

Mathematics Program Update

Kelly Bitinas, Ed.D.
Mathematics Coordinator
Plymouth Public Schools
School Committee: March 3, 2025

What's New?

- Number Corner in Kindergarten
- IEP goal writing, intervention, and progress monitoring
- Illustrative Math in middle school
- Curriculum search in high school
- In-house courses on Building Thinking Classrooms and Specialized Math Instruction



District-Wide Goals and Expectations

PPS MATH DEPARTMENT GOALS AND EXPECTATIONS ELEMENTARY

TALK MOVES

Use Talk Moves during all planned math activities on a regular basis, including but not limited to Number Talks*

CHOICE

Provide students with targeted choices of activities to demonstrate knowledge of just right and grade level math

EQUITY

Increase equity in class discussions by ensuring that all students are talking about math

PPS MATH DEPARTMENT GOALS AND EXPECTATIONS MIDDLE/HIGH

LAUNCH

Facilitate an all-access prompt during the first 10 minutes of math class so that all students are encouraged to engage in student to student and teacher to student math talk

MAIN LESSON

Provide collaborative learning experiences that allow all students to apply their mathematical knowledge to solve problems in multiple ways

EQUITY

Establish equity in math class by ensuring all students are able to communicate their thinking and respectfully critique the thinking of their peers

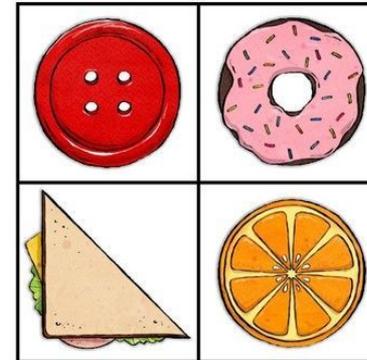
Engaging all Students! - Talk Moves and Launch

- Would you rather eat 5 shamrock-shaped cookies or 10 round cookies?
- Would you rather find a 4-leaf clover with a \$5 bill under it, or a regular 3-leaf clover with a \$20 bill under it?
- Would you rather walk 10 miles to find a rainbow, or walk 5 miles to find a pot of gold?

WHICH ONE DOESN'T BELONG?

15	5
21	25

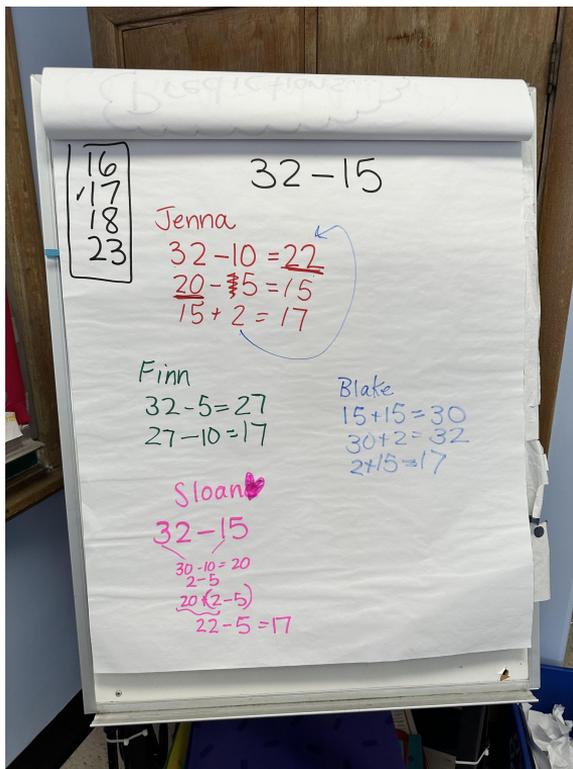
$y = 4x$	$y = x + 7$
$y = -2x + 4$	$y = 3x - 1$



Voices from the classrooms...

- I am constantly hearing from other educators, and agree myself, that the math department "hears us" and understands where we are coming from. This allows us all as a district to work hard for and with each other. **When I think of the PPS math department I think of action because as issues or comments are brought up, I feel they are not only listened to, but there is action and resolutions that follow.** The District Math website is easy to navigate, all of the documents that have been created to support the EDM math units are extremely helpful, district provided professional development is always informative, and all of the work that was done around writing math IEP goals is amazing!
- **I am just so impressed with the rigor of Number Corner.** I saw (my colleagues) do a lesson. All students were actively engaged and excited to learn in both classes, and engaging in content that I remember trying to drill in THIRD grade.
- Math is my favorite time and my kids' favorite time in our classroom! Math workshop engages everyone and allows them to grow and challenge themselves at their own pace in a fun way while providing me with time to pull intervention groups. Doing math this way is a game changer for so many kids who may not have seen themselves as "math people". **Everyone in math workshop can be a "math person" through developmentally appropriate games and activities!**
- I have been teaching 6th grade math for 15 years and this is the first time I have seen such **high level problem solving and perseverance.** For the past two years I have implemented a more student based classroom where my role has become just a facilitator. Students are using the Illustrative Math curriculum and task boards to **work collaboratively to solve problems and learn concepts.** Working together and using the school's Student Engagement posters we have so many of our students investing and driving their own learning.
- Students are doing a great job **finding their aha moments as they apply models to real-life situations as they problem-solve.** These strategies are much more engaging and meaningful than the old strategy of memorizing discrete procedures.

Coaching in Action



- With your help and the new math number talk routines and the new class offering to work one on one with you in the classroom has allowed us to get first graders to write about math all the while making it something that is functional, valuable, and effective! **It is something I've tried to do for years and we finally got it because of that consistent one on one time with you and all of the training with number talk routines.** It has made all the difference.
- PAC courses, Plymouth collaboration with Curry college, extensive in-house PD without the use of substitute teachers

Budgetary Considerations

What we have done...

- Peer modeling, observation, and collaboration (walkabouts, lesson study, etc.)
- Utilized our current texts for pacing guidelines with an increased focus on math practices and effective pedagogy – also using open source resources as appropriate
- Streamlined our technology resources to help maintain an equitable learning experience for all students K-12

What we will continue to do...

- Utilize the “train the trainer” method whenever possible and beneficial
- Work with new or untrained teachers each year so that all teachers have equal access to PD and coaching
- Attend/provide valuable and timely PD to remain current in teaching practices, assistive technology, and curriculum trends
- Work with administrators, teachers, AND students to meet them where they are at and to help them achieve their goals
- Reassess what is working and what should be reexamined on a regular basis to maintain a reasonable workload that benefits teachers, students, and families