Community Math Night Educator Training Session 2

March 18, 2021

West Virginia

Institute of Education Sciences

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REL Appalachia at SRI International

REL Appalachia facilitators

Kerry Friedman

Laura Kassner

Carmen Araoz

Phil Vahey

Eliese Rulifson

Today's goals

- Participants will **practice math station activities** and discuss considerations for implementing the activities in their schools.

- Participants will discuss considerations for planning a **Community Math Night** at their school.

Agenda

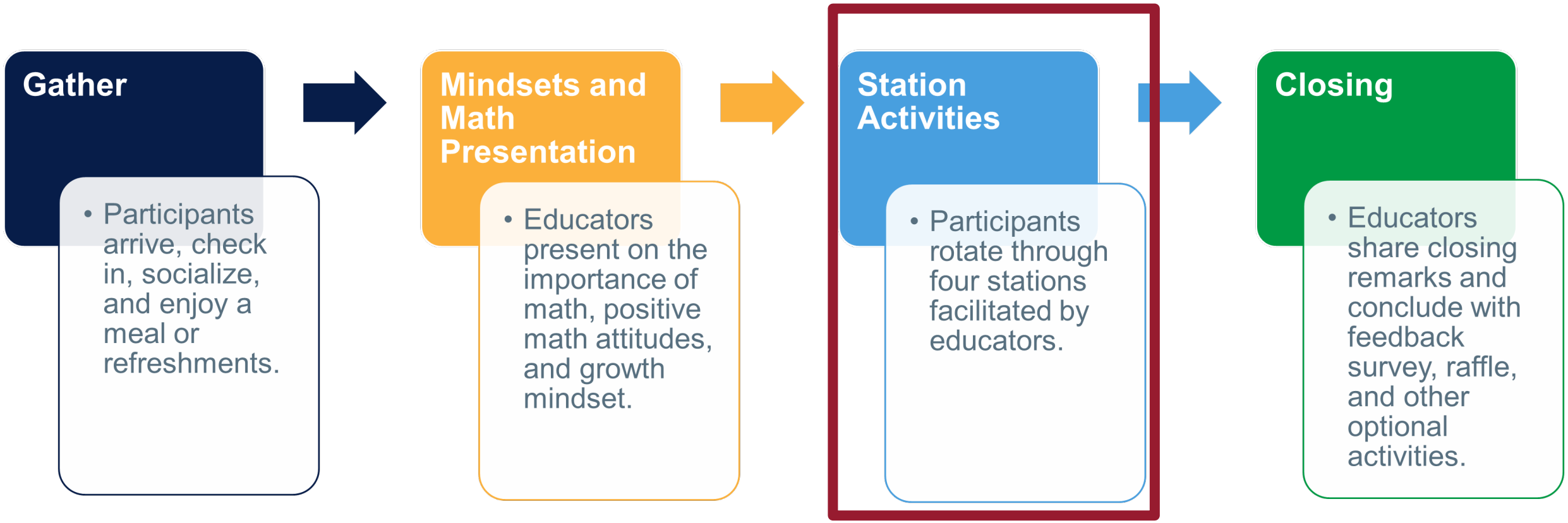
Time	Agenda item
10 min	Welcome
30 min	Numbers and Operations in Base 10 station activities
20 min	Measurement and Data station activities
40 min	Planning your Community Math Night
10 min	Wrap-up

Icebreaker

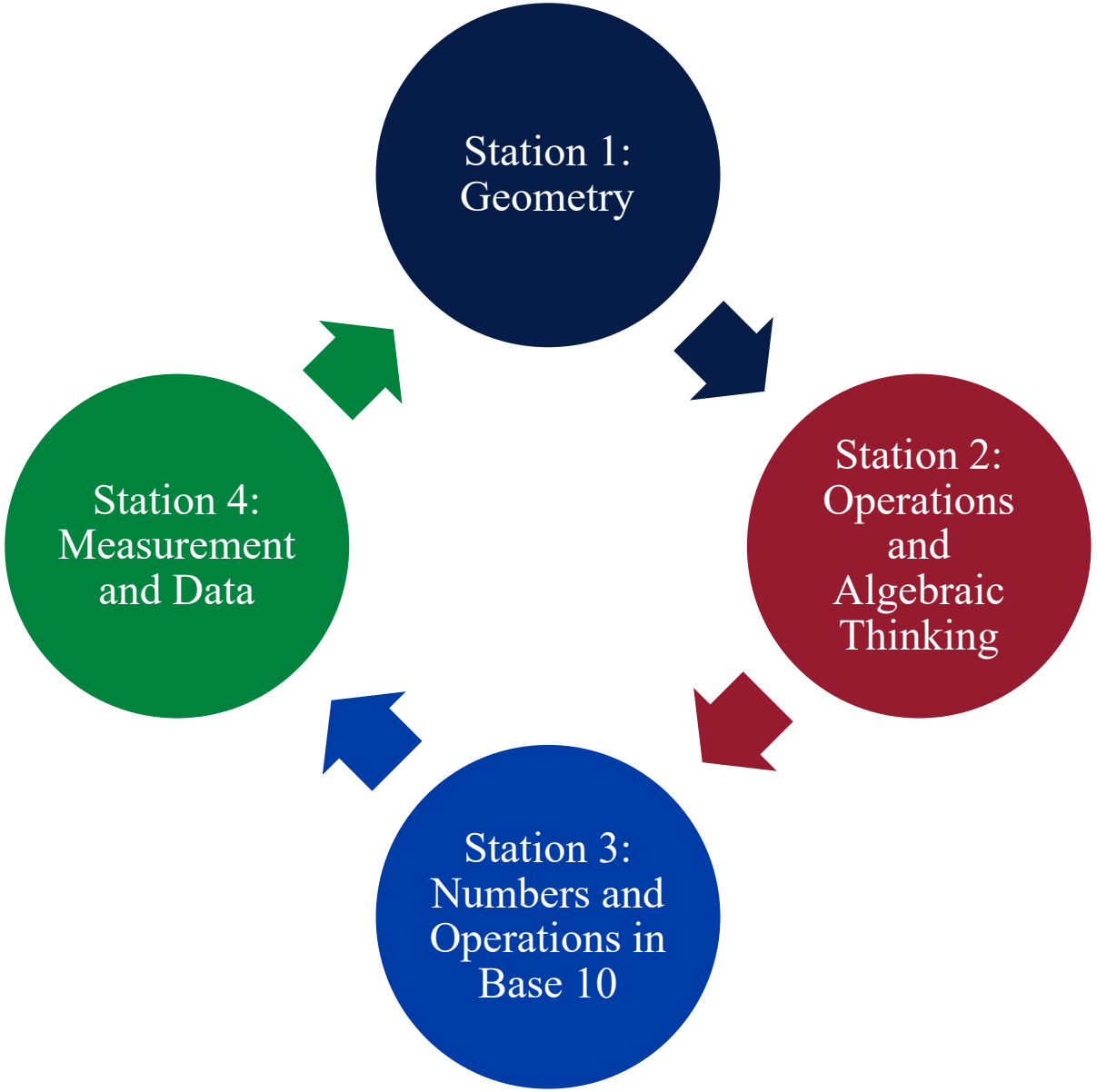
- In the chat box:
  - Share one new way you are engaging families since the start of the pandemic.

Numbers and Operations in Base 10 Station Activities

Community Math Night components



Station rotation



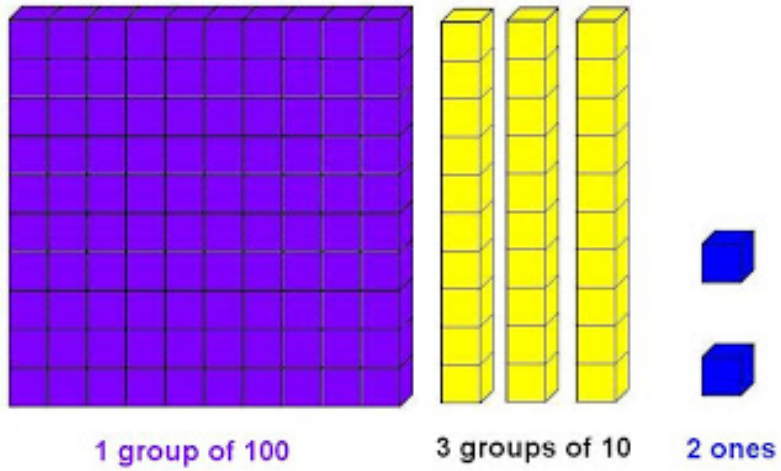
Station overview

Station 3: Numbers and Operations in Base 10

- The Numbers and Operations in Base 10 station includes three activities:
  - Activity 3a: **Race to 100**, recommended for children in grades **K through 1**.
  - Activity 3b: **Broken Calculator**, recommended for children in grades **2 through 3**.
  - Activity 3c: **Dinner Time**, recommended for children in grades **4 through 5**.

Know before you go

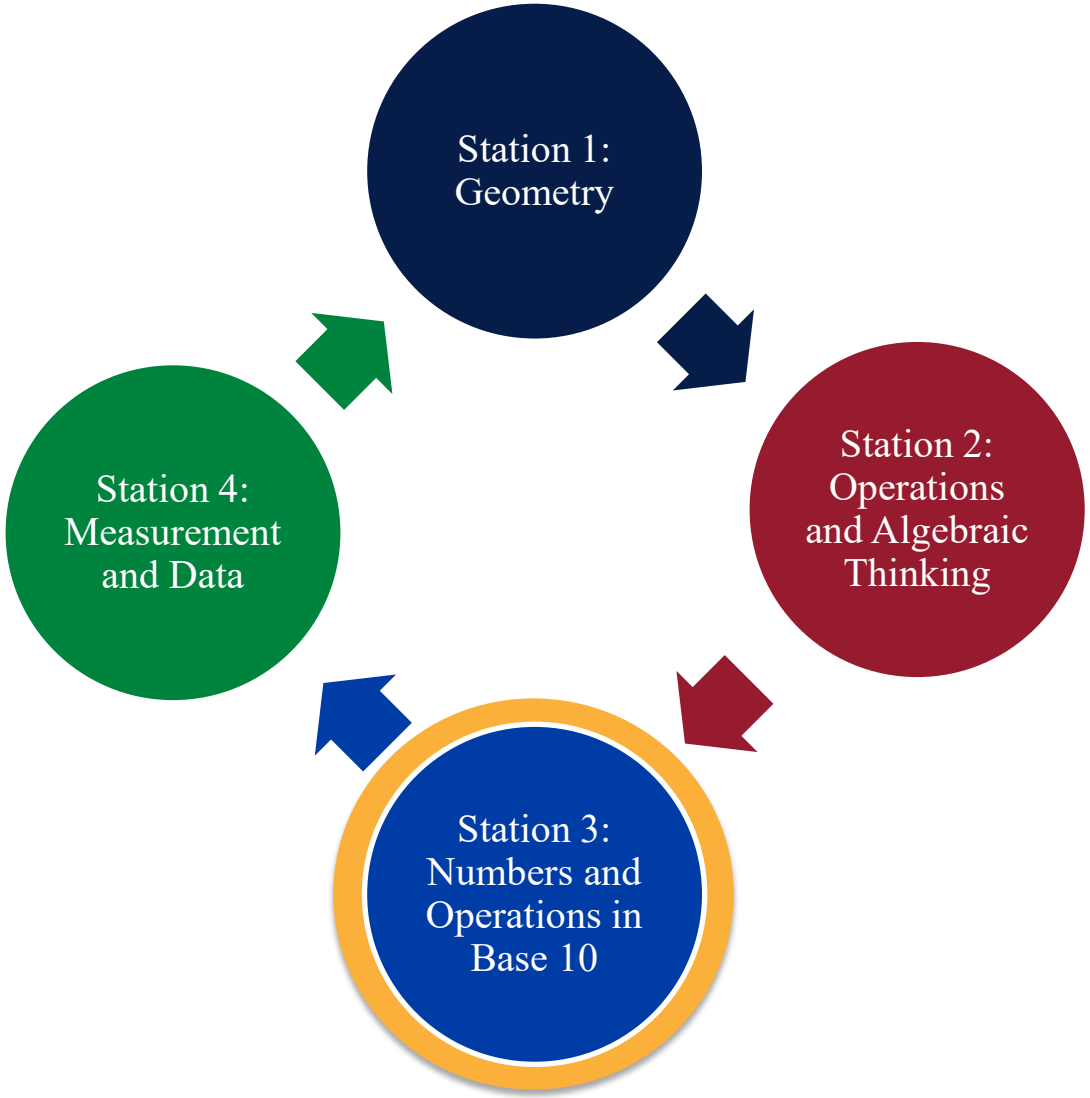
- Developing a strong understanding of the base-10 number system and place value helps students perform operations with fluency and then solve multistep and complex problems.
- Activities that emphasize conceptual problem solving, rather than transmission of rules and procedures, support a stronger understanding of place value and promote fluency with operations.



(Star et al., 2015)

For each activity…

- Review and practice each activity with your group.
- Consider:
  - How will family members engage with the activities? Will they find them engaging? Challenging?
  - Is there anything that you think will be confusing or unclear for families in your community?
  - How will you implement the activity in your school setting? Consider virtual, hybrid, and in-person implementation.



Discussion

- How will family members engage with the activities? Will they find them engaging? Challenging?
- Is there anything that you think will be confusing or unclear for families in your community?

- How will the facilitator lead this activity? What considerations are there when implementing this activity virtually?

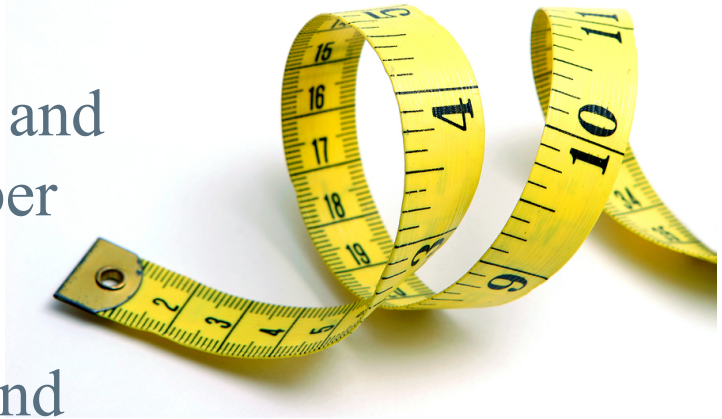
Measurement and Data Station Activities

Station overview

- The Measurement and Data station includes one activity with family prompts differentiated for students in grades K through 1, 2 through 3, and 4 through 5.

Know before you go

- Measurement is a key competency in the development of mathematical and scientific thinking from preK through middle school, and it is fundamental to STEM education.
- With measurement, children learn to compare magnitudes and observe changes, and these skills bridge the areas of number sense and geometry.
- Use of mathematical tools such as rulers, tape measures, and metersticks is key to building conceptual understanding of measurement and supports students' thinking and problem-solving abilities.



(Barrett et al., 2017; Sarama & Clements, 2009; Hiebert, 1984)

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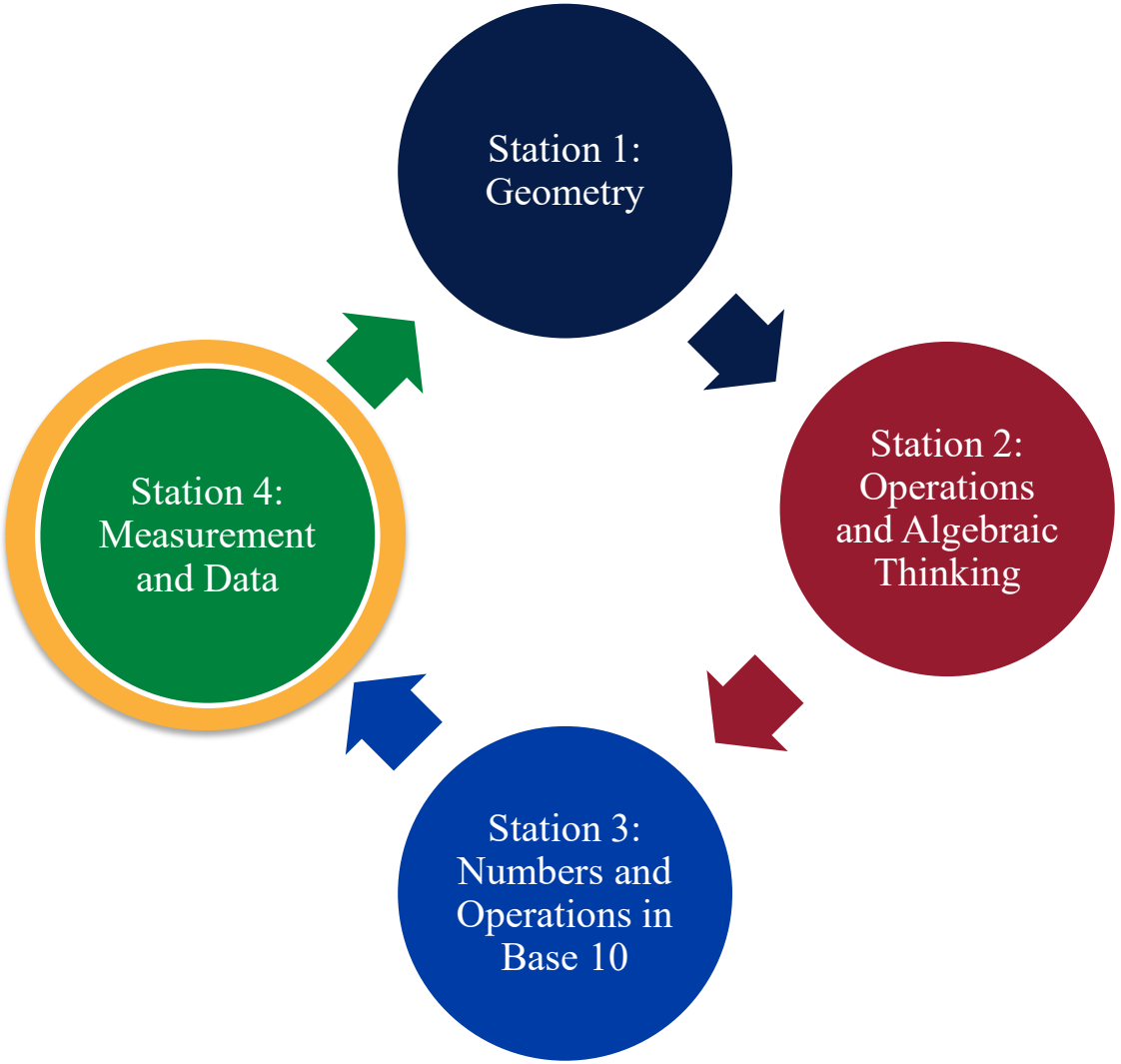

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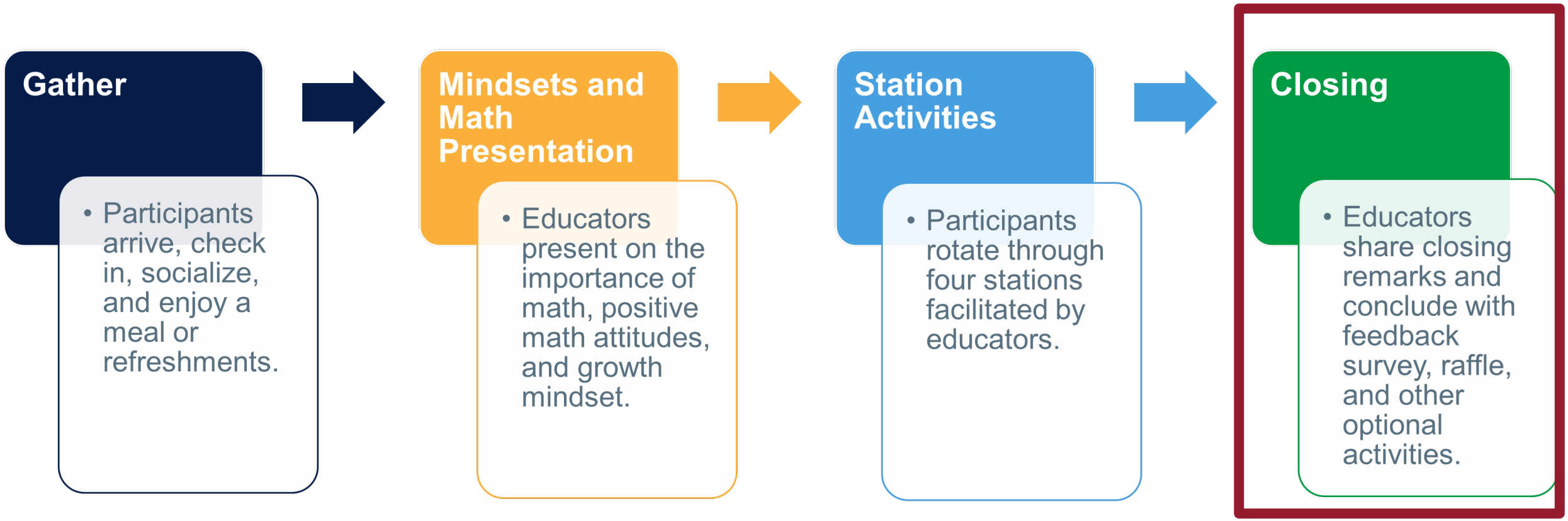
Community Math Night components



Planning Your Community Math Night

Lay the Foundation
8 weeks out

Promote Enthusiasm and Participation
4 weeks out

Build on Your Success
CMN through 1 week after

Coordinate Personnel and Resources
6 weeks out

Bring It All Together
2 weeks out

Lay the foundation (6–8 weeks out)

- Form your core planning team
- Determine your goals and objectives
- Select event date, time, and location
- Develop a budget

Facilitating training for your core planning team

- Have all core team members spend time exploring the Mindsets and Math presentation as well as the math-station activities and material – just like we did today and in our prior training.
- Schedule a time (approximately two or three hours) for all core team members to come together to reflect on the research and practice working through the activities.
- Consider assigning one team member to lead the presentation and another to lead each station activity.
- When practicing the Community Math Night activities, consider assigning team members to participate from the perspective of different participants, such as facilitator, family, and student.
- After listening to the presentation and practicing each activity together, discuss potential adaptations or revisions to the activities.

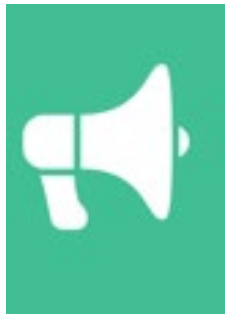
Coordinate personnel and resources (4–6 weeks out)

- Confirm agenda and plan for activities
- Assess resources and supplies
- Recruit volunteers as needed
- Set up event registration

Planning for remote/virtual math nights

- Be creative and flexible in your approach.
  - Consider asynchronous and synchronous approaches.
  - Consider both physical and virtual materials.
  - Find ways to encourage participant interaction.
- Develop a process agenda and practice with your colleagues.
  - Detailed step-by-step instructions for facilitators and practice run-throughs will help the event run smoothly.
- Retain the core components of the math night. Make sure your math night includes:
  - Formal and informal opportunities for families and educators to interact.
  - Community building.
  - Mindsets and Math presentation.
  - Hands-on activities that support adults in engaging with their children.
- Consider access.
  - Provide or confirm participants have the necessary technology.

Promote enthusiasm and participation (2–4 weeks out)

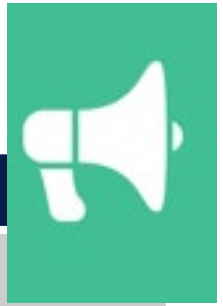


Develop a communications plan

Create promotional materials and content

Reach diverse families

Sample communication plan



Timeframe	Channel	Sample message
4 weeks out	County/school web calendars and school website	Update event with description, registration links
4 weeks out	Schoolwide message, all class newsletters	Save the date for math night, call for interested volunteers, vendors, sponsors
2 weeks out	All class newsletters and teacher blogs, flyers around community	"Hope you're hungry and ready to stretch your brains at Community Math Night! Chance to win prizes."
1 week out	All class newsletters and flyer included with report cards	"Can't wait to see you next week at Community Math Night!"
Day before	Reminder flyers go home, text messages from teachers	"We hope to see you and your family at our Community Math Night event on Wednesday. FREE dinner will be served at 5, followed by fun games to support your child's growth in math."
Day of	Reminder robo-calls	Reminder: include a trivia question – "Come with the answer for a bonus entry to win a new mountain bike tonight at Community Math Night. Doors open at 5 for dinner!"

Bring it all together (2 weeks out up until the event)

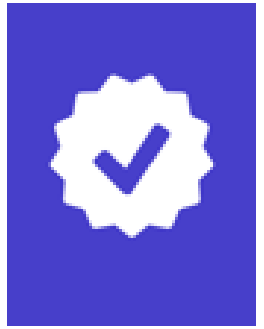
Stay organized

Practice

Implement

Collect Feedback

Build on your success (after your event)



Reflect as a team

Build on your momentum

Reflect and share

- What are some challenges you have experienced when trying to reach families (in-person or remotely)?
- What are ways you've addressed these challenges in the past?
- What ideas do you have for reaching all families to promote enthusiasm and participation?

Wrap-Up

Support available

Access the planning and activity materials:
https://drive.google.com/drive/folders/1s9EUTCqTYt9c0vyu069sfqGGewqsW7WX?usp=sharing

Questions?

Thank you!

https://ies.ed.gov/ncee/edlabs/regions/appalachia

RELAppalachia@sri.com

@REL_Appalachia

References

Barrett, J. E., Clements, D. H., & Sarama, J. (Eds.). (2017). *Children's measurement: A longitudinal study of children's knowledge and learning of length, area, and volume*. Reston, VA: National Council of Teachers of Mathematics.

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