



Foundations for *Inspiring Connections*

Session 1

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Welcome!

Foundations for Inspiring Connections - Session 1



What should I do before we get started?

- + In the **Shared Notes**, add your name under the CPM course that you will teach.
- + Get out your **Participant Notebook** and review our Virtual Routines.
- + Answer the door question in the Public Chat:
Who or what do you admire?

Virtual Routines

- Join with microphone.
- Private chat facilitator for individual support.
- Share your ideas.

Tech Tip

Viewing Options



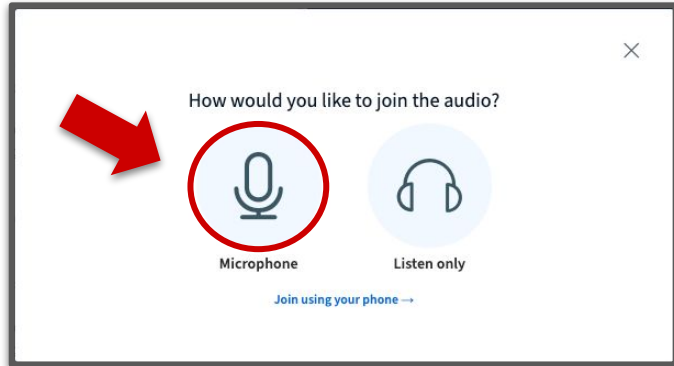
User list toggle

The screenshot shows a Zoom meeting interface with a dark blue background. At the top left, a user name 'Ashley Boyd' is visible. A red arrow points to a small icon next to the name, labeled 'User list toggle'. In the center, a cartoon avatar of a man is shown. A large white dialog box titled 'Layouts' is open, showing four layout options: 'Custom', 'Smart layout', 'Focus on presentation', and 'Focus on video'. A red box highlights this dialog. To the right, a 'Viewing Options' menu is open, listing: 'Fullscreen Application', 'Settings', 'About', 'Help', 'Keyboard shortcuts', 'Manage layout', and 'Leave meeting'. A red box highlights this menu, and a red arrow points from the 'Manage layout' option to the 'Layouts' dialog box. At the top right, a red circle highlights the three-dot menu icon. The bottom of the screen shows a navigation bar with 'Slide 1', a volume icon, a 100% zoom level, and a refresh icon.

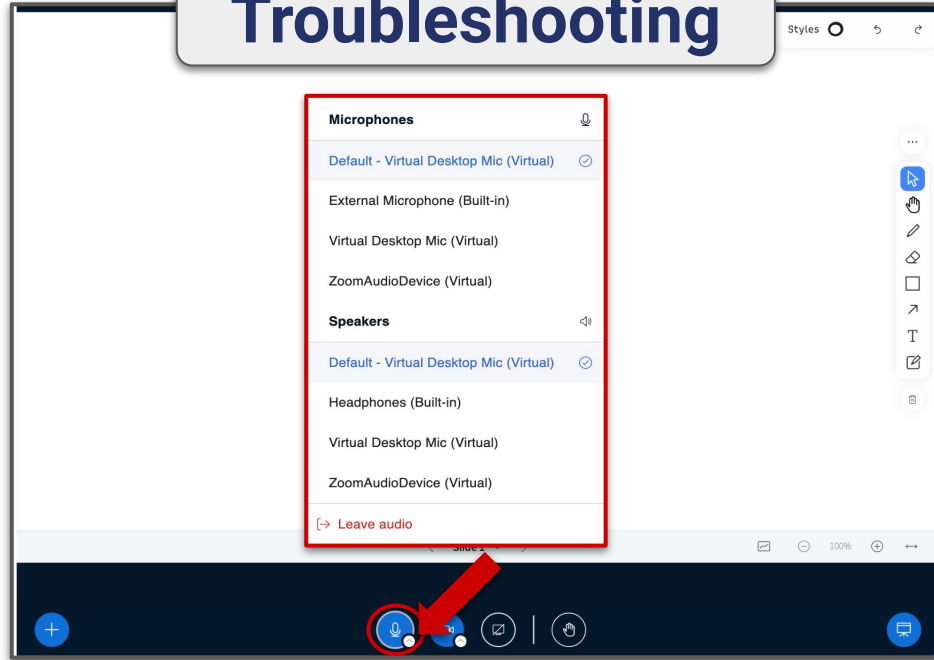
Tech Tip



Audio



Troubleshooting



Opening

Foundations for Inspiring Connections



CPM's Professional Learning On-Demand



Before You Start



Once You've Started



Course Content

Overview

Foundations for Inspiring Connections Virtual Series



- + **Sessions 1 & 2: Positive Classroom Culture**

- + Sessions 3 & 4: Collaborative Learning

- + Sessions 5 & 6: Problem-Based Learning

- + Sessions 7 & 8: Mixed, Spaced Practice

- + Follow-Up Sessions 1 & 2: Supporting Productive Struggle

- + Follow-Up Sessions 3 & 4: Formative Assessment

Opening

Working Agreements



- + Be willing to take **risks**.
- + Have a **visionary** mindset.
- + Stay **engaged**.
- + Explore and reflect on our **beliefs**.
- + Give **grace** to others and ourselves.

Change takes time, effort, and support!

Set your status to thumbs up if you are ready to begin.



Opening

Session 1 Outcomes



Together we will...

become familiar with the research behind the design of *Inspiring Connections*.

learn how *Inspiring Connections* supports and develops a positive classroom culture.

explore and experience *Inspiring Connections*.

reflect on current practices and beliefs to develop a plan for the implementation of *Inspiring Connections*.

Agenda

Session 1



Focus: Positive Classroom Culture

- + **Opening & Icebreaker**
- + Culturally Responsive Pedagogy
- + Research Connections
- + Math Chats
- + Closure

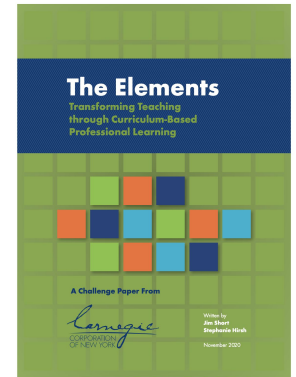
Learning Target: I can use a task to develop positive classroom culture.

Opening

Professional Learning



Curriculum-based professional learning invites teachers to participate in **the same sort of rich, inquiry-based learning** that new academic standards require...It is rooted in **ongoing, active experiences** that prompt teachers to **change their instructional practices, expand their content knowledge, and challenge their beliefs.**



Short, J., & Hirsh, S. (2020). *The elements: Transforming teaching through curriculum-based professional learning*. Carnegie Corporation of New York, 7.

69 **1** 21 81 37 61 97 **9** 34 66 26 74 42
41 93 29 85 25 33 53 50 14 **86** 54 18
57 73 **5** 49 17 77 65 53 6 78 30 **2** 98 62 90
12 20 56 32 40 4 **92** 7 71 95 67 27 47
64 52 16 88 28 76 39 11 79 63 23
24 84 **8** 44 48 60 36 87 31 51 **3** 35 99
100 68 96 80 15 91 43 55 75 59



CPM

More Math For More People

1.

2.

3.

Click here to turn on multi-user whiteboard

Take presenter

Styles

Color

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Fill

Dash

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Size

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Keep Open



Name: 1st Alphabetically
Representative

69 **1** 21 81 37 61 97 **9**
41 93 29 85 25 33 53
57 73 **5** 49 17 77 65 13
89

34 66 26 74 42
50 14 **86** 54 18
6 78 30 **2** 98 62 90
38 82 94 22 70 46 10 58

Name: 2nd Alphabetically
Investigator

Name: 3rd Alphabetically
Coordinator

12 20 56 32 40 4 92
64 52 16 88 76
24 72 48 28 36
84 **8** 44 60 96 80
100 68

7 71 95 67 27 47
39 11 79 63 23
87 31 51 **3** 83
15 91 43 19 35 99
55 75 59

Name: 4th Alphabetically
Organizer

Icebreaker

Inspiring Connections, Course 2 - Lesson 0.1.3



Reminder

Complete three rounds of the number search using the [Lesson 0.1.3A Launch Resource Page](#) and the [Lesson 0.1.3B Launch Resource Page](#).

Authors' Vision

Lesson 0.1.3B Launch Resource Page

INVESTIGATOR	COORDINATOR
80 23 63 43 105 65 112 97 33	79 42 118 25 77 98 122 31 54 73 39 21 7 102 110 106 86 94 29 15 50
48 104 22 125 66 40	36 44 20 64 30 116 91 26 62
REPRESENTATIVE	ORGANIZER

Agenda

Session 1



Focus: Positive Classroom Culture

- + Opening & Icebreaker
- + **Culturally Responsive Pedagogy**
- + Research Connections
- + Math Chats
- + Closure

Learning Target: I can identify embedded structures in Inspiring Connections that develop a positive classroom culture.

Culturally Responsive Pedagogy

What is it?



Culturally responsive educators...

- + Understand people make sense of and show their learning in different ways—often this is connected to their culture and background.
- + Know that strong relationships and social-emotional connection help students feel safe.

Want to know more? See “8 Competencies for Culturally Responsive Teaching” in Teacher Materials

Culturally Responsive Pedagogy

Prelude Authors' Vision



Lesson	Learning Target
0.1.1	I can identify the responsibilities of each team role. I can read and create a bar graph.
0.1.2	I can communicate effectively with my teammates. I can identify and extend patterns.
0.1.3	I can ask mathematical questions. I can use examples and pictures to write a convincing argument.
0.1.4	I can explain the difference between a growth mindset and a fixed mindset. I can order fractions.
0.1.5	I can explain my class's definition of respect. I can multiply using an area model.
0.1.6	I can work with my teammates to solve challenging problems.
0.1.7	I can explain my class's agreed-upon expectations for behavior when working in teams.

Culturally Responsive Pedagogy

Door Question Basics



Door Question

What is something that makes you laugh?

As students enter the classroom, stand in the hall and ask the Door Question, What is something that makes you laugh? With all door questions, prepare to listen to students' responses without judgment and encourage multilingual responses. Display this question to the class in case students miss the opportunity to tell you at the door. Encourage students to answer with two or three words. If they want to explain more or if you have follow-up questions, say, I would love to hear more about that! Let's plan a time when we can talk more. Be sure to wrap up the Door Question process by the start of class.



Want to know more? [Teacher Materials](#) → [Embedded Supports](#) → [Culturally Responsive Pedagogy](#)

Culturally Responsive Pedagogy

Door Questions Action Plan



How will you manage door questions?

- A. Ask at the door.
- B. Post in the room for teams to discuss.
- C. Ask as an attendance question.
- D. Post at the door on a whiteboard for students to write their response.
- E. Other.



Culturally Responsive Pedagogy

Lesson Launches: Teacher-Facing



Door Question

What is something that helps make any day better?

As with all Door Questions, listen to students' responses without judgment and encourage students to use their full linguistic repertoire.

Launch (5 minutes)

Dot Talk

Explore (20 minutes)

1-10 through 1-12

Closure (20 minutes)

Clothesline activity

Reflection & Practice

1-13 through 1-18

Teacher Notes



Reminder

Display the [Lesson 1.1.2 Launch Image](#) and conduct a *Dot Talk*.



My Notes

[Add Note](#)

Authors' Vision

Conduct a *Dot Talk* using the steps of a **Math Chat**. Display the [Lesson 1.1.2 Launch Image](#) and say to the students, *Determine the number of dots without counting each dot.*

Expect students to interpret the arrangement in different ways. Instruct them to extend one finger close to their chest when they have an answer. Encourage students to think of more ways to arrange the dots and extend additional fingers when they do. Once all students have at least one counting strategy, ask for volunteers to report their strategy to the class. Record all responses without judgment.

Culturally Responsive Pedagogy

Lesson Launches: Student-Facing



1.1.5

Cooking Ratios

How can I prove two ratios form a proportion?



Launch

Mathematicians look for and make use of structure. Your teacher will display a numerical expression for a *Number Talk*. Think silently about how you might use the structure of the numerical expression to determine the expression's value. Extend one finger close to your chest when you have an answer with a justification.

Culturally Responsive Pedagogy

Community Circles



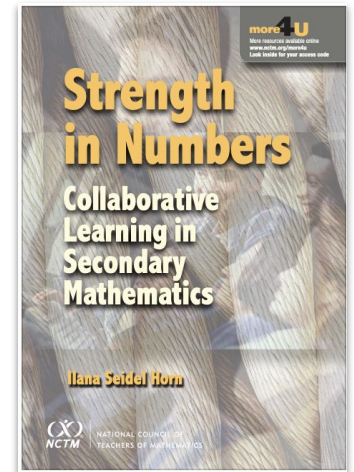
Culturally Responsive Pedagogy

Positive Interdependence



***Positive interdependence** arises when students feel mutual accountability for their learning and believe that their own learning will benefit through their interactions with each other.”*

(Horn, 2012, p. 47)



Culturally Responsive Pedagogy

Student Identity



Culturally responsive teachers plan learning encounters that validate students' lived realities, cultural identities, and heritages.

Student identities are based on family roles, gender, language, race, talents or abilities, career interests.

Mathematical identities are beliefs about one's ability to do, understand, and use mathematics in school and life.

(The Impact of Identity in K-8 Mathematics, 2013)

Want to know more? [Teacher Materials](#) → [Embedded Supports](#) → [Culturally Responsive Pedagogy](#)

Culturally Responsive Pedagogy

Mathography



Your Task:

Review the Mathography for your course:

- + IC1 Lesson 0.1.1—Reflection & Practice 0-8
- + IC2 Lesson 0.1.1—Reflection & Practice 0-9
- + IC3 Lesson 0.1.1—0-2c (Resource Page)

What do you notice? What do you wonder?



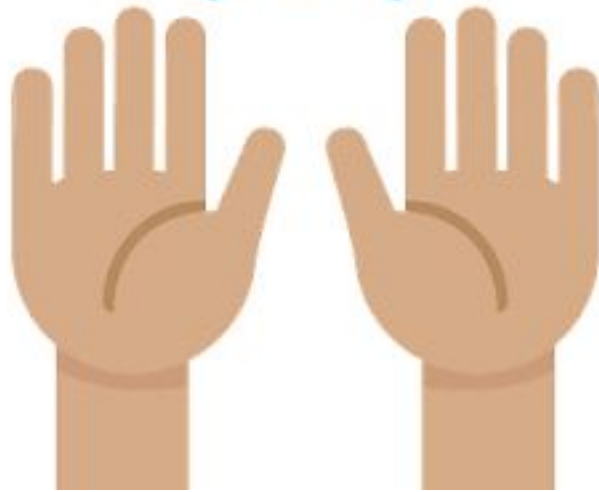
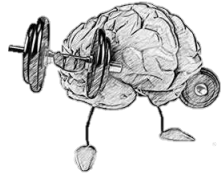
p.5 & 6

Research Connections

Brain Break



Waving Hands



Agenda

Session 1



Focus: Positive Classroom Culture

- + Opening & Icebreaker
- + Culturally Responsive Pedagogy
- + **Research Connections**
- + Math Chats
- + Closure

Learning Target: I can reflect on how my beliefs might impact students and the culture of my classroom.

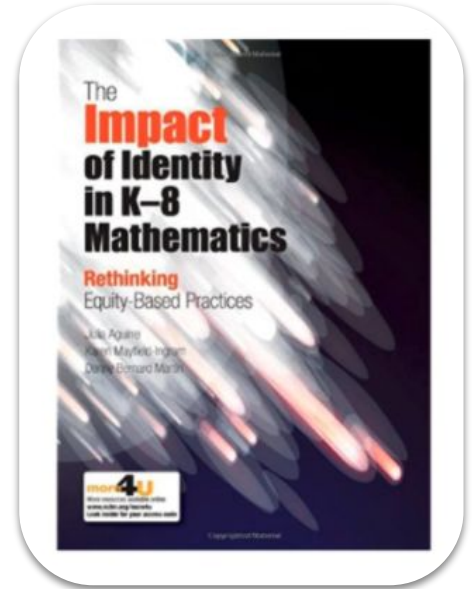
Research Connections

Importance of Identity



“Teachers’ identities as math learners shape their math teacher identities and, in turn, influence the decisions and actions enacted in math classrooms.”

(The Impact of Identity in K-8 Mathematics, 2013)



Research Connections

NCTM's Beliefs about Teaching and Learning



*“Teachers’ **beliefs influence the decisions** that they make about the manner in which they teach mathematics... Students’ beliefs influence their perception of **what it means to learn mathematics** and their dispositions toward the subject.”*

(NCTM, 2014, pp. 10-11)

Research Connections

Not “Good” or “Bad”



Unproductive Beliefs

- + Hinder implementation of effective instructional practice.
- + Limit student access to important mathematics content and practices.

Productive Beliefs

- + Enable implementation of effective instructional practice.
- + Opens mathematics to more students.

Research Connections

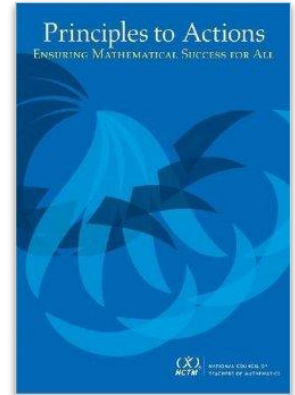
Beliefs



Read the Beliefs about teaching and learning mathematics.

Use the four A's protocol to reflect on the text:

- + (!) What do you **agree** with in the text?
- + (?) What do you want to **argue** with in the text?
- + (☆) What parts of the text do you want to **aspire** to?
- + What **assumptions** does the author of the text hold?



Research Connections

Working Agreements



Be willing to take **risks**.

Have a **visionary** mindset.

Stay **engaged**.

Explore and reflect on your **beliefs**.

Give **grace** to others and yourself.

Change takes time, effort, and support!

Research Connections

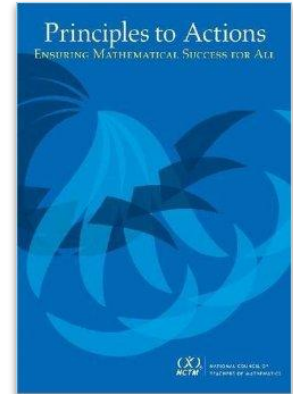
Beliefs Team Discussion



Discussion Rounds

Share one of the following from your reading:

- + (!) What do you **agree** with in the text?
- + (?) What do you want to **argue** with in the text?
- + (☆) What parts of the text do you want to **aspire** to?
- + What **assumptions** does the author of the text hold?



Research Connections

Beliefs Reflection



What does this mean for my work with students?

—

In what areas do I need some more skills, motivation,
and/or resources to make it happen?



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Screen Break

Take a break and walk away from the computer.



Agenda

Session 1



Focus: Positive Classroom Culture

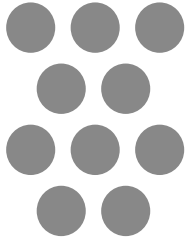
- + Opening & Icebreaker
- + Culturally Responsive Pedagogy
- + Research Connections
- + **Math Chats**
- + Closure

Learning Target: I can use Math Chats to create a positive classroom culture.

Math Chats



Why?



$$54 + 38$$

Which One
Is Unique?

5

8

9

21

*... Students start to believe in themselves mathematically. They become more willing to persevere when solving complex problems. They become more confident when they realize that they have ideas worth listening to. And when students feel this way, **the culture of a class can be transformed.***

Making Number Talks Matter
Cathy Humphreys & Ruth Parker

Math Chats

Talk Moves



The secret to talk moves is not to evaluate, but question for better discourse without acknowledging if the response was right or wrong. Talk moves can work at the small team level or in a whole class discussion.

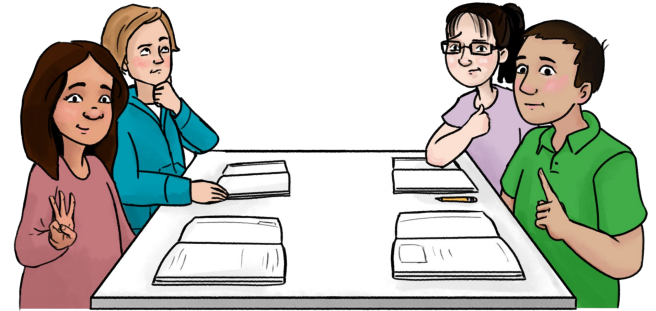
(O'Connor and Chapin)

Math Chats

Steps

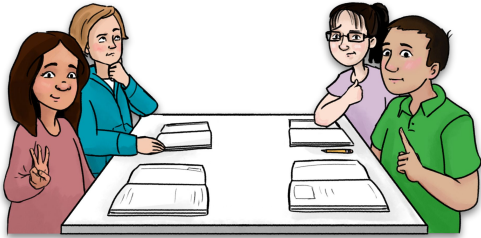


1. Display the problem to the class.
2. Students complete the problem in their heads.
3. Students put a finger up to their chest to represent how many methods or strategies they have.
4. Wait for all students to extend at least one finger.
5. When appropriate, instruct students to talk to their team about answers and justifications.
6. Ask for volunteers to report their responses to the class. Record all answers without acknowledging whether or not they are correct.
7. Discuss methods and use talk moves in a whole class discussion.



Math Chat

IC1 Lesson 2.2.2



$$36 + 37$$

Update your status

One Method: Smiley Face

Two Methods: Thumbs Up

Three Methods: Applause

Math Chats

Embedded Support



IC1 Lesson 2.2.2

Authors Vision

Possible student responses for $36 + 37$:

- Round and Adjust: Round 37 to 40 ; $40 + 36 = 76$; that is 3 too many, so adjust to 73 .
- Take and Give: Take 3 from 36 and give it to 37 to make 40 ; now you have $33 + 40 = 73$.

Students may also take 4 from 37 and give it to 36 to make 40 ; now you have $40 + 33 = 73$.

- Break Addend(s) Apart: Break 36 into $30 + 6$; then $37 + 30$ is 67 ; $67 + 6$ is 73 .
- Add Up: Start with 36 and add 30 to make 66 ; then add 4 more to get 70 ; add 3 more to 73 .
- Add Place Values: $30 + 30 = 60$; $6 + 7 = 13$; now the problem is $60 + 13 = 73$.

Math Chats

Lesson Launches



Station Rotation



Your Task:

- + Take turns being the teacher who uses Talk Moves and leads the Math Chat*.
- + After 4 minutes, switch to a new teacher and Math Chat.
- + Repeat the process.

*Math Chat Steps:

- + Students think about the problem. Wait for students to extend at least one finger.
- + When appropriate, students share answers and justifications.
- + Record answers without acknowledging whether or not they are correct.

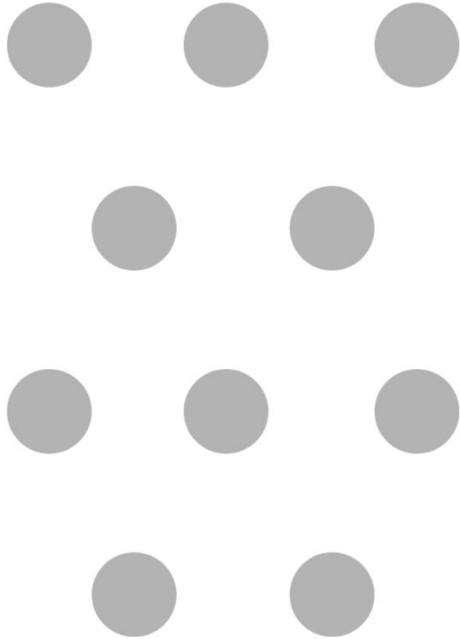
Dot Talk

Number Talk

**Which One is
Unique?**

IC1 - 0.1.2 - Dot Talk

How many are there? How do you see it?



IC2 - 4.1.3 - Number Talk

How many different ways can you calculate it?

Calculate the product:

$$1.25 \times 64$$

IC2 - 1.2.4

Which One Is Unique?

1:6

2:12

3:16

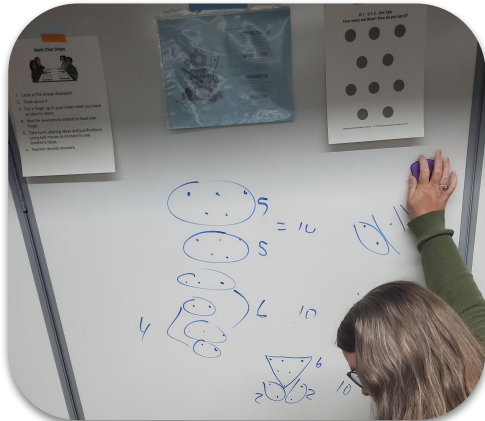
6:36

Math Chats

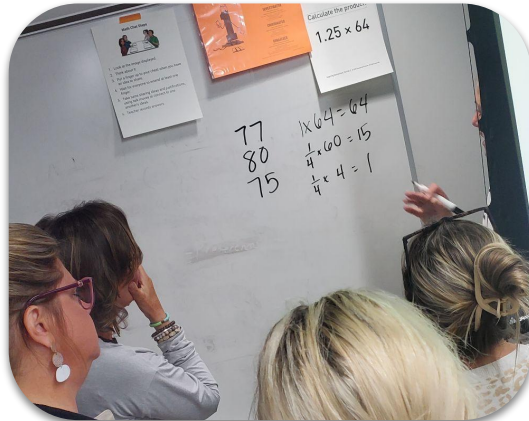
Station Rotation Debrief



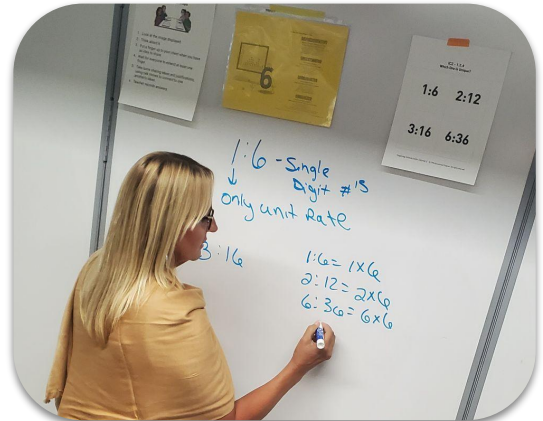
In what ways do these launches support classroom community?



Dot Talk



Number Talk



Which One is Unique?

Math Chats

Reflection



Write a note to your future forgetful self.

- + What do you want to remember about Math Chats?
- + How do Math Chats support a positive classroom community?

Learning Target: I can use Math Chats to create a positive classroom culture.



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Add questions, comments, good ideas to share, and burning issues to the Parking Lot!

Agenda

Session 1



Focus: Positive Classroom Culture

- + Opening & Icebreaker
- + Culturally Responsive Pedagogy
- + Research Connections
- + Math Chats
- + **Closure**

Learning Target: I can reflect on how to develop a positive classroom culture and plan my next steps for the school year.

Closure

Outcomes



Together we have had the opportunity to...

become familiar with the research behind the design of *Inspiring Connections*.

learn how Inspiring Connections supports and develops a positive classroom culture.

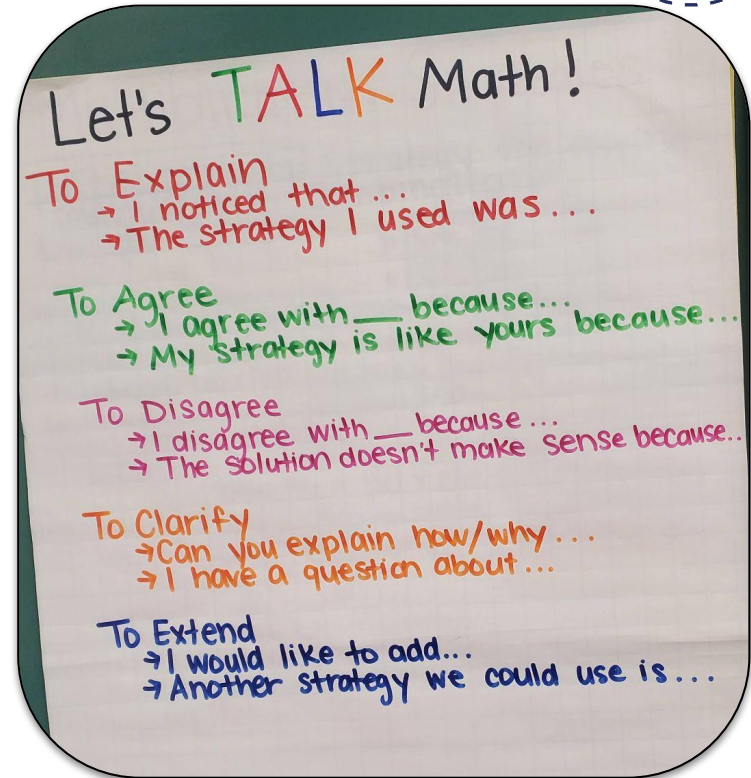
explore and experience Inspiring Connections.

reflect on current practices and beliefs to develop a plan for the implementation of Inspiring Connections.

Closure



- + **Parking Lot**
- + **Attendance & Feedback**
 - Enter passcode in the PL Portal
#####
- + **Before Next Session:**
 1. Go to <http://my.cpm.org>
 2. Click "Use Enrollment Pin" under Account Management.
 3. Enter enrollment PIN :
#####



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