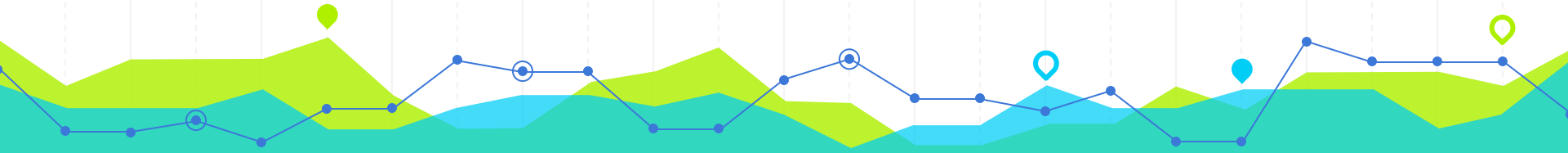


Math Curriculum Review Update

Westwood School Committee

May 10, 2023

THE REVIEW TEAM

Erin Aaron, Elementary Math Specialist/Coach
Ashley Braren, WHS Class of 2023
Karen Carbone, Elementary Teacher
Kristen Carr, Elementary Teacher
Christine Carter, Parent
Katie Clarke, Middle School STEM Department Head
Beth Cormier, Middle School Math Specialist
Amy Davenport, High School Principal
Tanya Ferguson, High School Math Department Head
Lisa Freedman, Preschool Director/Special Education Department Head

Jennie Goossen, Elementary Science Specialist/Coach
Nate Keene, High School Math Teacher
Matt Kuklentz, Elementary Principal
Christy McKenney, Middle School Math Teacher
Andrew Miller, High School Science Department Head
Eavan Monahan, High School Math Teacher
Tony Mullin, School Committee Member
Christine Size, Elementary Math Coordinator
Julia St. Jean, High School Guidance Counselor

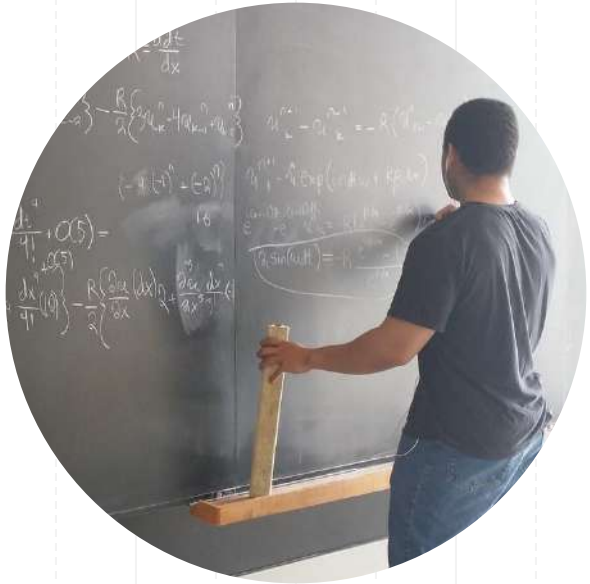
You may not be aiming for a mathematically oriented career. That's fine--most people aren't. But you can still do math. You probably already are doing math, even if you don't call it that. Math is woven into the way we reason. And math makes you better at things. Knowing mathematics is like wearing a pair of X-ray specs that reveal hidden structures underneath the messy and chaotic surface of the world. Math is a science of not being wrong about things, its techniques and habits hammered out by centuries of hard work and argument. With the tools of mathematics in hand, you can understand the world in a deeper, sounder and more meaningful way."

-Jordan Ellenberg, How Not to be Wrong (2014)

VISION STATEMENT

Students in the Westwood Public Schools use math to explore and understand the world around them. The concepts and skills they master at school set them up for success in academic, professional and civic life.

They use the structure and language of math to pose questions and solve problems. They approach new challenges with curiosity. They persevere, think flexibly, try different strategies and work collaboratively.



All students have access to courses that support their academic and career goals. Course pathways are flexible and interconnected, and resources are available to students seeking additional challenge or support.

REVIEW CYCLE & PROCESS HIGHLIGHTS

Westwood Public Schools
Curriculum Review Cycle, 2018-2024

	Review	Recommend/Develop	Implement
2018-2019	English Language Arts & Literacy	SEL	Science & Engineering
2019-2020	Social Studies Wellness	English Language Arts & Literacy	SEL
2020-2021	Social Studies Wellness	n/a	English Language Arts & Literacy
2022-2023	Spring: Mathematics Fall: Library Media/ Digital Literacy and Computer Science	Social Studies/ Wellness	n/a
2023-2024	Library Media/ Digital Literacy and Computer Science & World Languages	Mathematics Library Media/ Digital Literacy and Computer Science	Social Studies/ Wellness
2024-2025	Visual & Performing Arts	Library Media/ Digital Literacy and Computer Science & World Languages	Mathematics Library Media/ Digital Literacy and Computer Science

- DESE framework and guidance
- NCTM publication
- Curriculum maps
- MCAS data
- Survey feedback (students, families)
- Outreach to other districts
- Learning walks

MAJOR THEMES

"**Just right" math experiences** that provide appropriate challenge and are **relevant** to students' long-term goals.

Equitable access to **high-quality curriculum** and **culturally responsive instruction** for all students.

Collaboration for teachers from **different levels** that deepens understanding of how students' mathematical thinking develops.

RECOMMENDATIONS: District-Wide

1. Implement programs and practices that support equitable access to rigorous, high quality math instruction for all students, particularly BIPOC, low income and students with disabilities.
2. Develop a PreK - 12 curriculum map of math concepts and skills that can be used as a professional learning tool.
3. Partner with families to support student success in math by providing more opportunities for engagement and communication.
4. Create regular opportunities for vertical professional development (learning walks, reading common texts).

RECOMMENDATIONS: PreK - Grade 5

1. Revise K-5 formative and summative assessments to align with standards and expectations.
2. Explore best practices for the use of writing in math class.
3. Explore different approaches to coaching, consultation, intervention and student support in elementary math.
4. Identify math-science curriculum connections and plan instruction around those connections.
5. Invest in curriculum resources, PD and instructional technology support to bolster foundational multiplication understanding in grade 3.
6. Strengthen grade level team structure across the district.

RECOMMENDATIONS: Middle School

1. Identify a mathematics curriculum resource that is aligned to DESE standards, promotes engagement and understanding, and prepares students for high school.
2. Revise the current curriculum pacing guide/map.
3. Provide PD to support teachers in the implementation of a new program, inquiry-based approaches, and a math workshop model.
4. Develop a new model for intervention
5. Align the Algebra courses at 8th and 9th grade so that all students entering Geometry have comparable skills and conceptual understanding.
6. Clarify possible accelerated pathways for students who have mastered all the algebra and the grade level standards of the Massachusetts frameworks.

RECOMMENDATIONS: High School

1. Determine a range of relevant options for students' culminating senior math experience and plan flexible pathways leading to those courses
2. Develop more math electives (e.g., Financial Literacy, Programming and Coding.)
3. Replace Math Plus class with a small group intervention/co-teaching model.
4. Offer support to students who want to move into a more challenging math class.
5. Align the Algebra courses at 8th and 9th grade so that all students entering Geometry have comparable skills and conceptual understanding.
6. Clarify possible accelerated pathways for students who have mastered advanced coursework.

NEXT STEPS: June 2023 - 2024

Summer 2023

- Revise elementary assessments
- Hire consultant to support elementary coaching/intervention model options
- Purchase materials and plan PD to support grade 3 multiplication
- Plan for all grades pilot of new math program at TMS
- Align grade 8 and grade 9 Algebra courses

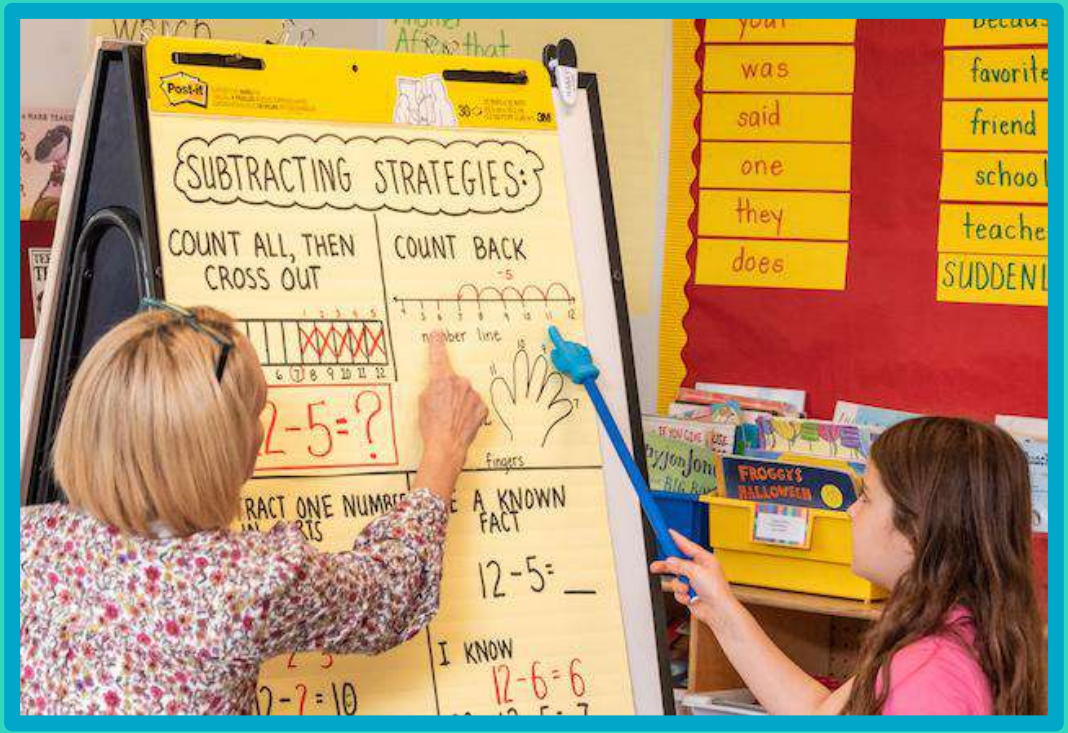
School Year 2023-2024

- Develop common curriculum map template and update existing maps
- Launch new math support model and new Math Plus course at WHS
- Pilot multivariable calculus at WHS
- Develop/pilot new math coaching/intervention model for elementary
- Provide collaborative time for grade 8 & 9 teachers to monitor course alignment
- Develop semester elective offerings at WHS
- Provide PD to support culturally responsive practices

Up Next For Review

2023-2024	**Library Media/ Digital Literacy and Computer Science & World Languages**
2024-2025	**Visual & Performing Arts**
2025-2026	**Science & Engineering**
2026-2027	**English Social Emotional Learning**

THANK YOU!!!


SUBTRACTING STRATEGIES:
COUNT ALL, THEN CROSS OUT
COUNT BACK
-5
number line
Fingers
A KNOWN FACT
12-5=_
I KNOW
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friend
FROGGY'S HALLOWEEN