

Community Math Night Educator Training

Part 1 – Introduction to Community Math Nights

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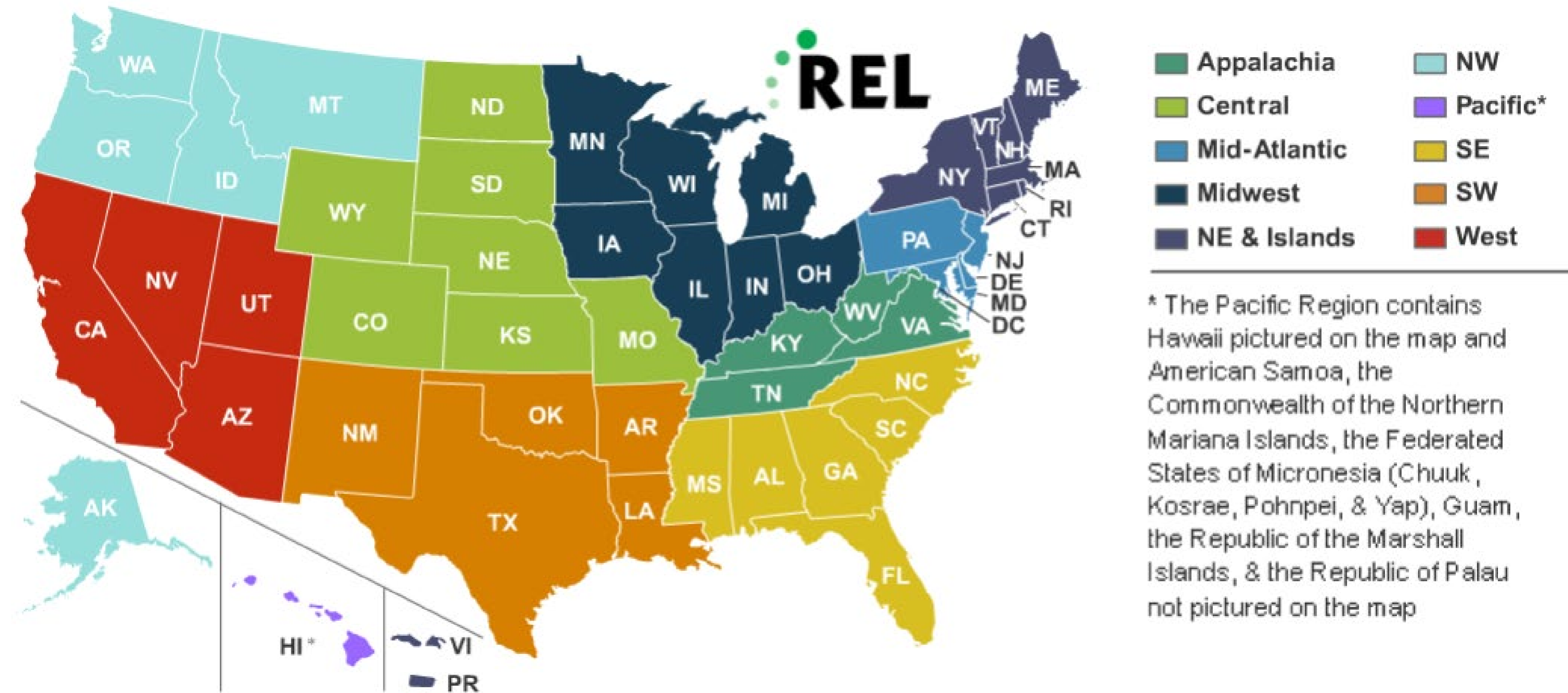
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The EdVenture Group

For our 60 minutes together...



Time	Agenda item
10 min	Welcome and introductions
20 min	Math, family, and mindset
10 min	Training and support
15 min	Getting started
5 min	Wrap up

The Regional Educational Laboratories



The 10 RELs work in partnership with stakeholders to support a more evidence-based education system.

Administered by the U.S. Department of Education, Institute of Education Sciences (IES)

Find us on the web! <https://ies.ed.gov/ncee/edlabs/regions/appalachia/>

Applied Research

Training, Coaching, and Technical Support

Dissemination


IES Institute of Education Sciences

Regional Educational Laboratory Appalachia
At SRI International

REL 2020-017
U.S. DEPARTMENT OF EDUCATION


What Tools Have States Developed or Adapted to Assess Schools' Implementation of a Multi-Tiered System of Supports/Response to Intervention Framework?

A Publication of the National Center for Education Evaluation and Regional Assistance at IES




Supporting Your Child in Developing Math Skills For Future Success

Math success opens doors to college and careers.
The technical and professional jobs of the future demand more mathematical knowledge and problem solving skills.



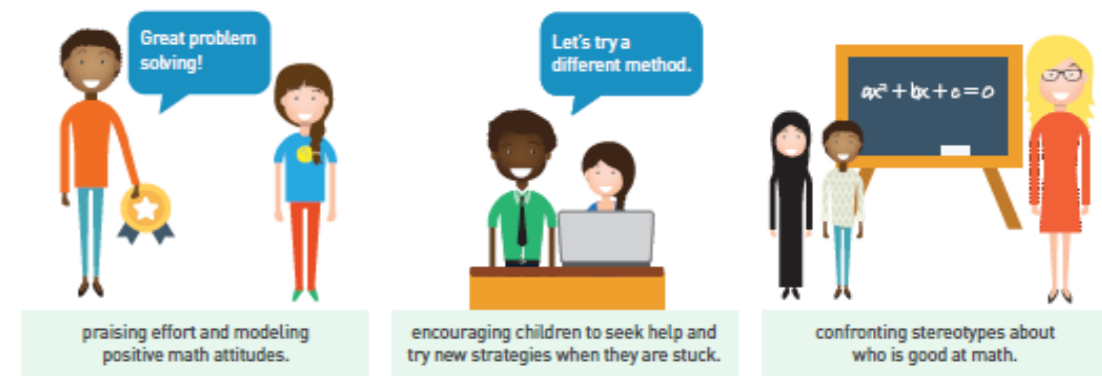
Children who believe they can be successful in math are more willing to put in effort, even when they struggle, and this results in better performance.¹

Success in elementary school math predicts future achievement in middle and high school math and other subjects.^{2,3}

Students who complete higher-level math in high school earn higher incomes in the future.⁴

The number of STEM (science, technology, engineering, and mathematics) jobs is growing and half of all STEM jobs are available to workers without a four-year college degree. STEM jobs pay 10% more than other jobs available to these workers.⁵

Families can support children in developing math skills for the future by⁶:



Great problem solving!

Let's try a different method.

$ax^2 + bx + c = 0$

praising effort and modeling positive math attitudes.

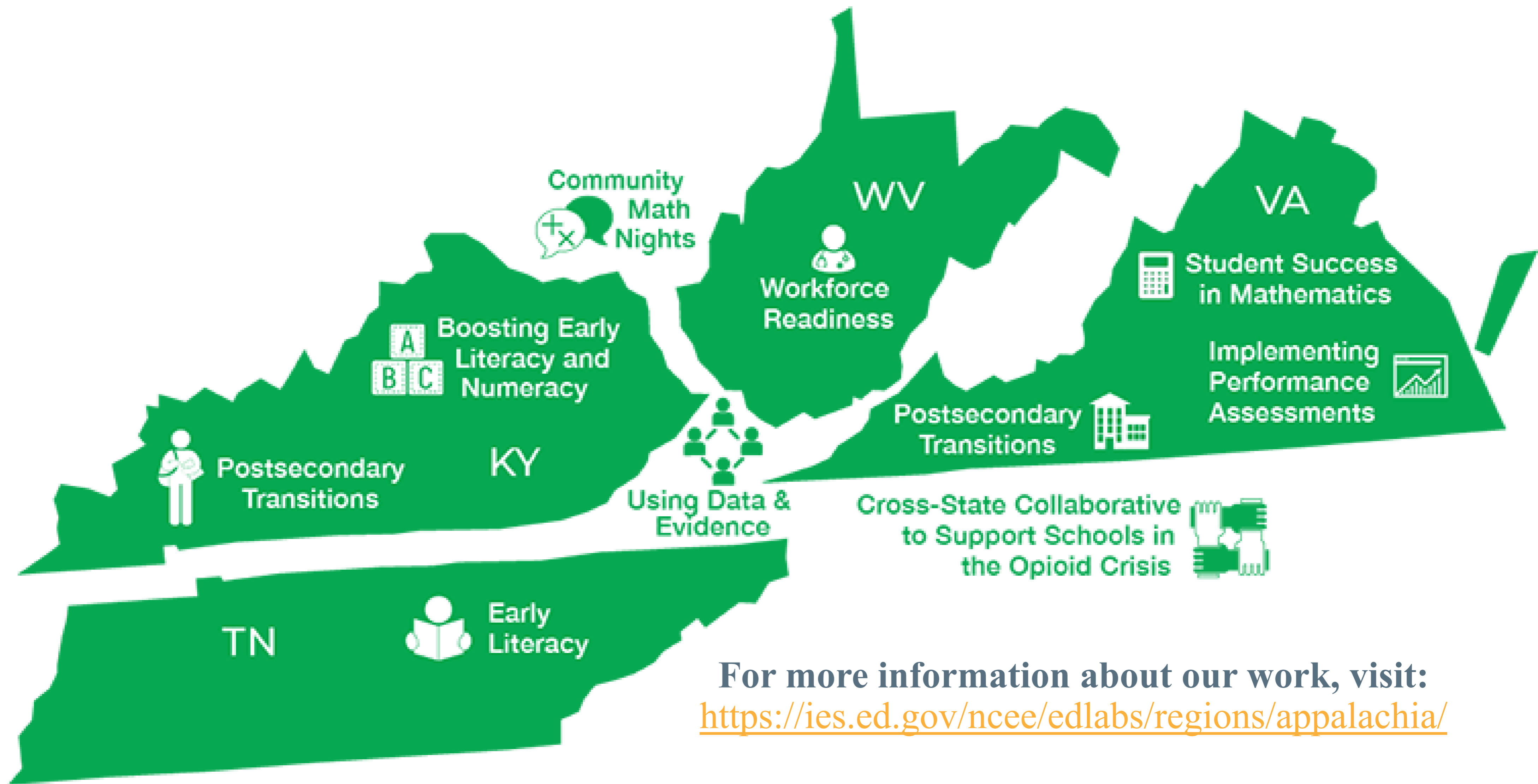
encouraging children to seek help and try new strategies when they are stuck.

confronting stereotypes about who is good at math.

REL APALACHIA

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About WVFEC

The West Virginia Family Engagement Center helps families participate in their child's learning both inside and outside of school through SEAMless Family Engagement.

WVFEC is led and operated by The EdVenture Group, Inc., a nonprofit education leader based in Morgantown, WV.



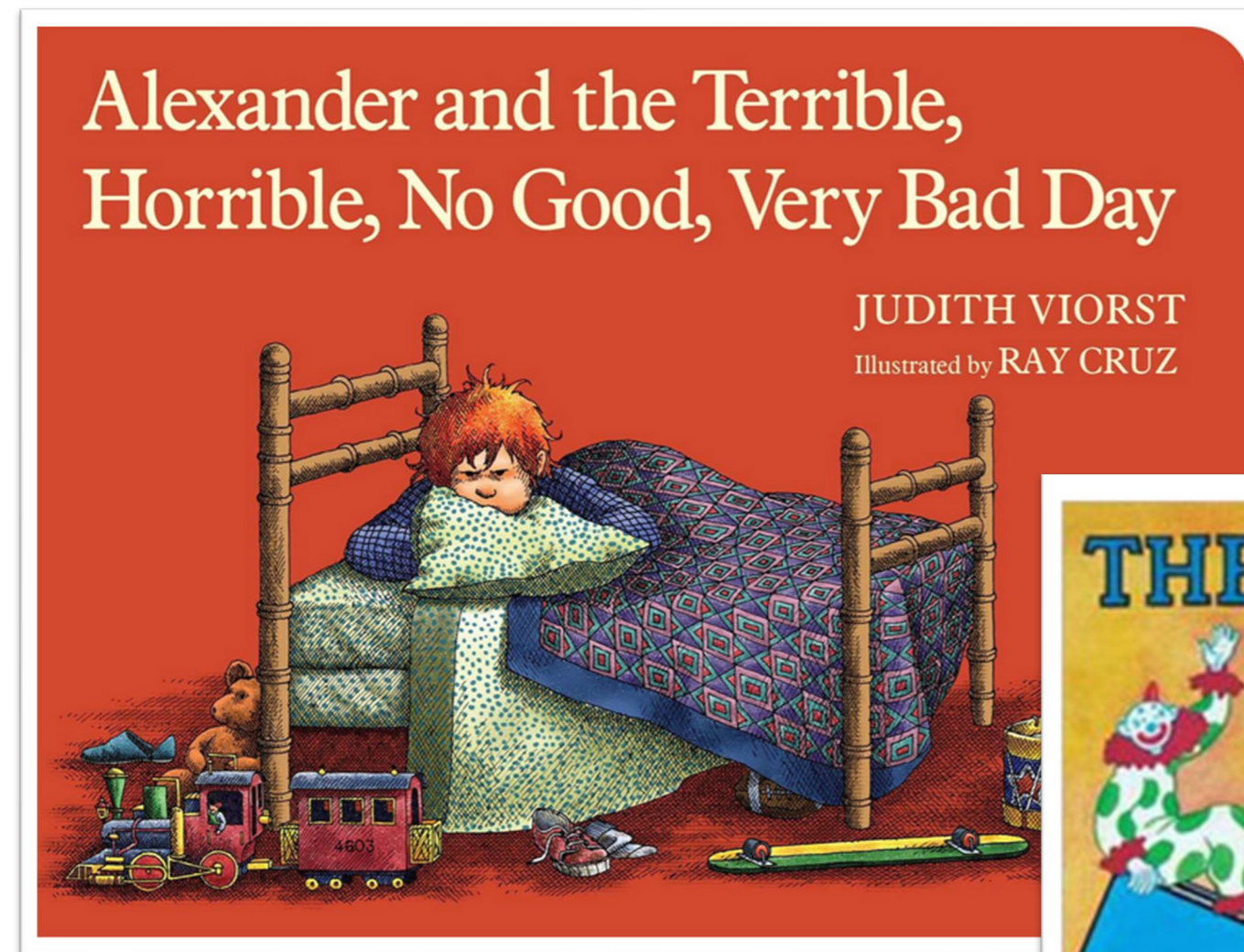
Icebreaker!

- In the chat, please put your name, where you are joining from, and your role.

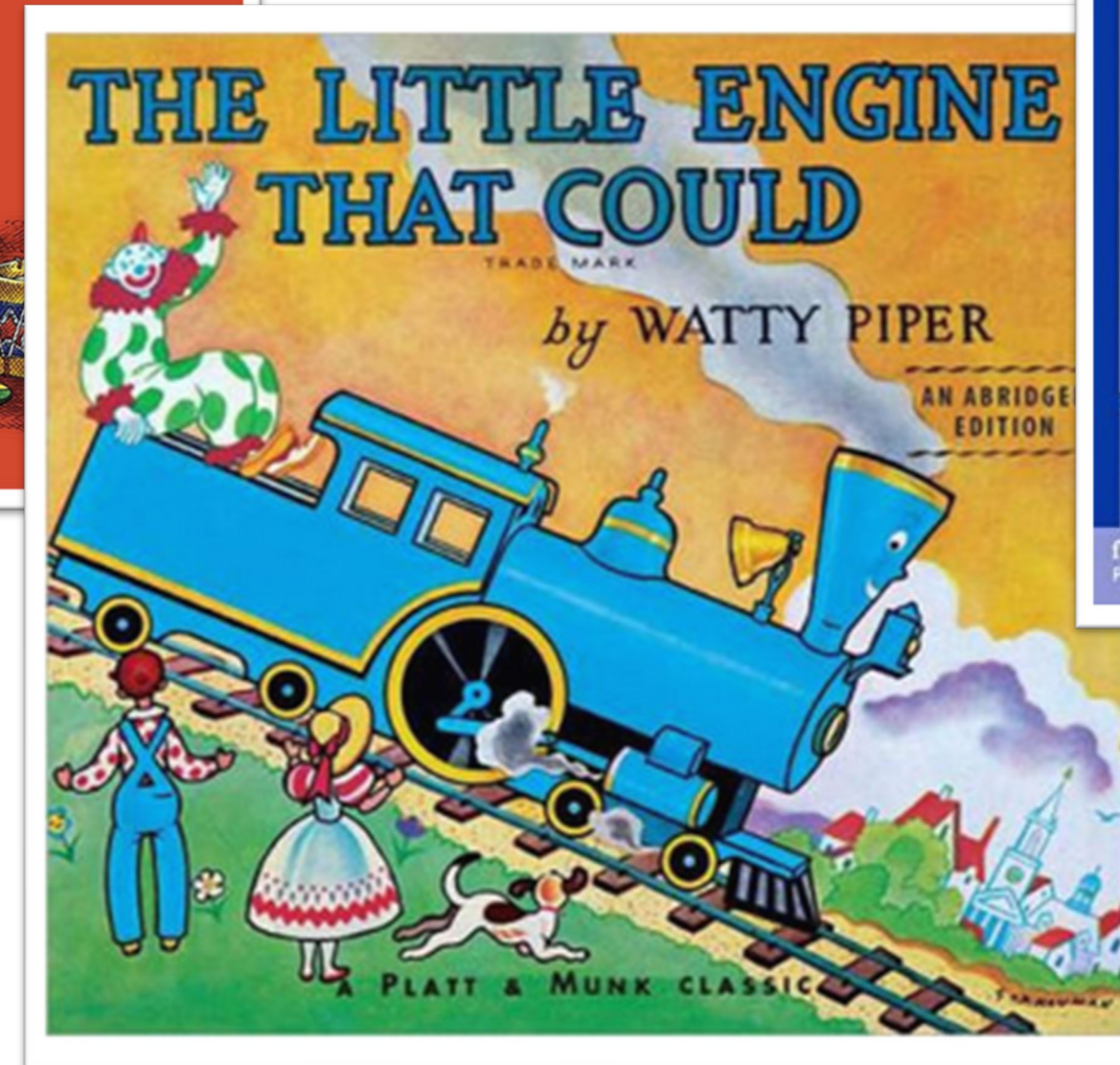


When you think about math learning, which book is most like you?

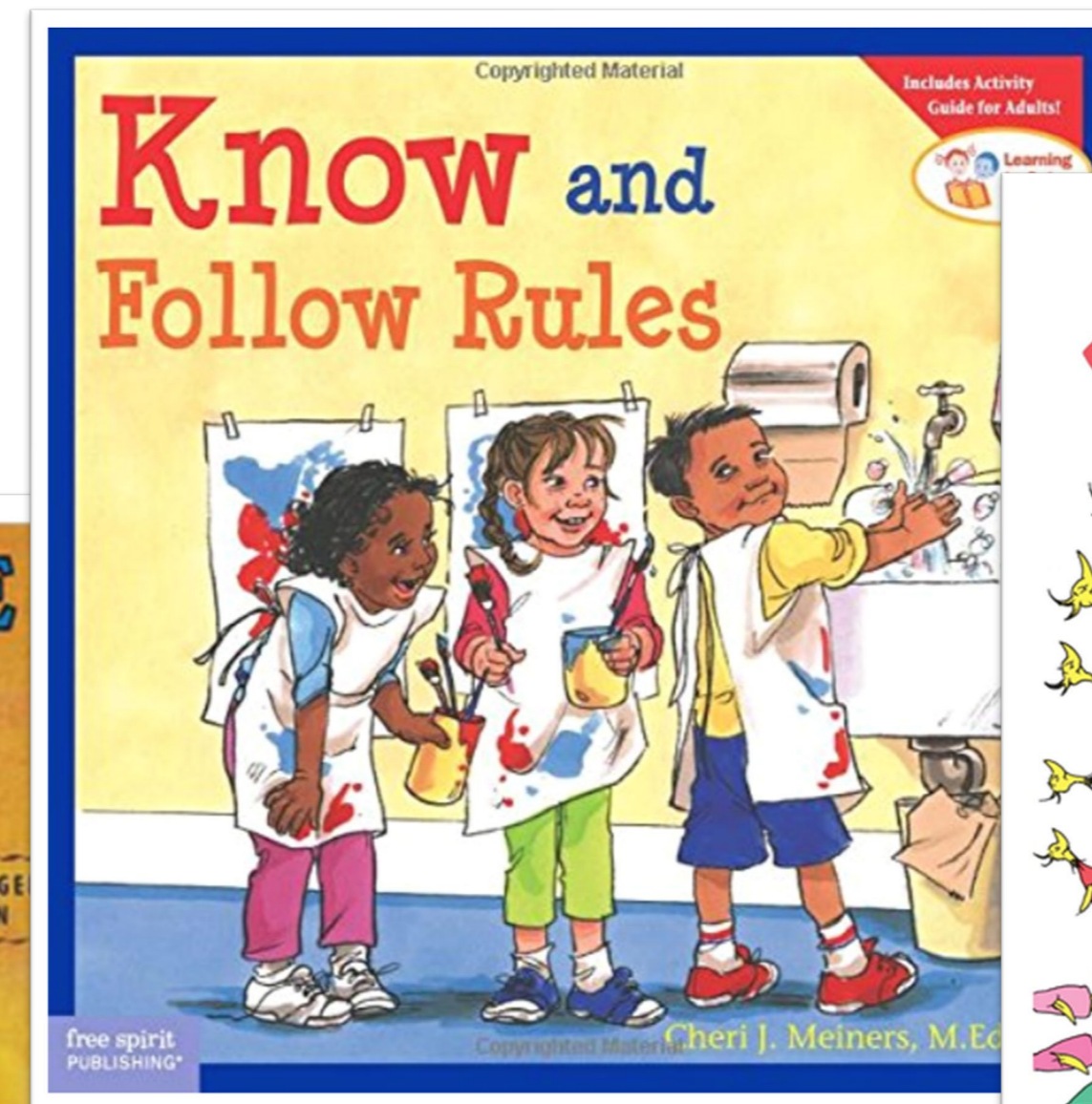
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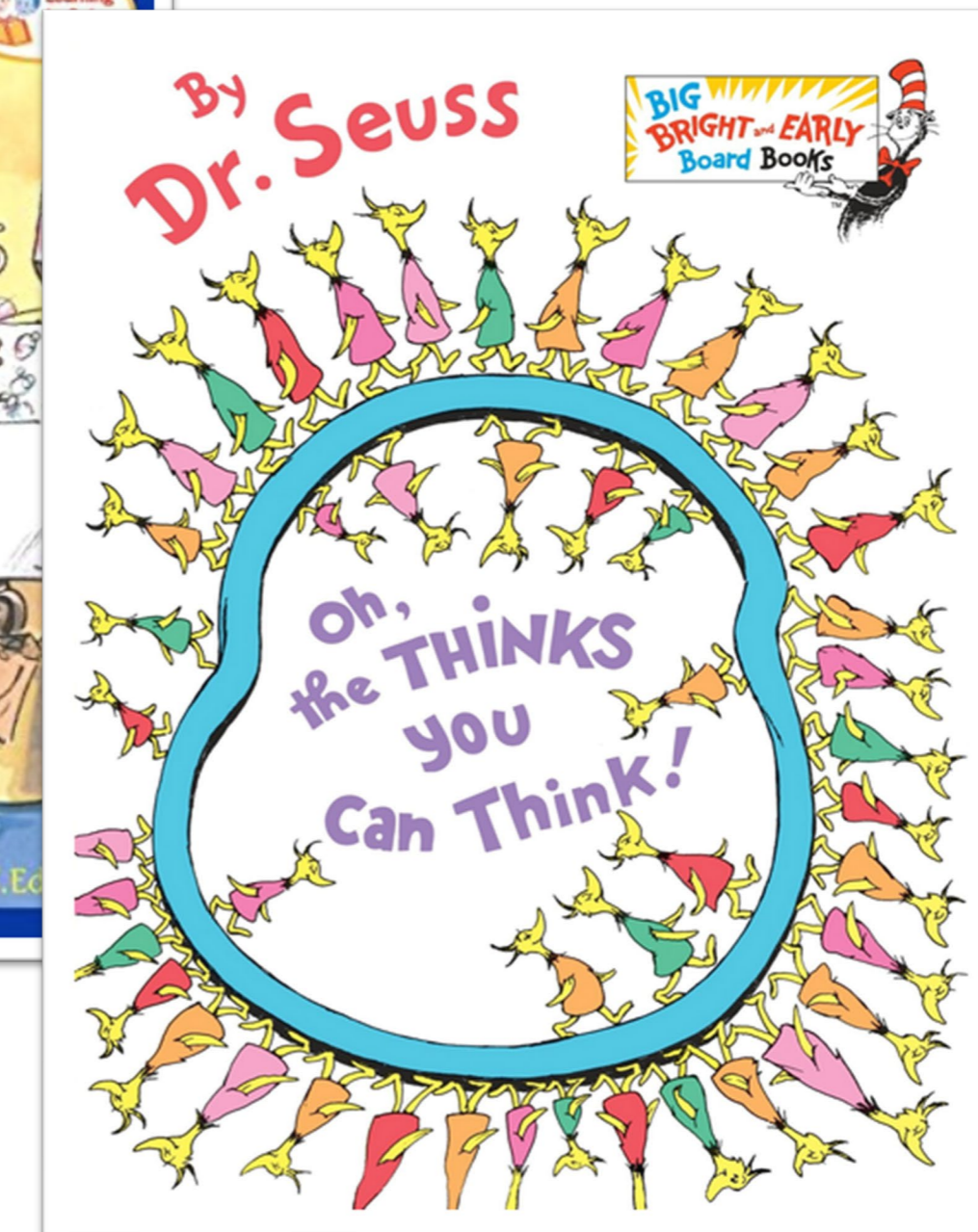
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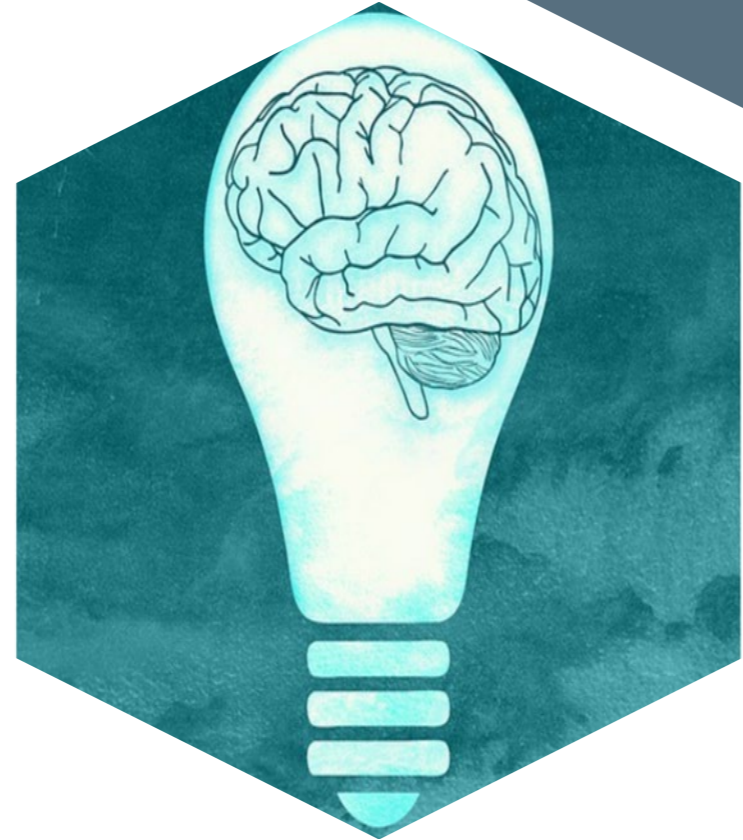
Math, Family, and Mindset

Why host a Community Math Night?



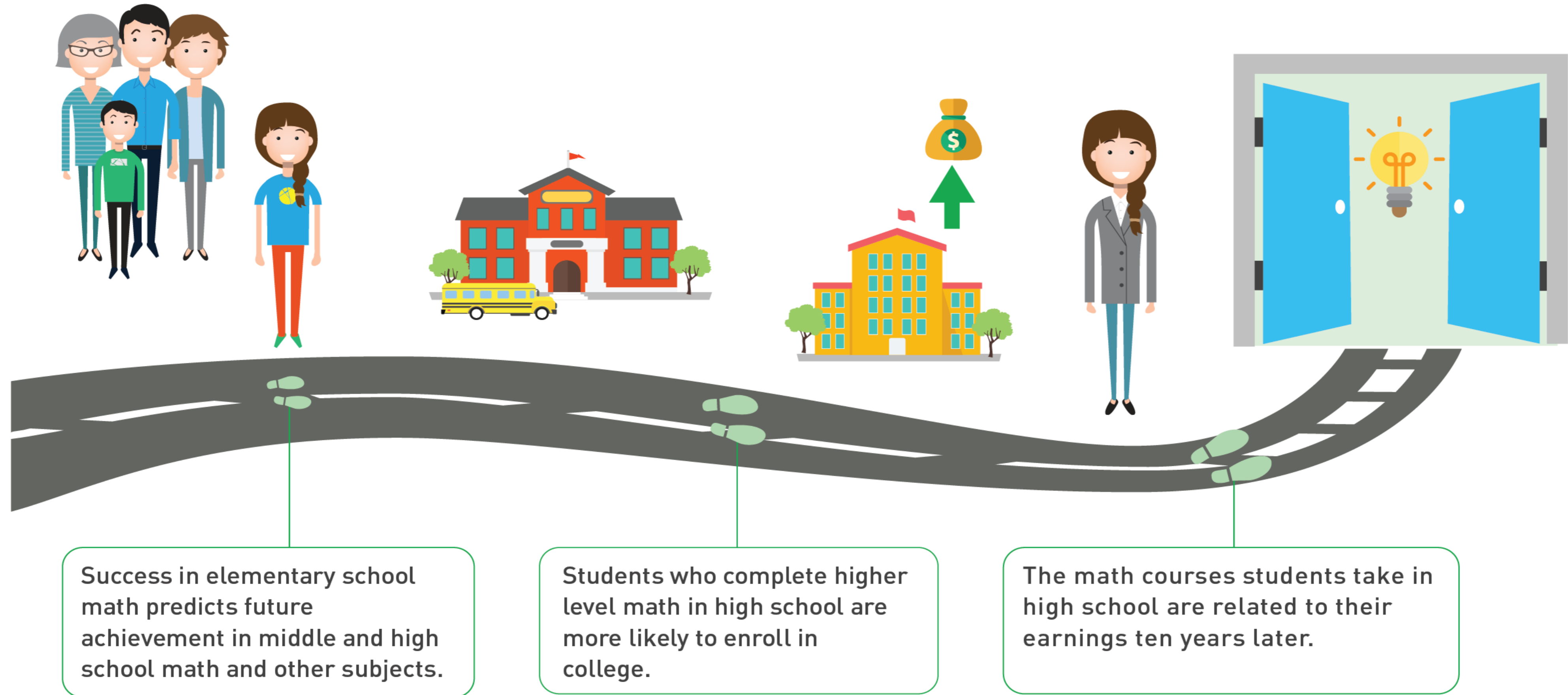
Math

Family



Mindset

Math matters



(Byun et al., 2015; Claessens & Engel, 2013; Cuoco et al., 1996; Rose & Betts, 2004; Siegler et al., 2012)



Research tells us that student **learning is greatest** when activities and tasks encourage **high-level thinking** and least when tasks are procedural.

(Boaler & Staples, 2008; Van de Walle, 2004)

Families matter

We use the word **family** to honor **all adult caregivers who make a difference in a child's life**. Families can be biological or nonbiological, chosen or circumstantial. They are connected through cultures, languages, traditions, shared experiences, emotional commitment, and mutual support.

National Center on Parent, Family and Community Engagement

(U.S. Department of Health and Human Services, 2018)

Families matter (cont.)



- Family involvement is a **strong predictor of school success**, particularly with literacy and math skills.
- Well-designed parent-family-community **partnerships that involve parents and family members** in their children's learning are associated with **increased student self-confidence and achievement** generally and in math specifically.

(Epstein et al., 2018; Harris et al., 2017; VanVoorhis et al., 2013; Weiss et al., 2009;)

Reflect

- In what ways do you already partner with families in their children's education? Is math education a part of these efforts or is it an area in which you have room to grow?



Mindset matters



- Students who **believe they can be successful in math** are more likely to put in effort, even when they struggle, and this can result in better performance.
- **Math anxiety and negative attitudes towards math** can affect students' success in math.
- Math anxiety can be counteracted by **normalizing feelings about math, modeling positive math attitudes, and supporting development of a growth mindset.**

(Boaler, 2015; Blazer, 2011; Chang & Beilock, 2016; Ramirez et al., 2016; Ramirez et al., 2013; Maloney et al., 2015)



I can learn anything I want to.
When I'm frustrated, I persevere.
I want to challenge myself.
When I fail, I learn.
Tell me I try hard.
If you succeed, I'm inspired.
My effort and attitude determine everything.



I'm either good at it, or I'm not.
When I'm frustrated, I give up.
I don't like to be challenged.
When I fail, I'm no good.
Tell me I'm smart.
If you succeed, I feel threatened.
My abilities determine everything.

Created by Reid Wilson @wayfaringpath ©️🌐🌐 Icon from: thenounproject.com

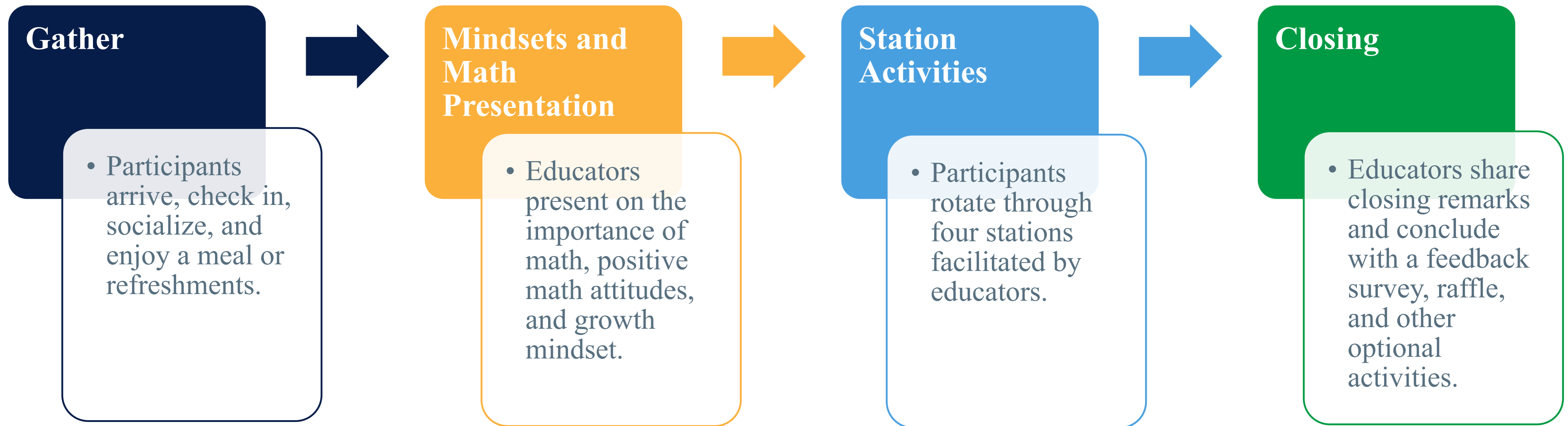
(Blackwell et al., 2007; Dweck, 2014; Dweck, 2008; Epstein et al., 2006; Gunderson et al., 2018; Ma, 1997)

Reflect

- How does the research on mindset align with your own experiences surrounding mathematics attitudes—either on a personal level or with your students?



Community Math Night components



Quotes from families on the Community Math Night

- **Engaging in fun activities:**
 - The activities were creative and engaging.
 - Loved the activities and ways to work with my child!
 - There was learning but disguised as fun.
- **Participating as a family:**
 - Children had the opportunity to engage with their family.
 - I loved the family setting and being able to spend the time learning with them and making memories.
- **Spending time with teachers/teachers' attitudes:**
 - It was nice to spend time at the school with my kid and teachers for reasons other than conferences or being in trouble.
 - Hearing about how teachers focus on positivity.



Family survey data

Overall, how would you rate the Community Math Night?

- 75 percent rated it *Excellent*.
- 25 percent rated it *Very Good*.

96 percent agreed:

- I increased my understanding of the importance of math for my child's success in school.
- I learned new strategies to support my child's math education.
- I thought the math activities were fun for my child.
- I can use some of what I learned at home.



Benefits of hosting a Community Math Night

Educators engage with research and learn interactive math activities and family and community outreach strategies.

Educators build and strengthen relationships with families and community members.

Family and community members leave with a greater understanding of the importance of mathematics and strategies to support math learning that can help children become stronger mathematicians in the classroom.

Questions?



Training and Support

What support is available if my school decides to participate this school year?

Available resources

- Workbook to help you unpack the research underpinnings of the Community Math Night.
- Templates and tools for planning your Community Math Night.
- Slides for your Mindsets and Math presentation.
- Ten activities to use during your Community Math Night including facilitator instructions, family instructions, and printable or virtual activity materials.

Access to virtual training

- Two virtual trainings to learn about and practice the Community Math Night activities.
 - March 16, 3:30-5:30 p.m. ET
 - March 18, 3:30-5:30 p.m. ET
- Look out for an email with registration links.



Follow-up support

- Follow-up support and coaching to help you adapt materials and training to your local context and prepare for the Community Math Night.
 - Office hours during April
 - Reflection/debrief to be scheduled



WVFEC Supports

Financial Assistance

- Eligible for a \$1,000 evaluation stipend for completion of WVFEC's annual survey
- Schools must reach a 70% student response rate
- Funds can be used to support teacher stipends and/or materials purchases

Technical Assistance

- Family Engagement Specialists
- WVFEC Special Projects Coordinator
- REL Appalachia Team
- Virtual frameworks



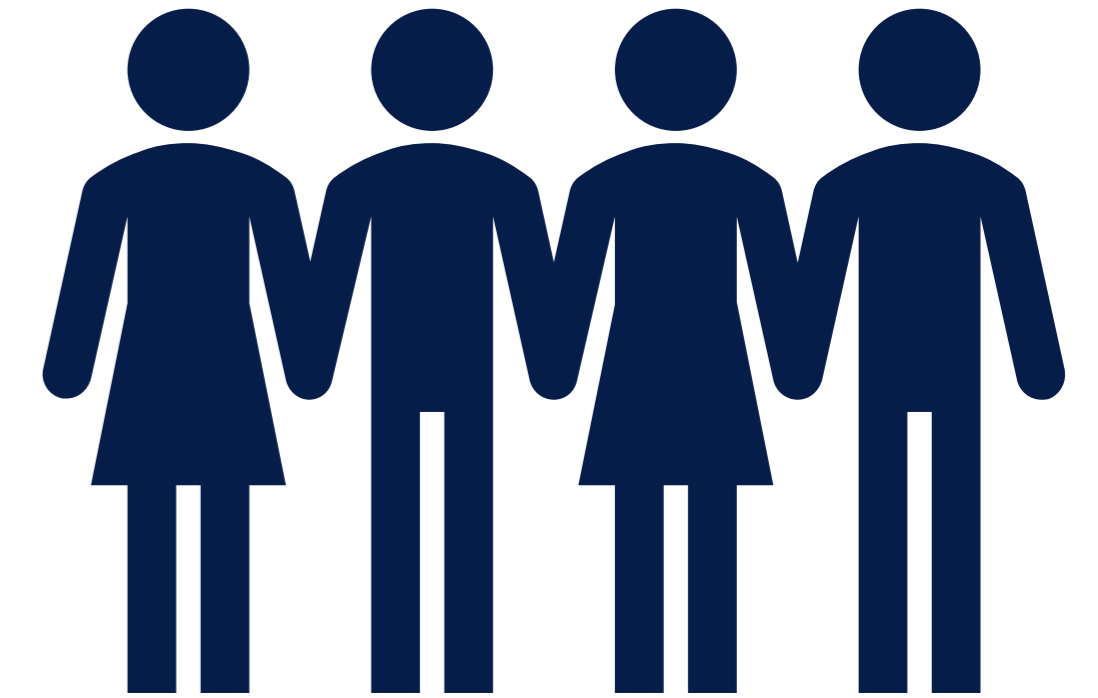
Questions?



Getting Started

Planning your Community Math Night

- Who is hosting the Community Math Night?
 - We recommend you identify a team of at least four teachers to plan the event.
 - You can recruit additional volunteers or other school staff to help implement the event (for example, welcoming guests and facilitating activities in stations).
- Who should attend the Community Math Night?
 - Children, families, educators, and other community members.
 - Consider inviting community service providers.
 - Consider including local businesses as attendees or sponsors.



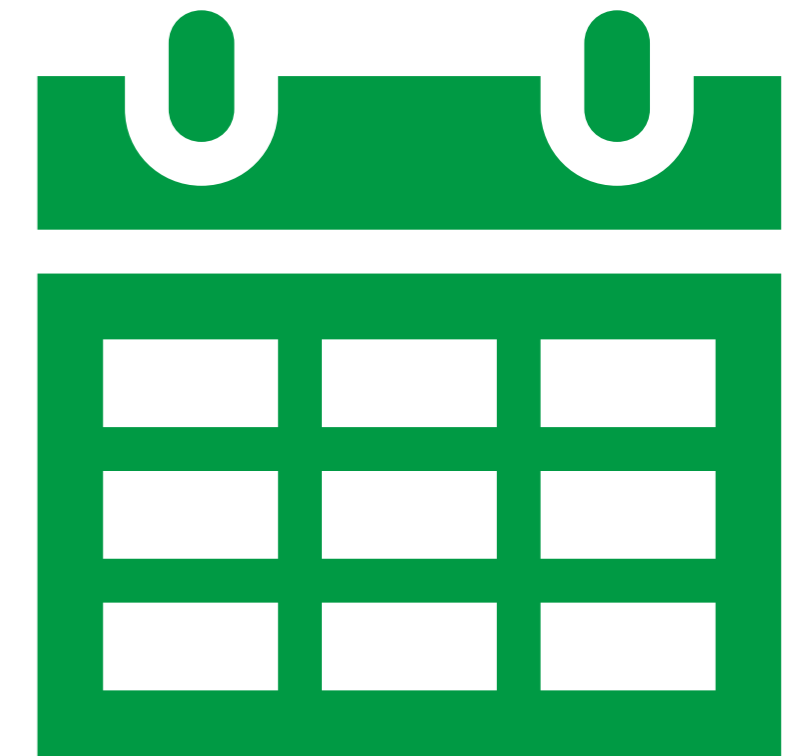
Planning your Community Math Night

- Where should you host the Community Math Night?
 - School
 - We recommend the gymnasium or cafeteria.
 - Community center
 - Consider local libraries, churches, or other central locations.
 - Virtually or remotely
 - Consider a mix of pre-recorded videos and live event(s).
 - Create activity kits that can be distributed to families ahead of time.



Planning your Community Math Night

- When should you host the Community Math Night?
 - We recommend scheduling on a weeknight.
 - Try to minimize the gap between when the school day ends and when your event begins.
- Scheduling tips!
 - Consider dates and times of other student activities and community events.
 - Consider release time of siblings in other grades to ensure the whole family can attend.



Planning your Community Math Night

- Attend the virtual trainings to learn more about math mindset and family engagement, practice all the math night activities, and develop an action plan.
- Recruit and train other teachers/staff/volunteers to support the Community Math Night.
- Select a time and location.
- Promote the math night to families and community members.
- Prepare all materials for the math night.
- Finalize logistics for math night.



Questions?



Wrap Up

What's next?

Register for upcoming trainings

Watch your email for the opportunity to register.



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Questions?



Thank you!



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



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