Beginning to Build the Initial AM -ME

Adapted Measure of Math Engagement Research Group,
July 24, 2023

Child Trends

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Agenda

TODAY - Qualitative Meaning-Making

- Team Building
- Survey Development Plan
- Qualitative Data Overview
- Math Engagement Meaning-Making Activity

TOMORROW - Quantitative Meaning-Making

- Team Building
- Quantitative Data Overview
- What Exists, What is New, What Needs to Go Activity
- Closing

Team Building

Get to know each other

Create space to get to know the members of the AM-ME Research Group.

Group norms

Share a summary of our group norms activity from last time and come to agreement about group norms moving forward.

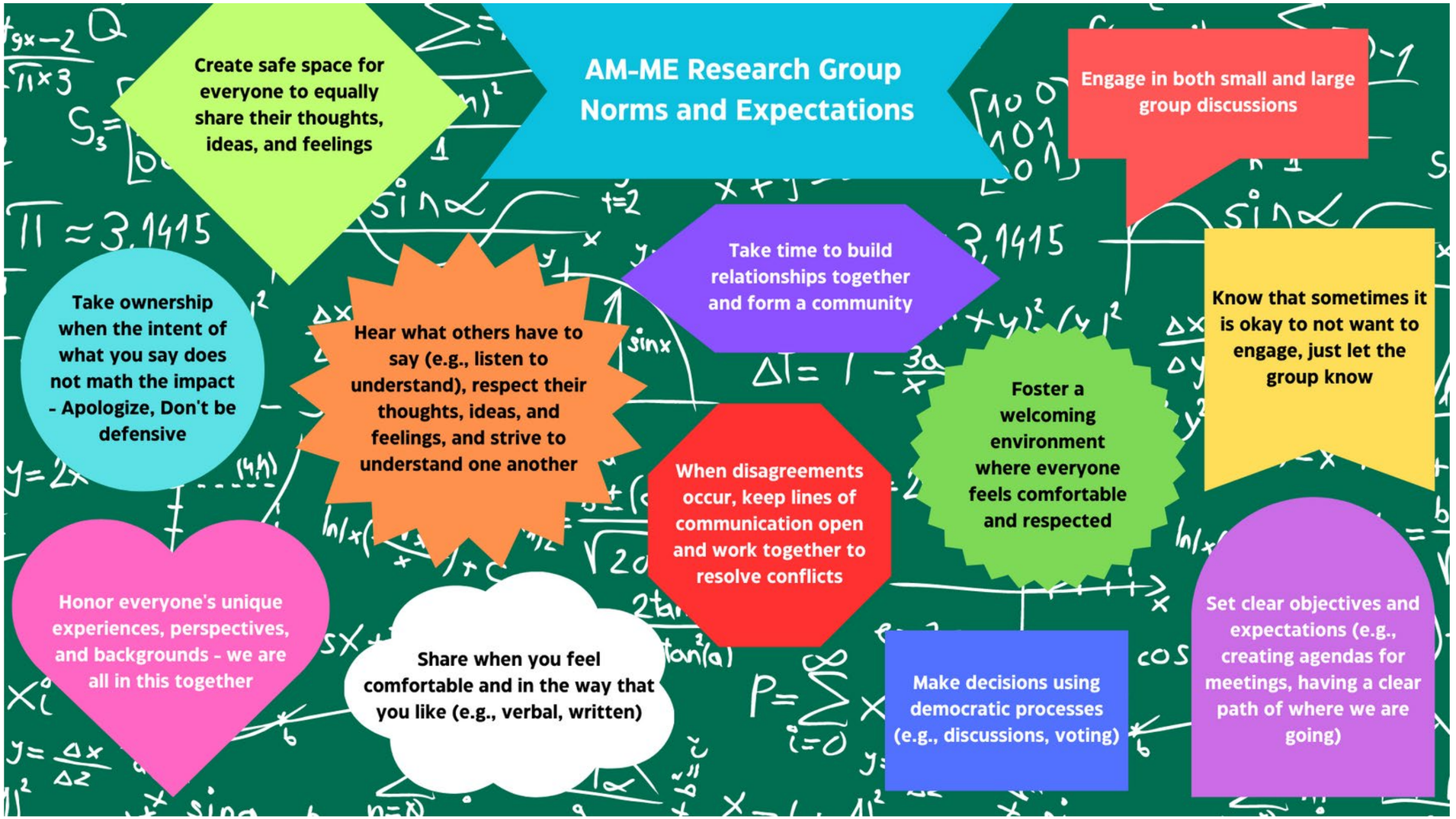
Team Building Activity

B	I	N	G	O
I have gone outside of the country	I own/owned a black cat	I speak more than two languages	I have brown eyes	I am an only child
I am left-handed	I have a green thumb	I play video games	I am sarcastic	I am a musician
I am in high school	I watch anime	FREE SPACE	I am afraid of snakes	I have lived in the desert
I hate chocolate	I've had braces	I have broken a bone	I was born in February	I like sushi
I like to cook	I brush my teeth more than 2 times a day	I like pineapples on my pizza	My name has more than 3 syllables	I like rollercoasters

We're going to play Bingo!

1) Walk around the room asking people the questions on the Bingo board.
2) Don't forget the online folks!
3) Goal is to have names in five squares in a row.

Group Norms

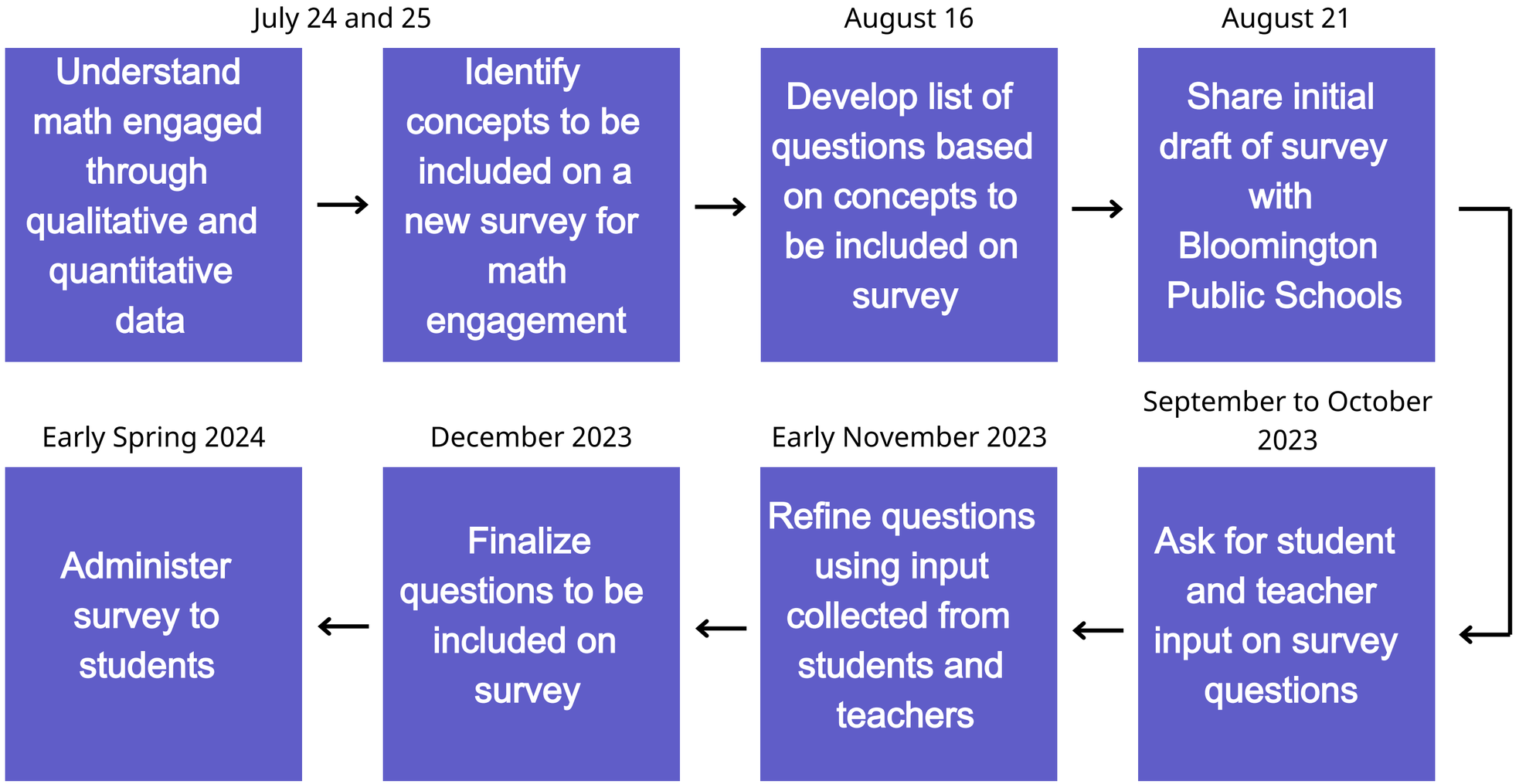

AM-ME Research Group Norms and Expectations
Create safe space for everyone to equally share their thoughts, ideas, and feelings
Engage in both small and large group discussions
Take time to build relationships together and form a community
Take ownership when the intent of what you say does not math the impact - Apologize, Don't be defensive
Hear what others have to say (e.g., listen to understand), respect their thoughts, ideas, and feelings, and strive to understand one another
Foster a welcoming environment where everyone feels comfortable and respected
Know that sometimes it is okay to not want to engage, just let the group know
When disagreements occur, keep lines of communication open and work together to resolve conflicts
Honor everyone's unique experiences, perspectives, and backgrounds - we are all in this together
Share when you feel comfortable and in the way that you like (e.g., verbal, written)
Make decisions using democratic processes (e.g., discussions, voting)
Set clear objectives and expectations (e.g., creating agendas for meetings, having a clear path of where we are going)

Survey Development

How are we creating the survey?

What steps are we going to take to create the initial AM - ME together?

What will this process look like?



Qualitative Data

How did we collect data?

Who did we talk to? How did we talk to them? What did we ask?

How did we analyze data?

What did the process look like? What key definitions do you need to know?

What did we find?

Most common themes, least common themes, differences between middle and high school students, differences between students and teachers

How did we collect data?

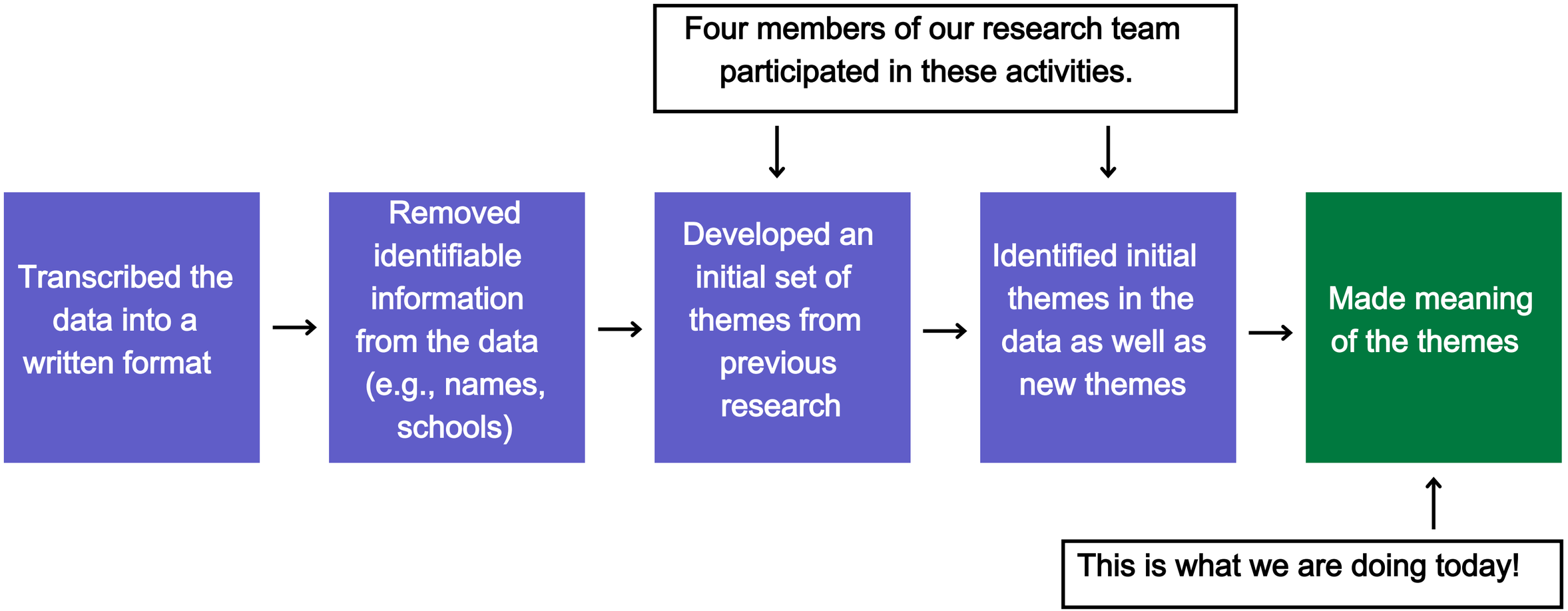
Who did we talk to? How did we talk to them?

Interviews	Focus Groups

• **8 math teachers**
  ◦ 4 in middle school, 4 in high school
  ◦ 7 identify as White, 1 as Non-White
  ◦ 5 identify as female, 3 as male
  ◦ 7 have been teaching 10 or more years, 1 less than 10 years
• Lasted between **25 and 45 minutes** .
• Took place online afterschool in May and June 2023.
• Participants each received a $50 gift card for their time.
	• **50 students** total (between 4 and 7 students per focus group in 9 focus groups)
	  ◦ 68% in middle school, 32% in high school
	  ◦ 48% identify as female, 52% as male
	  ◦ 66% like math, 14% are indifferent, 20% don't like math
	• Lasted between **45 and 90 minutes** .
	• Took place in middle and high schools directly after school in May 2023.
	• Participants each received a $50 gift card for their time.

How did we analyze data?

What did the process look like?



Key definitions you need to know!

- **What are themes?**
  - Themes are the common perceptions, experiences, feelings, values, beliefs, and/or ideas stated by participants.
    - For example, if students discussed how math class is boring during a focus group, we may capture that entire section of the conversation as a theme entitled "feeling bored."
  - Themes are meant us help to explain the data.
  - Themes enable us to summarize a lot of words into one word or short phrases.
  - We may also sometimes refer to themes as "codes".

- **What does it mean to "make meaning" of qualitative data?**
  - Making meaning of qualitative data means that we are interpreting the themes identified to understand a common experience or phenomenon.
  - For example, in this project, we will be interpreting the themes identified to capture how Black and Latino students understand math engagement.

What did we find?

Reminder!

All of these themes are related to **how students and teachers describe math engagement and what engagement looks like to them.**

Most common student themes

1. Negative student-teacher relationships
2. Work with peers or friends
3. Positive student-teacher relationships
4. Understands math

Most common teacher themes

1. Works with peers or friends
2. Instruction style
3. Differentiated learning strategies

Least common themes overall

1. Feels isolated
2. Feels motivated
3. Listens in class
4. Learns from mistakes

Differences between students and teachers

Themes mentioned by students, not teachers

1. Feels bored
2. Feels dumb
3. Receives rewards

Theme mentioned by teachers, not students

1. Family obligations

Differences between middle school and high school

Themes mentioned more often in middle school than high school

1. Negative student-teacher relationships
2. Works with peers or friends
3. Completes homework
4. Distracted in class

Themes mentioned more often in high school than middle school

1. Positive student-teacher relationships
2. School and class schedule
3. Asks questions (or for help)
4. Feels judged

*Important to remember that there were more middle school student participants than high school.

Differences between schools based on percentage of Black and Latino students

Themes mentioned more often in schools with 50-74% Black and Latino students

1. Works with peers or friends
2. Positive student-teacher relationships
3. Distracted in class
4. Enjoys math

Themes mentioned more often in schools with 0-24% Black and Latino students

1. Completes homework
2. Classroom management and structure

Meaning-Making Activity

Parts 1 - 3

Group 20 themes at a time.

Part 4

Reflection.

Part 5

Large group consensus about final theme groupings.

Part 1 - Group Codes (20 minutes)

We will be in 3 groups to start .

Remember the grouping activity you did last time? That was prep for the work we'll be doing today and tomorrow.

1. Use the digital placemat provided to group the 20 themes and define your groupings
2. For defining groups, write a “title” that is one to two words that describes the themes in the group as well as a one to two sentence description of how the group is related to math engagement.
3. If you have time, walk around the room and see what other groups did for their placements and definitions. Feel free to ask questions.
4. If you need more information about any of the themes, ask one of us and we can help you look up the quotes associated with a theme.

Part 2 - Group Codes (20 minutes)

Next, we have 20 additional themes for you to consider. Note that you can change your groupings if the ones you came up with last time no longer work well.

1. Use the digital placemat provided to group the additional 20 themes.
2. Define the groups. Do any titles (1-2 words) need to change? Write 1-2 sentence definitions for any new groups and modify any existing definitions to ensure it matches the themes you've included.
3. If you have time, walk around the room and see what other groups did for their placements and definitions. Feel free to ask questions.
4. If you need more information about any of the themes, ask one of us and we can help you look up the quotes associated with a theme.

BREAK

Part 3 - Group Codes (20 minutes)

Next, we have the final 11 themes for you to consider. Note that you can change your groupings if the ones you came up with last time no longer work well.

1. Use the digital placemat provided to group the final themes.
2. Define the groups. Do any titles (1-2 words) need to change? Write 1-2 sentence definitions for any new groups and modify any existing definitions to ensure it matches the themes you've included.
3. If you have time, walk around the room and see what other groups did for their placements and definitions. Feel free to ask questions.
4. If you need more information about any of the themes, ask one of us and we can help you look up the quotes associated with a theme.

Part 4 - Reflection (20 minutes)

We will now work as one large group.

Each team will share their theme groupings and describe the themes within them. You will receive a handout you can use to take notes as well.

- As each team is sharing their theme groupings, the other teams will take note of:
  - What similarities you see
  - What differences you see and things you might change
  - Additional questions you have

Part 5 - Consensus (20 minutes)

We will continue in one large group.

We will have a new placemat to work with and encourage you to take notes and utilize the handout we gave you during the reflection.

- Place theme groupings (and themes) that are similar across the three teams on the placement.
- Discuss remaining theme groups (and themes) from each team and where they fit on the placemat:
  - Can any of these remaining themes or groupings be combined?
  - Should any remaining groupings stay on their own?
  - Do any new groupings need to be made?

Preview for tomorrow

Team Building + Review

We'll continue to get to know each other and review what we did today.

Quantitative Data Overview

Discuss the survey data collection and analysis process.

What Exists, What is New, What Needs to Go Activity

We will utilize the groupings from today and work on connecting survey questions to these groupings.

Stay Connected

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Learn more about the Adapted Measure of Math Engagement at https://www.childtrends.org/project/adapted-measure-of-math-engagement.