

Elementary Math in Nyack Public Schools

**EUREKA
MATH²**

Eureka Math Squared Implementation Presentation

Presented by District Elementary Math Specialists

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January 21, 2025 Board of Education Meeting

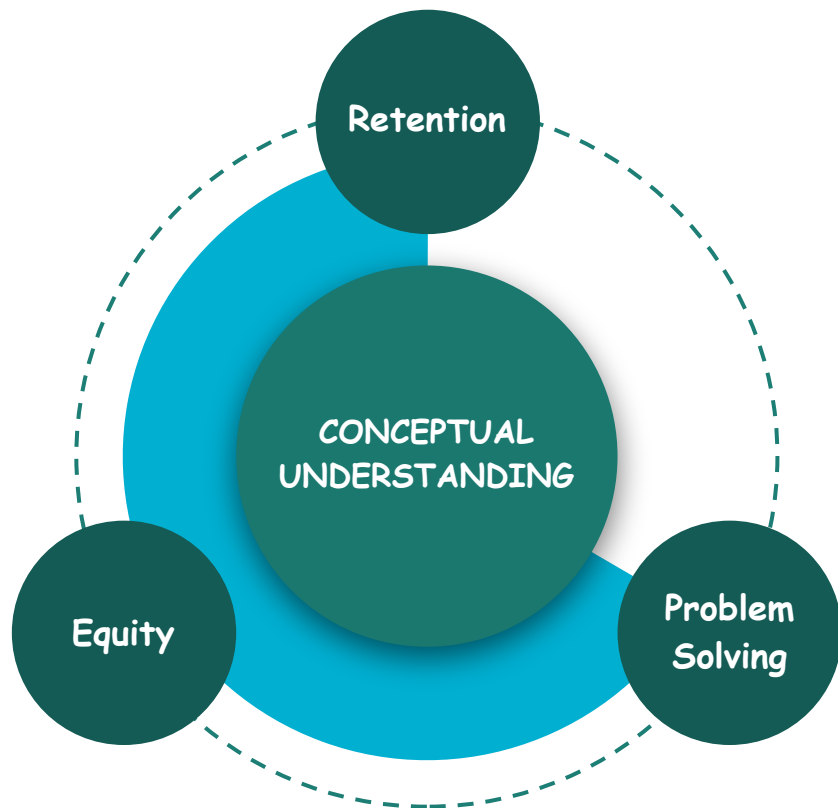


Rationale for a New Resource



- ❖ **Classroom teachers were using various materials and/or programs to support math instruction**
 - Supplemental resources needed to align to NYS Next Generation Learning Standards
 - Inconsistent instruction & assessments between classrooms
 - Challenges for vertical alignment
 - Inconsistent communication for families
- ❖ **Lack of digital tools**
 - Difficulty with usability of the online platform
- ❖ **Equality and equity in learning**
 - Aligned with the district's vision & goals
- ❖ **Inquiry-based instruction dominated, with a lack of explicit instruction**

Why Conceptual Understanding Matters



- **Retention:** Students who understand the "why" behind math are more likely to retain knowledge and apply it flexibly.
- **Problem-Solving Skills:** Conceptual understanding equips students to tackle unfamiliar problems with confidence.
- **Equity:** A focus on understanding over memorization levels the playing field for students with varying backgrounds and prior experiences.

National Research Council. (2001). *Adding it up: Helping children learn mathematics*. National Academy Press.

Boaler, J. (2002). *Experiencing school mathematics: Teaching styles, sex, and setting*. Open University Press.

Key Points About Eureka Math Squared



Focus on conceptual understanding:

- Builds a strong foundation of mathematical concepts through engaging lessons

Inclusive design:

- Designed with Universal Design for Learning (UDL) principles

Digital integration:

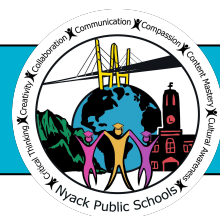
- Incorporates digital components & print materials

Alignment with Next Generation Mathematical Learning Standards

Teacher support



Timeline



Curriculum Evaluation

- * Teacher Survey
- * Program Reviews
- * Ed Reports
- * Committee Review

SY 2022-2023

Program Start

- * All K-5 Classrooms begin using **Eureka Math Squared**

SPRING '24

SEPT. '24

Continued Implementation

- * District Math Committee meetings
- * Building level PLCs

FALL '24

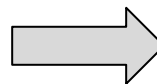
WINTER '25

* Introduction to the structure, design, and components of **Eureka Math Squared**

* Content study, unit objectives, & lesson preparation



Professional Development





Stages of Implementation (Fixsen et.al., 2005)

EXPLORATION & ADOPTION

- Aware of innovation
- Explores options
- Determines whether to adopt innovation or not

PROGRAM INSTALLATION

- Planning
- Ensuring all necessary resources are in place
- Ensuring support systems are in place
- Teacher training

INITIAL IMPLEMENTATION

- Begins the change process
- Includes individual and team competency development and organizational capacity development

FULL OPERATION

- Transitions to this phase once the new way becomes *the way*

INNOVATION

- Making thoughtful changes by the organization to meet the unique needs of the students in the Nyack School District.

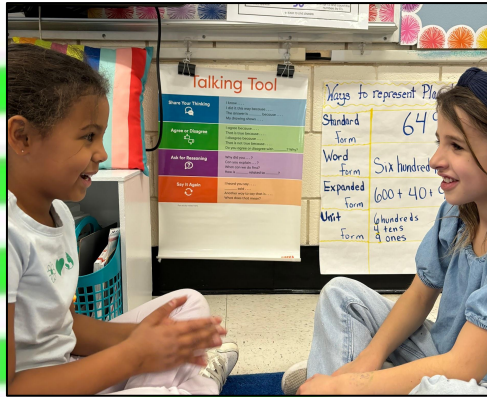
SUSTAINABILITY

- Sticking power
- Long term success

★ Research indicates that most programs require at least 2-4 years for full implementation

What's happening in our classrooms?

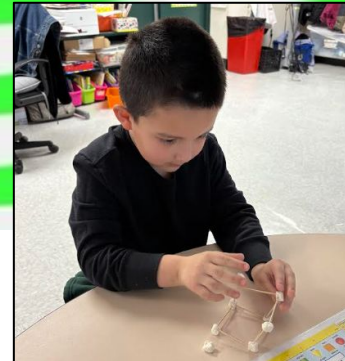
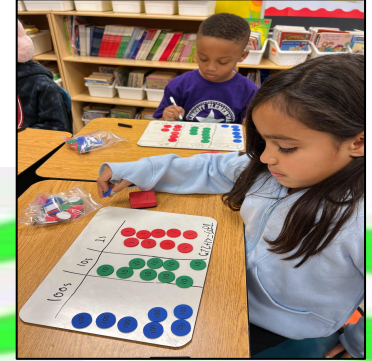
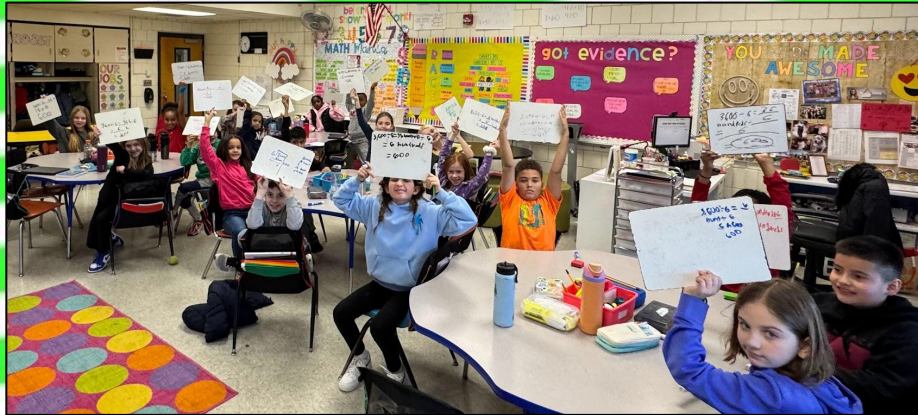
➔ Student discourse involving explaining, critiquing, and refining understanding



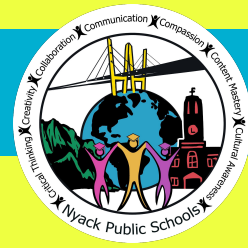


What's happening in our classrooms?

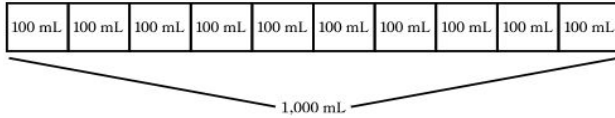
➔ Interactive lessons with hands-on activities



Which One Doesn't Belong?



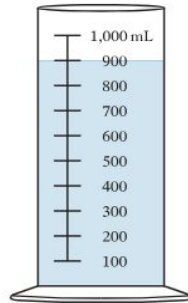
A



B

one thousand milliliters

C

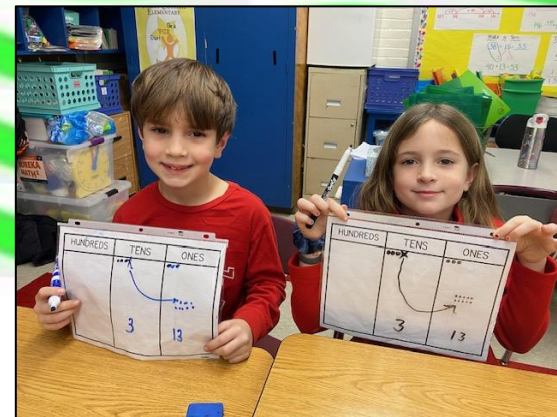
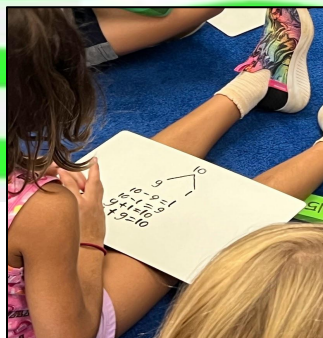
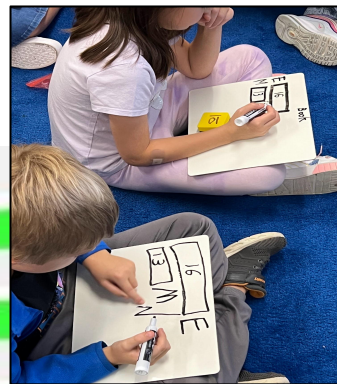


D



What's happening in our classrooms?

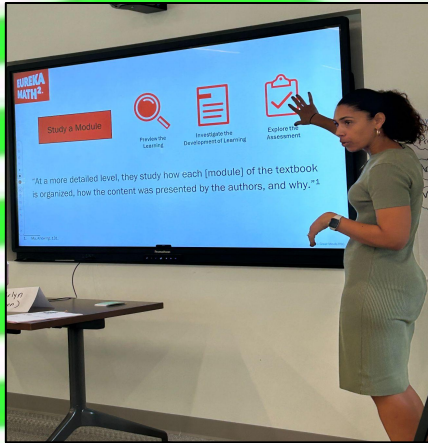
- Multiple representations: manipulatives, visual representations, abstract symbols



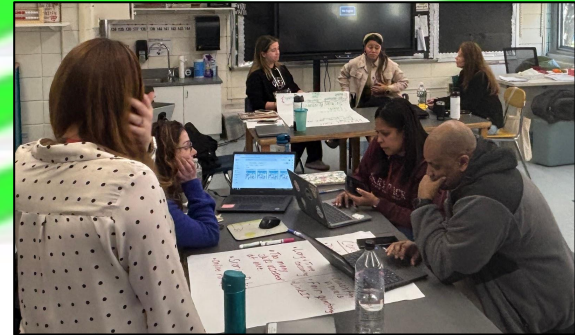


What's happening outside of our classrooms?

- Ongoing Professional Development
- Math Committee meetings
- Teacher grade-level collaboration through PLC/Team meetings



Topic B	Topic C	Topic D
"How many?"	Write numerals	Decompose numbers
Ways to Count	create sets to 5	review sorting
Reasons to count	counting "unseen" items	number sentences
strategies for accuracy • touch & count • move & count • mark count	count to match a given #.	story problems
		preparation for addition & subtraction



What are our teachers saying?

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- Teachers are happy with the numerous resources and materials provided by the program
- Assessments are provided both on paper and electronically
- Manipulatives provide engaging, hands-on experiences
- Teachers and students enjoy the mathematical routines
- Students are gaining a stronger grasp of mathematical concepts & confidence

- Teachers are concerned about the time spent preparing for lessons
- There are so many digital resources available, but navigating the digital platform is still a challenge
- A lot of instructional time is used for the numerous assessments built into the program

District 2024-2025 Goals

❖ Implementation District Wide MTSS Plan

- Utilize Comparative data
 - Fall 24 to Winter 25 Screening Results
 - Fall 24 to Spring 25 Screening Results
 - Fall 24 to Fall 25 Screening Results
- Integrate Numeracy Briefs

❖ Advance the District Equity Plan

- Embed Universal Design for Learning
 - Various methods of representation
 - Multiple access points for all learners

❖ Strengthen Elementary ELA/ENL/Math Curriculum

- Conduct ongoing PLC/Team meetings & Math Committee meetings
- Organize Family Math Night



ACKNOWLEDGEMENTS & ACCOUNTABILITY

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Karissa Sullivan, Nyack Middle School Asst. Principal
Lucia Pichardo, Liberty Elementary School Acting Principal
Tom DiLeo, Upper Nyack Elementary School Principal
Lucrisha Addison Harris, Valley Cottage Elementary School Principal



RedHawk Ready!
Remember. Refresh. Reunify.



Slide Deck and Design for
Strategic Communications
in Nyack Public Schools
by Lisa Miner Retallack, PRCO
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