task

Learning Agreements



We value sharing ideas, even when our ideas are unfinished.

We believe that listening to our classmates' ideas helps us understand math better.

We believe questions and discussion deepen mathematical understanding.

Math Task

“Icebreaker Team” Roles Assignments



Task Manager: Start the conversation on how your team chooses to start this task. *Individual think time* or a **Teammates Consult** or *both*.

Facilitator: **Participate** in lesson and **Listening Post**. Record the interactions with the “teacher” on your own sheet of paper. You will need this later in this session.

Resource Manager: Make sure everyone is able to access the Jamboard and is on your team slides.

Recorder/Reporter: Revisit the tech tip slide if needed.

Math Task

Launch – Park Problem



What do you **notice** about the field?

What do you **wonder**?



Post your notices and wonderings in the Public Chat.

Math Task

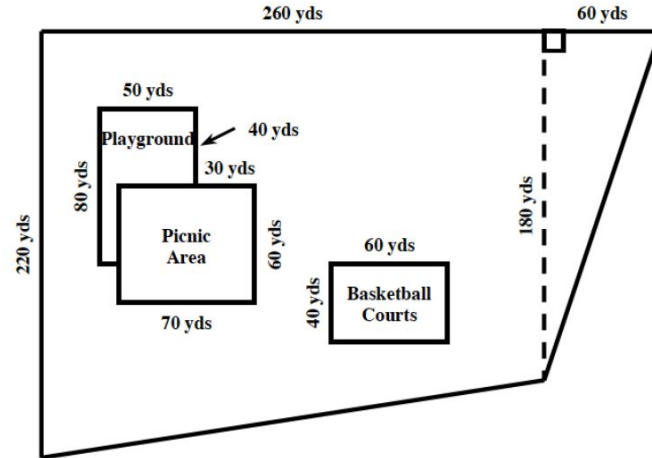
Launch – CC1 Lesson 5.3.4 Problem 5-99



5-99 Park Problem

The city council is trying to decide how much to budget for mowing the grass in the city park shown in the diagram. The park is all grass except for a playground area, a picnic area, and basketball courts.

Using what your team knows about finding the areas of rectangles, parallelograms, triangles, and trapezoids, and using the lesson 5.3.4 C Resource page, calculate the area of the park that will need to be mowed. Assume that all angles that appear to be right angles are actually right angles. If possible, find two different ways to find the total area. Be sure to show all of your work so that you can explain your strategies to other teams.



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Asset-Based Feedback

CANN Protocol



What is the CANN protocol?

- ❖ Check-in
- ❖ Assign Competence
- ❖ Notice
- ❖ Nugget - Explain

ASSET-BASED FEEDBACK

 **C**heck-in
Check in with something personal or academic.
Tell me more about...
It seems your team has focused on...
How are you doing with ___?

 **A**ssign Competence
Publicly name an intellectual strength.
I can see you really understand...
You've really improved at...
I see you're using the ___ strategy.
I see you using the math practice ___ by ___.
Your ability to ___ is really going to help with...








 **N**otice
Find a point to move forward on.
I see you're still learning...
I noticed you don't yet understand...
I would like to see...
It seems like...


 **N**ugget - Explain
Leave them with something.
Your next steps are...
A question I have is...
I wonder what would happen if...?
What do you think about...?



ASSET-BASED FEEDBACK

Is not...

-  a grade.
-  a compliment.
-  the good-bad-good sandwich.
-  "Good Job!"
-  evaluative.
-  advice.
-  praise.



Asset-Based Feedback

Assigning Competence



*“When teachers assign competence...they have **the power to shift students’ perceptions** about what it means to learn math and who can be a successful math learner.”*

Jilk, L. (2016). *Supporting Teacher Noticing of Students’ Mathematical Strengths*.
Mathematics Teacher Educator, 4(2), 188–199.

Asset-Based Feedback

Compliment vs. Competence



Compliment	Assigning Competence (Intellectual Strength)
I really like your team's argument.	Your team found so much evidence, and that makes your argument strong.
Nice work connecting multiple representations.	Using your table to make a graph really helped you notice how the pattern grew.
Great teamwork!	Using the conversation starters helped you listen to all ideas and find a creative solution.

Asset-Based Feedback

Intent



How is assigning competence **different from other forms of positive feedback?**

How might asset-based feedback **contribute to a positive classroom culture?**



Post your response in the Public Chat.

ASSET-BASED FEEDBACK

Check-in
Check in with something personal or academic.
Tell me more about...
It seems your team has focused on...
How are you doing with...?

Assign Competence
Publicly name an intellectual strength.
I can see you really understand...
You've really improved at...
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Notice
Find a point to move forward on...
I see you're still learning...
I noticed you don't yet understand...
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It seems like...

Nugget - Explain
Leave them with something.
Your next steps are...
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ASSET-BASED FEEDBACK

Is not...

- ☒ a grade.
- ☒ a compliment.
- ☒ the good-bad-good sandwich.
- ☒ "Good Job!"
- ☒ evaluative.
- ☒ advice.
- ☒ praise.

CPM

Math Task & Asset-Based Feedback

Reflection on Learning Target and Success Criteria

Learning Target:

Connect positive feedback strategies to meaningful discourse.

Success Criteria:

1. Explain how assigning competence is different from other forms of positive feedback.
2. Describe how asset-based feedback contributes to a positive classroom culture.

Math Task

Action Plan



Record your **rough draft thinking** about the following prompts.

- + *How did asset-based feedback make you feel? What impact did it have on your learning?*
- + *How does asset-based feedback connect to the 5 Practices and classroom culture?*
- + *How could you use asset-based feedback in your classroom?*

Action Plan (Portal):

In the upper right dropdown menu, click on **Action Plan**.

Select **Discourse Action Plan**.

Find the box titled **Day 3 Rough Draft Thinking**.

Click in the box to record your thoughts.

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The 5 Practices in Practice

5 Practices Review

1. Anticipating
2. Monitoring
3. Selecting
4. Sequencing
5. Connecting



5 Practices for Orchestrating Productive Math Discussions

Margaret S. Smith & Mary Kay Stein, NCTM & Corwin Press, 2011 www.nctm.org

1. Anticipating

- Do the problem yourself
- What are students likely to produce?
- Which problems will most likely be the most useful in addressing the mathematics?

2. Monitoring

- Listen, observe, identify key strategies
- Keep track of approaches
- Ask questions of students to get them back on track or to think more deeply

3. Selecting

- CRUCIAL STEP – what do you want to highlight?
- Purposefully select those that will advance mathematical ideas

4. Sequencing

- In what order do you want to present the student work samples?
- Do you want the most common? Present misconceptions first?
- How will students share their work? Draw on board? Put under doc cam?

5. Connecting

- Craft questions to make the mathematics visible.
- Compare and contrast 2 or 3 students' work – what are the mathematical relationships?
- What do parts of student's work represent in the original problem? The solution? Work done in the past?

The 5 Practices in Practice

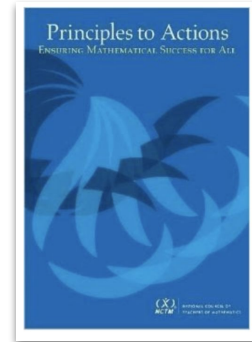
Effective Mathematics Teaching Practices



Use and Connect Mathematical Representations

“Effective teaching of mathematics engages students in making connections among mathematical representations to deepen understanding of mathematics concepts and procedures and as tools for problem solving.”

(NCTM, 2014)



The *5 Practices* in Practice

Focusing Learning

Learning Target:

Apply the *5 Practices* as you continue planning with your rich task.

The *5 Practices* in Practice

Reflection on Learning Target and Success Criteria

Learning Target:

Apply the *5 Practices* as you continue planning with your rich task.

Success Criteria:

1. Shared your completed rich task plan and feedback desires with colleagues.
2. Practice giving and receiving asset-based feedback.

The 5 Practices in Practice

Reflection



Stand, Turn, and Reflect? (3 min)

Individually reflect on your experience planning with the 5 Practices.

Which practice(s) will be the most comfortable for you to implement?

Which practice(s) raises your anxiety?

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Closure

Focusing Learning

Learning Target:

Connect “teacher moves” to each of the *5 Practices* in order to implement equitable and meaningful mathematical discourse.

Closure

Reflection on Learning Target and Success Criteria

Learning Target:

Connect “teacher moves” to each of the *5 Practices* in order to implement equitable and meaningful mathematical discourse.

Success Criteria:

1. Add “teacher moves” to your toolkit to promote discourse.

Closure

Outcomes



Together we will...

- + Experience the Effective Mathematics Teaching Practices through the design of the *5 Practices*.
- + Better understand how facilitating meaningful mathematical discourse develops an equitable, student-centered classroom.
- + Gain strategies to address important elements of implementing mathematical discourse in the classroom.

Closure

- + Parking Lot
- + Attendance & Feedback

Either scan the QR code

OR

Enter passcode in the Portal

XXXXXX



Text Font: Roboto

Title Font Size: 24

Subtitle Font Size: 18

Color coding:

Teacher Lens: 006DAB

Learning Log: 006DAB

Student Lens: 41AD49

Housekeeping: 233368

Content Module: 006D41

Thread: 006D41

Text should be primarily black or dark blue (#233368)

Note: Drop zones of icons on layouts are not moveable.

HOUSEKEEPING



ANCHOR PAGE



WELCOME



PUZZLE



TEAM GOAL



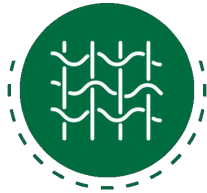
TEACHER LENS



LEARNING LOG



THREAD



CONTENT MODULE



MATH GOAL



STUDENT LENS



EQUITY LENS



ASSESSMENT



PRODUCTIVE STRUGGLE



RESEARCH PILLARS



MSP



COLLABORATIVE LEARNING



PBL



STUDY TEAMS



LEARNING TARGET



TASK CARD



TEAM ROLES ALL



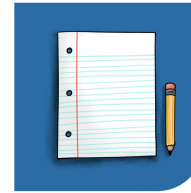
RESOURCE MANAGER



TASK MANAGER



REPORTER RECORDER



FACILITATOR



IMPLEMENTATION
ACTION PLAN



TEAM ROOMS



IMPLEMENTATION
PROGRESS TOOL



STTS

