

# Healing-Centered Engagement & Anti-Racism in Mathematics





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# Healing-Centered Engagement & Anti-Racism in Mathematics

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*“...mathematics teachers and leaders must also be reflective practitioners that critically examine their agency in perpetuating and dismantling institutional structures, policies, and practices that promote systemic inequities in mathematics education.”*

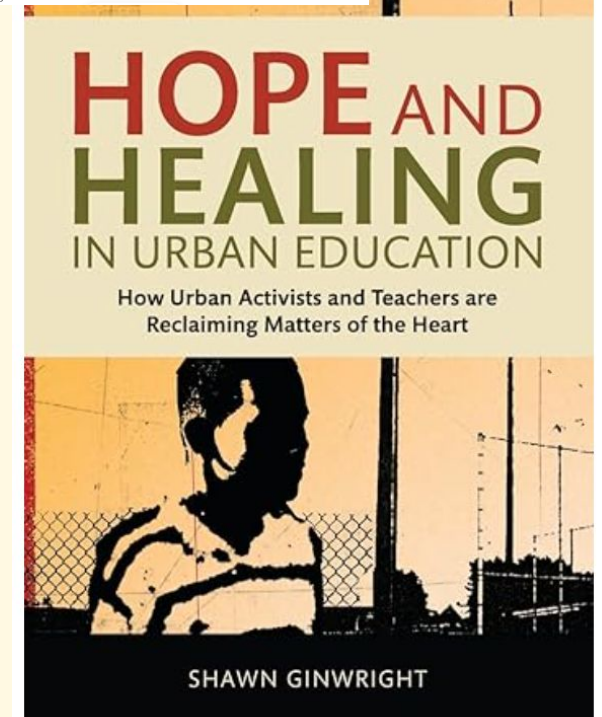
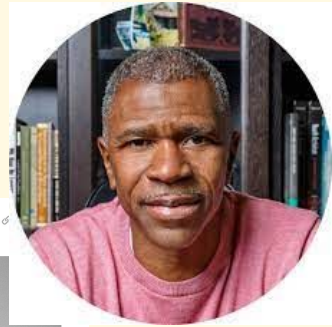
Mathematics Education Through the Lens of Social Justice: Acknowledgment, Actions, and Accountability

A joint position statement from the National Council of Supervisors of Mathematics and  
TODOS: Mathematics for ALL, 2016



# What is Healing Centered Engagement?

“Healing Centered Engagement is an asset-based and culturally-rooted approach to healing and well-being for young people of color and their adult allies. The term was coined by **Dr. Shawn Ginwright** in 2018, and is based on more than 30 years of research and practice with young people, schools, probation departments, and social workers.”



# Healing-Centered Engagement

## **Healing-centered approach**

**Engages people as agents of their own well-being**

**Asks "what's right with you"**

**Builds on experiences, knowledge, skills and curiosity as positive traits to be enhanced**

## Healing-Centered Engagement: 4 Main Tenets

**Political  
rather  
than  
Clinical**

**Culturally  
Grounded**

**Asset  
Driven**

**Attends to  
the Health  
& Wellness  
of Adult  
Providers**

## Elements of Healing-Centered Engagement

1. **Political rather than clinical**- A subtle shift suggesting healing is found in awareness in actions that **address the conditions** that created the trauma.
2. **Culturally grounded**- Healing is **experienced collectively** and is shaped as shared identity such as race, gender, and sexual orientation.
3. **Asset Driven**- A departure from solely viewing young people through the lens of harm... Builds upon their experiences, knowledge, skills, and curiosity as **positive traits to be enhanced**.
4. **Attends to the health/wellness of adult providers**- Consider how to support adult providers in **sustaining their own healing** and well-being.

## **Elements of Healing-Centered Engagement Frameworks/Activities**

Transformative Organizations

Restorative Justice

Healing Circles

Contemplative Practices

Faith-based

Cultural and Indigenous Practices

Activist Art





HEALING-CENTERED

## HCE & Anti-Racist Mathematics

ENGAGEMENT

**How can we disrupt systemic conditions that interfere with student wellness and learning in mathematics?**

- Systemic and interpersonal racism
- Tracking and testing mandates
- Social justice & activist mathematics
- Creative Insubordination Strategies (Gutierrez, 2016)
- ???

**How are students' funds of knowledge and multifaceted identities centered in mathematics?**

- Prioritizing relational teaching
- Healing-centered pre-assessment
- Courage, Humility, Tolerance, Lovingness (Freire)
- Collective experiences
- Family/community connections
- Affirming multilingualism
- ???

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**How are we routinely surfacing the mathematics students do understand?**

- Formative assessment
- Teacher curiosity
- Expansive and inclusive view of math "knowledge"
- Multiple modalities and representations
- ???

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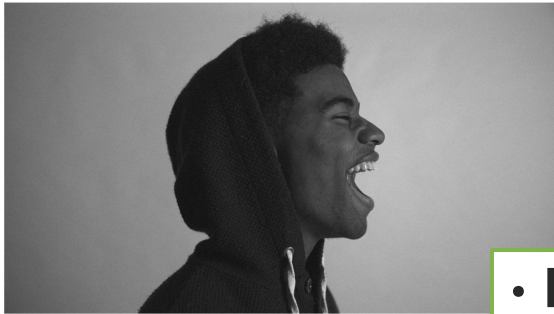
**What structures support teacher wellness?**

- "Sociopolitical turn" professional learning (Gutierrez, 2013)
- Open conversations on teacher bias
- Holistic evaluation
- Affinity Healing Spaces
- Humanizing mathematical content knowledge
- ???

## Political rather than Clinical

## How can we disrupt systemic conditions that interfere with student wellness and learning in mathematics?

Shawn Ginwright  
May 31, 2018 · 14 min read · Listen



The Future of Healing: Shifting From Trauma Informed Care to Healing Centered Engagement

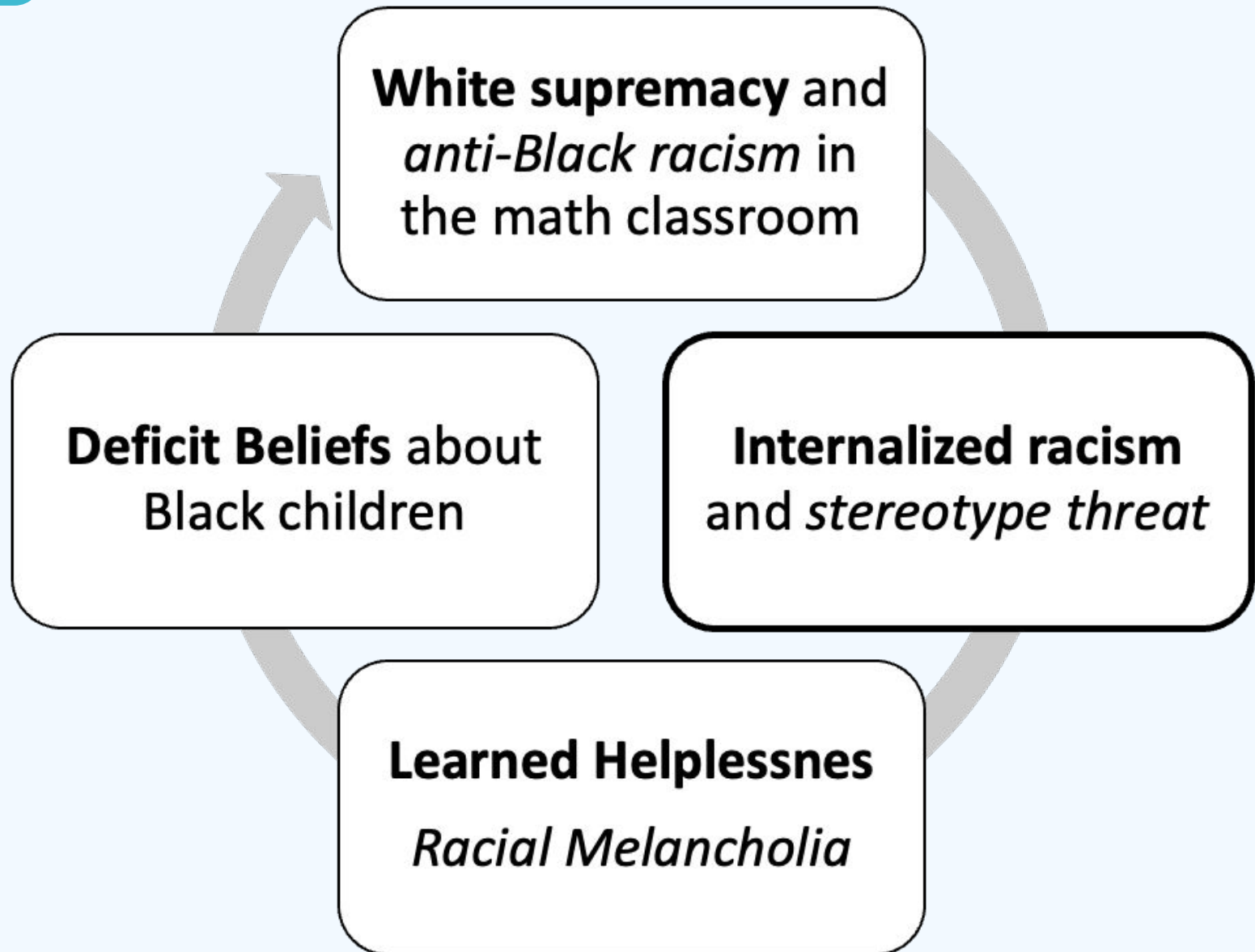
Shawn Ginwright Ph.D.

### • Healing centered engagement is explicitly political, rather than clinical.

“These studies focus on concepts such as such as **liberation, emancipation, oppression**, and social justice among activist groups and suggests that building an awareness of justice and inequality, combined with social action such as protests, community organizing, and/or school walkouts contribute to overall wellbeing, hopefulness, and optimism.”

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# From Clinical to Political: Reframing Math Anxiety among Black students





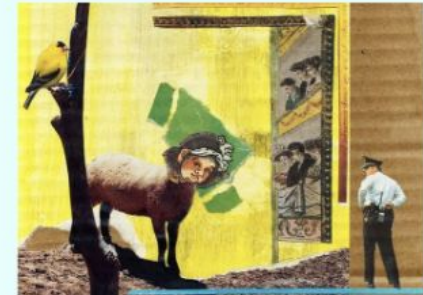
# White Supremacy Culture



**Urgency**



**Progress is More\* &  
Quantity over Quality**



**Individualism**



**One Right Way &  
Perfectionism**



**Either/Or  
& The Binary**



**Worship of the  
Written Word**



**Right to Comfort**



**Fear**



**Denial &  
Defensiveness**

# Antidotes to WSC in the Math Classroom

White Supremacy Culture	Restorative Antidote
<b>Perfectionism/Urgency</b> <ul style="list-style-type: none"><li>❖ Devaluing of non-White cultural and intellectual knowledge.</li><li>❖ Rewarding completion over exploration and growth</li></ul>	Emphasis on Growth Patience Culture of Appreciation
<b>Power hoarding/Individualism</b> <ul style="list-style-type: none"><li>❖ Independent Work preferred over collaborative group work</li><li>❖ Assessing students for teacher needs instead of student learning</li></ul>	Power sharing Collaborative Decision Making
<b>Objectivity/Only one right way</b> <ul style="list-style-type: none"><li>❖ “I do, we do, you do” mini lesson format prioritized</li><li>❖ Lack of joy, playtime, and creativity in content (Disconnected to other content areas)</li></ul>	Multiple Solutions Multiple Truths Multiple methods of communicating

# White Supremacy Culture

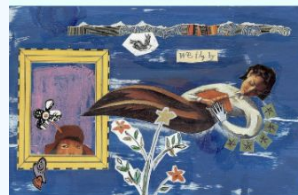
- ✗ How does White Supremacy Culture show up in the Math Classroom?
- ✗ What can the antidotes look like?



**Urgency**



**One Right Way & Perfectionism**



**Right to Comfort**



**Progress is More\* & Quantity over Quality**



**Either/Or & The Binary**



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**Denial & Defensiveness**

## How can we disrupt systemic conditions that interfere with student wellness and learning in mathematics?

### Within Ourselves:

- Acknowledge the systemic racism that pervades our society and the political nature of this racism harms children and families that are in our care.

### Within the Classroom:

- Mitigate stereotype threat and disrupt the cycle of math anxiety.
- Incorporate the history of mathematics into lessons.
- Frame mathematics learning within the context of students' lives, and link them to the standards.
- Begin with conceptual knowledge, and build the skills along the way.
- Learn about authentic and cultural ways of teaching and learning that represent the students in your classroom. (ethnomathematics)
- Connect mathematics to activism: social justice & anti-racism.

### Beyond the Classroom:

- Work to dismantle systemic and interpersonal racism
- De-tracking and contextualizing testing mandates and data
- [Creative Insubordination Strategies \(Gutierrez, 2016\)](#)



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## How are students' funds of knowledge and multifaceted identities centered in mathematics?

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## How are we routinely surfacing the mathematics students do understand?

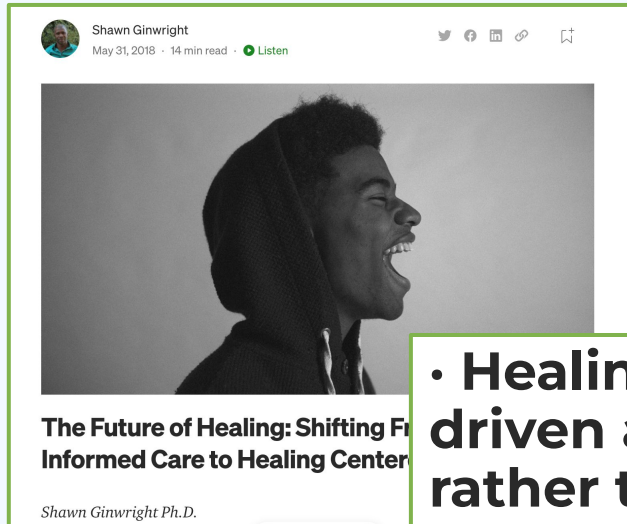
- Formative assessment
- Teacher curiosity
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## What structures support teacher wellness?

- "Sociopolitical turn" professional learning (Gutierrez, 2013)
- Open conversations on teacher bias
- Holistic evaluation
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## Asset Driven

### How are we routinely surfacing the mathematics students *do* understand?



- **Healing centered engagement is asset driven and focuses well-being we want, rather than symptoms we want to suppress.**

“An asset driven strategy acknowledges that young people are much more than the worst thing that happened to them, and builds upon their experiences, knowledge, skills, and curiosity as positive traits to be enhanced.”

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## MisConceptions → What *Do* Students Understand?



“...misconceptions. Why this word? When you say misconception, you are suggesting that someone is thinking about something wrong. If you are trained as a teacher to notice students’ misconceptions, you will find yourself listening for what they *don’t* understand.

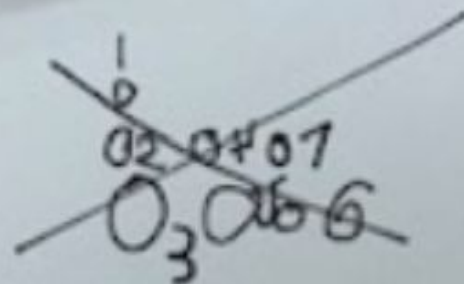
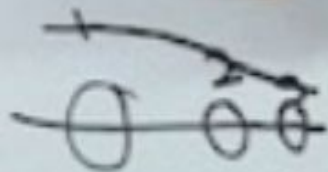
“Knowing what children do not yet understand is useful to a point, because it can give you ideas of what to teach. However, the balance of research in learning says that children are not blank slates. That means that they already know something, and odds are even if you have not yet taught a particular concept to your kids.... In short...**‘Children are sense-makers.’** They are always making sense of new information in relation to what they know.

“So rather than looking for the holes in kids knowledge, ***teachers should be listening and looking for what sense-making kids are engaged in, and what makes sense to the student.***”

## MisConceptions → What *Do* Students Understand?

- ★ How will you name what the student IS **understanding**?
- ★ What conceptions (*not misconceptions*\*) **make sense to the student**? (even if it doesn't match the structure of math as we understand it)
- ★ What would you say to the student to recognize their **competence**?

$$\cancel{3+7=7}$$



$$3+7=10$$



Original problem  
 $7-3=?$



Estimate to answer the question below.  
Assume that there is no tax on the items.

23. Allen wants to buy a notebook for \$3.89 and a pen for \$1.99. He has \$5.00. Does he have enough money?

No

Explain your thinking:

I think he because  
is 88¢. more than 5.00

Number model you used:

$$3.89 + 1.99 = 5.88$$

## Close to 1

Find the sums for each pair of problems. Show your work. Then circle the sum in each pair that is closer to 1.

1  $0.500 + 0.583 = \underline{1.083}$

$$\begin{array}{r} 0.500 \\ + 0.583 \\ \hline 1.083 \end{array}$$

$0.166 + 0.666 = \underline{\hspace{2cm}}$

2  $0.166 + 0.5 + 0.333 = \underline{\hspace{2cm}}$

$0.725 + 0.333 = \underline{\hspace{2cm}}$

3  $0.195 + 0.07 + 0.002 = \underline{\hspace{2cm}}$

$0.835 + 0.1 = \underline{\hspace{2cm}}$

$$\begin{array}{r} 0.1 \\ 0.835 \\ \hline \end{array}$$

$$\underline{0.935}$$

4  $0.7 + 0.301 = \underline{\hspace{2cm}}$

$0.48 + 0.06 = \underline{\hspace{2cm}}$

1) Ahmed has 246 pieces of candy. He wants to put 10 candies in each box. How many boxes will he need? How many candies will be left over?

$$246/10$$

started here

$$\begin{array}{r} 10 \times 20 = 200 \\ \underline{10} \\ 210 \\ \underline{10} \\ 220 \\ \underline{10} \\ 230 \\ \underline{10} \\ 240 \end{array}$$



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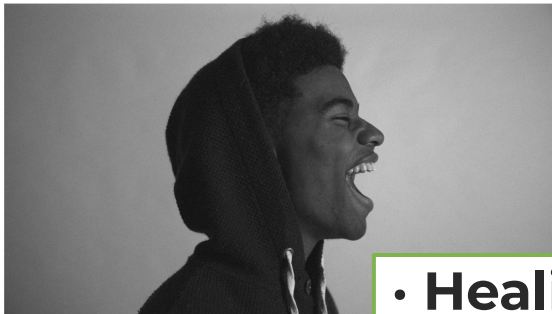
## Culturally Grounded

### How are students' funds of knowledge and multifaceted identities centered in mathematics?



Shawn Ginwright

May 31, 2018 · 14 min read · Listen



**The Future of Healing: Shifting From Informed Care to Healing Centered**

Shawn Ginwright Ph.D.

- **Healing centered engagement is culturally grounded and views healing as the restoration of identity.**

“Healing centered engagement uses culture as a way to ground young people in a solid sense of meaning, self-perception, and purpose. This process highlights the intersectional nature of identity and highlights the ways in which culture offers a shared experience, community and sense of belonging.”

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Dr. Rudine Sims Bishop



When has a text been like a **mirror**, reflecting one or more aspects of identity or experience? How did it feel to see yourself in the story?



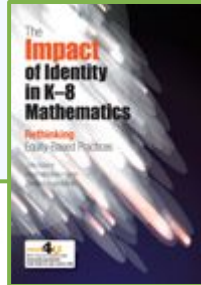
When has a text been like a **window**, offering you insight into someone else's experience or world? What did you learn?



When has a text been like a **sliding glass door**, allowing you to enter and engage with another world for a moment in time? What did you experience?



Julia Aguirre,  
Karen Mayfield-Ingram,  
Danny Martin



## Equity Based Teaching Practices

- Going deep with mathematics
- Leveraging multiple mathematical competencies
- Affirming mathematics learners' identities
- Challenging spaces of marginality
- Drawing on multiple resources of knowledge



**Identity:** Students will discover if they like to hike and be outdoors with nature.

**Skill:** Students will learn to make sense of problems and persevere in solving them; Students will learn how to reason abstractly and quantitatively.

### Home & Family Connection:

As a family, what type of outdoor activities do we enjoy?  
Draw a model of the trail of my family's hike this summer.

**Intellect:** Students will learn about different hiking trails in their communities;  
Students will learn about Black hikers in St. Louis who bring awareness to social issues.

#BlackHikersWeek

**Criticality:** Students will learn why it is important to see people of color in outdoor spaces.

**Joy:** Students will learn how nature can elevate happiness.

Dr. Ghoddy Muhammad

# Engagement

What do you see?

What do you think?

What do you wonder?



## HRL Framework In Action at James Weldon Johnson

Ms. Santiago  
Math

Below is a mural of Latin musician, Tito Puente. This mural is located on 110th and 3rd ave. Create a word problem that involves adding fractions with denominators of 10 and 100.



Write a word problem below.

Sabrina and Briena painted the mural of Tito Puente. Sabrina painted  $\frac{6}{10}$  and Briena painted  $\frac{20}{100}$  of the mural. How much of the mural did Sabrina and Briena paint in all?

Show your work to demonstrate your thinking.

$$\frac{6}{10} \times \frac{10}{10} = \frac{60}{100}$$

$$\frac{60}{100} + \frac{20}{100} = \frac{80}{100}$$

## HRL Framework In Action at James Weldon Johnson

Ms. Santiago  
Math

Name: Sophia Dolores  
Date: 5/18/2022

T2: Add Fractions with Denominators of 10 and 100.

Learning Objective: I can use equivalence to add fractions with denominators of 10 and 100.

PS/MS 57 Mural



Sophia used  $\frac{3}{10}$  of a red gallon of paint to color the building of the PS/MS 57 school mural. Makayla then added 0.40 gallons of blue paint to color the skies for the background. How much paint did Sophia and Makayla use?

Write 0.40 gallons as a fraction:  $\frac{40}{100}$

How much paint did Sophia and Makayla use? Use a strategy below to problem solve.



$$\frac{3}{10} \times \frac{10}{10} = \frac{30}{100}$$

$$\frac{30}{100} + \frac{40}{100} = \frac{70}{100}$$

Sophia and Makayla used  $\frac{70}{100}$  gallons of paint.

How were you able to solve fractions with denominators of 10 and 100? Use math vocabulary to explain your thinking.

First I drew a model that represented 100. Then I knew I had to make  $\frac{3}{10}$  into an equivalent so I multiplied  $3 \times 10$  which got me  $\frac{30}{100}$ . Next I added  $\frac{30}{100} + \frac{40}{100}$  which gave me  $\frac{70}{100}$ . Lastly I shaded 30/100 for Sophia and 40/100 for Makayla. This means that Sophia and Makayla used  $\frac{70}{100}$  gallons of paint.

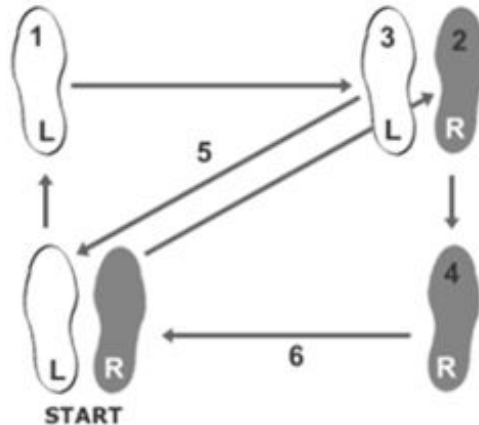


# Restorative Practices Storytelling and Relationships

## Quadratic Equations and Multiplying Binomials

### Problem:

You are at a crowded party and your favorite Bachata Song just came on. You grab a partner and start to dance! BUT, you keep bumping into people. Your original square is 6 cm wide and long, and you decide to decrease your step by 2 cm in your length and width.



How much space did you save?

$$\begin{array}{c}
 \text{6ft} \\
 \boxed{\text{6ft} \times \text{6ft} = 36\text{ft}^2} \\
 \Downarrow \\
 \begin{array}{cc}
 \text{6ft} - 2 & \\
 \text{6ft} \begin{array}{|c|c|} \hline 36 & -12 \\ \hline -12 & +4 \\ \hline \end{array} \\
 -2 & 
 \end{array} \\
 36 - 12 - 12 + 4 = 16\text{ft}^2 \\
 36 - 16\text{ft}^2 = \boxed{20\text{ft}^2}
 \end{array}$$

- ▶ When you think of the word “roots,” what other words comes to mind?
- ▶ What or who would you describe as your “roots”?
- ▶ Choose and explain one aspect of your culture, community or family that is deeply rooted in you?

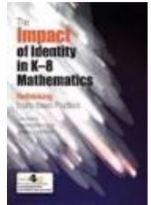


# Lesson Study Agenda - 1st Grade Recycling & Big Numbers

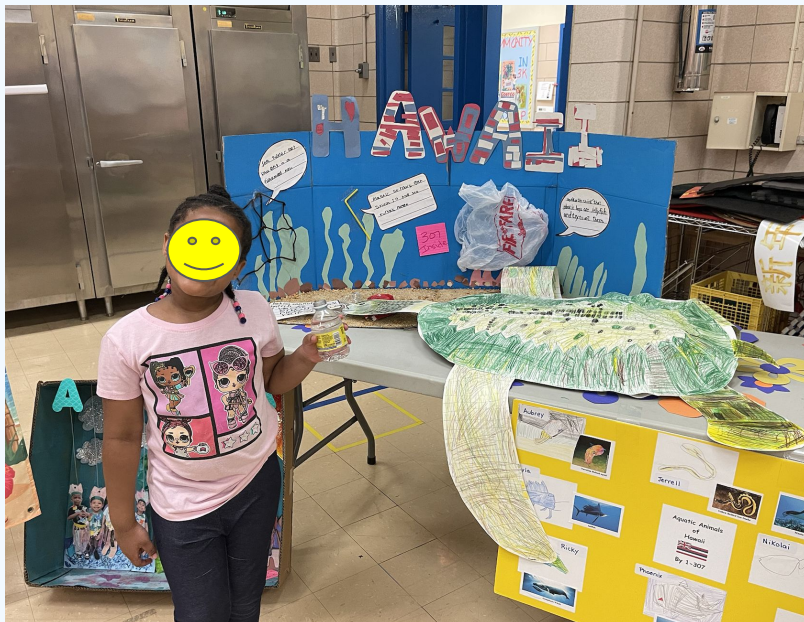
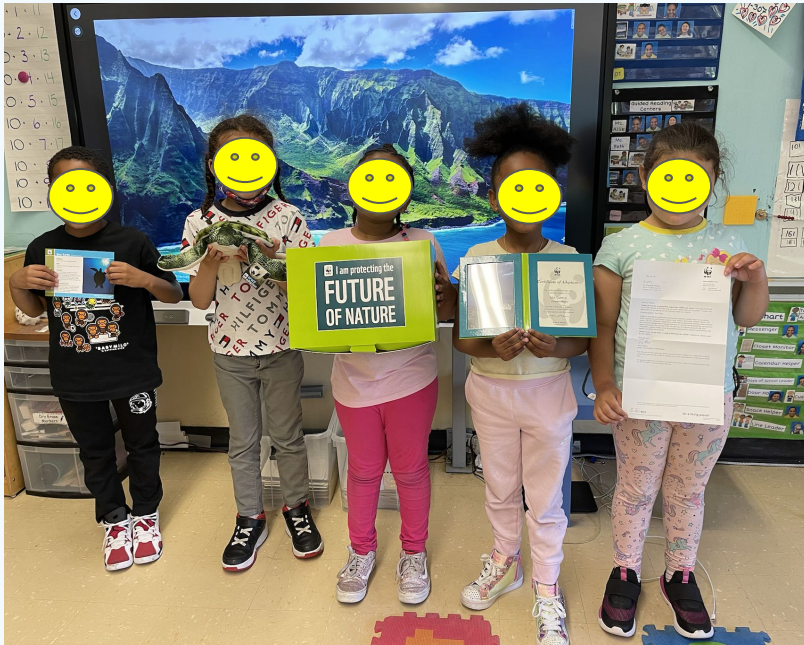
## May 24, 2022 - PS 112

### 5-Equity Math Practices

- 1) Going deep with mathematics.
- 2) Leveraging multiple mathematical competencies.
- 3) Affirming mathematics learners' identities.
- 4) Challenging spaces of marginality.
- 5) Drawing on multiple resources of knowledge.



*The Impact of Identity in K-8 Mathematics Learning and Teaching: Rethinking Equity-Based Practices.*  
 Julia Aguirre, Karen Mayfield-Ingram, and Danny Bernard Martin.  
 1st edition, 2013. The National Council of Teachers of Mathematics, Inc (p 42-43)



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**What is resonating with you?**



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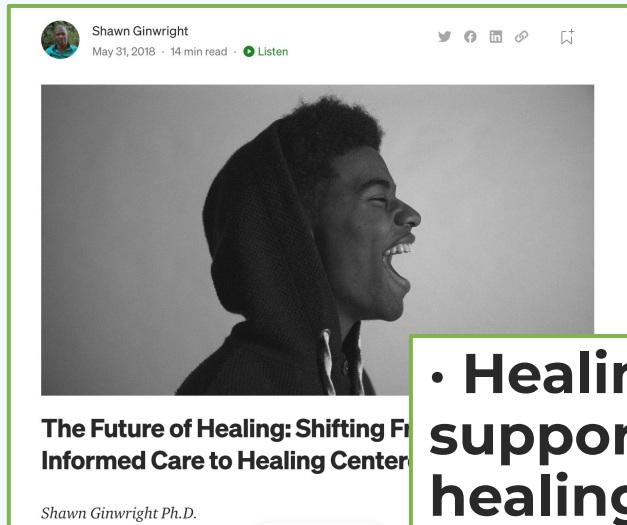
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## What structures support teacher wellness?



### • Healing centered engagement supports adult providers with their own healing.

“Adult providers need healing too! Healing centered engagement requires that we consider how to support adult providers in sustaining their own healing and well-being. We cannot presume that adulthood is a final, “trauma-free” destination.”

V

## What structures support teacher wellness?

- ★ What comes to mind when you think about healing centered engagement that that **supports adult providers with their own healing** in your context?
- ★ What are possible **tensions and inflection points** in your communities when you consider incorporating HCE?

### Journal or Healing Circle Questions...

- *What is our own history with math and how can we restore our relationship to the math classroom?*
- *How is WSC showing up in my classroom and how can I transform it?*
- *How can we grow in community?*
- *What might help to mitigate potential barriers to growth?*

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## **Healing-Centered Engagement: Three Essential Actions**

**Start by  
building  
empathy.**

**Build critical  
reflection and  
take loving  
action.**

**Encourage  
young people  
to dream and  
imagine!**

## Citations, Resources, and Inspirations

**Shawn Ginwright**, 2018. [\*The Future of Healing: Shifting From Trauma Informed Care to Healing Centered Engagement.\*](#)

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**Julia Aguirre, Karen Mayfield-Ingram, Danny Martin**, 2013. [\*The Impact of Identity in K-8 Mathematics: Rethinking Equity-Based Practices.\*](#) NCTM.

**Maria del Rosario Zavala**, 2019. [\*CHALLENGING DEFICIT LANGUAGE IN THE MATH CLASSROOM\*](#)

**Chris Emdin**, 2021. Reimagining the Culture of Science, Technology, Engineering, and Mathematics Stem, Steam, Make, Dream.

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**Gholdy Muhammad**, 2020. [\*Cultivating Genius\*](#), Scholastic Inc., New York, NY

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**Rudine Sims Bishop**, 1990. "[Mirrors, Windows, and Sliding Glass Doors.](#)" Perspectives: Choosing and Using Books from the Classroom 6, no. 3



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Thank You!