



Board Meeting: March 9, 2026

Title: K-12 Mathematics Curriculum Review Process

Type: Discussion

Presenter(s): Mark Carlson, Math and Science Coordinator

Description: This report outlines the comprehensive K-12 Mathematics Curriculum Review Process conducted by Edina Public Schools in response to the adoption of the 2022 Minnesota Academic Standards in Mathematics. Grounded in our core belief of Professional Excellence, this work reflects our commitment to engaging educators and stakeholders in thoughtful, research-based decision making that advances student learning. It summarizes the review process, key findings regarding current reality, instructional shifts required by the new standards, curricular resource evaluations, final recommendations for K-12 mathematics materials, implementation timelines, pathway adjustments, and anticipated budget considerations. The recommendations presented reflect a unified vision for vertically aligned, rigorous, and engaging mathematics instruction designed to meet the diverse needs of all Edina Public Schools students.

Recommendation: Read and review this report for board discussion.

Desired Outcomes for the Board: Review the report, have questions prepared and provide feedback on the content. This report will be brought to the Board meeting on April 13th for action.

Curriculum Review Process

In Edina, a core belief we share is Professional Excellence. This means, Edina Public Schools (EPS) believes our educators and staff are essential to student success. We value and support them in advancing strategic and innovative initiatives grounded in best practices. One way we live out this value is by including stakeholders in the review, design and implementation of district programming. This will be done through the use of “district design teams.” A design team is a group of representatives who serve to guide and inform district decisions. In completing the math review process, we had two separate teams one for elementary and one for secondary.

The following staff members have been integral in the review and recommendation that resulted from the math curriculum review process:

Alicia Abdella	Edina High School	Mathematics Teacher
Kristy Ardinger	Countryside Elementary	3rd Grade Teacher
Mark Carlson	District Office	K-12 Curriculum Coordinator
Allyson Dardis	Creek Valley Elementary	4th Grade Teacher
Kristen Ehlert	Valley View	Mathematics Teacher
Leigh Ann Feily	District Office	MTSS Coordinator
Carrie Gerber	South View	Mathematics Teacher
Kathryn Gimse	District Office	Instructional Coach (EL)
Alex Giraldo	Countryside Elementary	Spanish Dual Immersion Teacher
Toy Haerter	Countryside Elementary	Math learning Specialist
Amber Klaphake	District Office	Special Education Facilitator
Jane Kretsch	Concord Elementary	5th Grade Teacher
Lindsey Kruppstadt	Edina High School	Mathematics Teacher
Sarah Miziorko	South View	Dean of Students
Nathaniel Murphy	Edina High School	Mathematics Teacher
Laura Opsahl	Cornelia Elementary	Math Learning Specialist
Erin Plasch	Concord Elementary	Talent Development Teacher
Cara Rieckenberg	Highlands Elementary	Principal
Maren Scheiner	Normandale Elementary	5th Grade Teacher
Margaret Schlukebier	Valley View	Mathematics Teacher

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Kristen Ehlert	Valley View	Mathematics Teacher
Leigh Ann Feily	District Office	MTSS Coordinator
Carrie Gerber	South View	Mathematics Teacher
Kathryn Gimse	District Office	Instructional Coach (EL)
Mary Schoeb	Highlands Elementary	Grades 2-3 CP Teacher
Elizabeth Sletten	South View	Mathematics Teacher
Jared Thompson	Edina High School	Mathematics Teacher

The curriculum review process started with the approval of new mathematics standards from the Minnesota Department of Education in the spring of 2024 and final approval by the Minnesota State Legislature in April of 2025. In the fall of the 2024-2025 school year, Teaching and Learning convened two design teams one for secondary and one for elementary. Each team completed the following tasks for their level:

- Examined the new standards and changes from the 2007 standards.
- Completed an audit of the current reality of elementary/secondary math education in Edina Public Schools.
- Completed a study of current research on best practices in math instruction.
- Identified a desired reality for math programming.
- Created a rubric for evaluating curricular resources and their ability to meet our desired reality.
- Researched core resource materials for use across all Edina math programming.
- Developed an implementation plan for new resources.

Math Design Team Timeline

The design teams had their initial meetings in December 2024 and had an additional three meetings each throughout the winter and spring of 2025. The teams began meeting again in late August of 2025 and began to focus attention on curricular resources, course sequencing and implementation plans throughout the remainder of 2025 and into early 2026. The teams will continue to meet during the spring of 2026 and will transition to an implementation team for the 2026-2027 school year.

Current Reality - Elementary

The Elementary Math Design Team examined the current reality of math programming. They focused on student achievement, engagement, and the effectiveness of resources including: curriculum, instruction, time, and systemic structures. Below are some findings across these areas.

Student Achievement:

- K-1 EarlyMath screener data indicated approximately 89% of all students were proficient in math (Spring 2025)
- aMath screener data indicates approximately 80% of all 2nd-5th grade students are proficient in math (Spring 2025)
- Proficiency on the Minnesota Comprehensive Assessments (MCA) for 3-5 students is at approximately 76%
- While these proficiency rates are strong they remain largely unchanged over the last few years.
- EPS has persistent, significant gaps when looking at sub-groups based on race, FRPM, EL and Special Education status.

Student Engagement:

- Based on data from teacher surveys, there is a wide variation in student engagement.
- There is a strong positive correlation between student engagement and achievement.
- Current instructional practice is viewed as teacher driven, leading to a lower level of active student engagement from some.

Resources - Curriculum:

- Math in Focus has provided a strong mathematics base for most students in EPS.
- While appropriately challenging for most students it lacks scaffolding resources for those who may need additional support.
- The French resources provide some challenges around language complexity as materials are designed for native speakers.
- There is a lack of included fluency instruction and practice within the program.

Resources - Teacher:

- EPS has an incredibly well trained, highly effective pool of teachers providing instruction to all students across the system.
- With the emphasis on reading instruction over the last several years, there has been a lack of professional development in math. Teachers would benefit from focused work on evidence based instructional practices in mathematics.
- There are support resources in place for both interventions and for Talent Development.

Resources - Structural:

- Structural Supports such as detailed pacing guides, common assessments, common rubrics and use of digital grading tools are cited as positive structural support systems.
- WIN time is available in all schools but most of this time has been used for reading and language instruction instead of math support.
- The coaching model has proven success for reading and could be successful with a math implementation.

Current Reality - Secondary**Student Achievement:**

- Approximately 74% of 6-8th grade students are demonstrating proficiency across 2 of 3 measures as determined by the EPS Data Metrics Report.
- In 9-12 approximately 66% are proficient in their math courses as measured by a B or better course grade and 70% are proficient on the MCA based on EPS Data Metrics Report
- FastBridge & classroom grades are showing higher success than MCA scores at the 6-8 level.
- EPS has persistent significant gaps when looking at sub-groups based on race, FRPM, EL and Special Education status.

Student Engagement:

- 72% of students surveyed rated their overall engagement in math class at a 4 or 5 on a scale a 1-5 Likert Scale.
- 93% of teachers surveyed rated their students' overall engagement as a 3 or 4 on a 1-4 Likert Scale.
- Phones provide significant distraction for some students.

Resources - Curriculum:

- Savvas is thorough, and mostly aligned to MN standards based upon EdReports and teacher feedback.
- At the middle level teachers like the immediate feedback that is provided for students when doing work outside of class.
- The digital features, while helpful for getting through homework, can sometimes act as a "crutch." Students may learn to click through the hints to get the right answer without actually mastering the underlying mathematics.
- There are scaffolding gaps in the resource.
- There are many teacher created resources to supplement Savvas across all classrooms. This has created some inconsistency in student experiences.
- Savvas has a limited number of quality math tasks. Tasks to engage students in meaningful mathematical thinking, exploration, and that allow for multiple approaches to problem-solving.

Resources - Time:

- At the middle school level students have a block of math every other day for approximately 76 minutes (this varies slightly by building or block) on average about 38 minutes per day. This is significantly less time than math receives at the elementary and high school level.
- At the high school classes are 49 minutes a day 5 days a week or 49 minutes 3-days per week and one 88 minute block.
- Very difficult to complete content for Compacted Algebra. Two years of material compacted into one year with new standards isn't feasible.
- Math teachers at the high school feel it is difficult for students to get their needs met during FLEX as students have needs in other classes as well.

Resource - Teacher:

- Edina Public Schools has a very strong, well trained set of professional math teachers across all three secondary sites.
- Teachers use a variety of research based teaching practices to deliver mathematics instruction.
- More time is needed to continue to develop teaching practices to meet the needs of all learners.

Resources - Structural:

- Both middle schools and the high school continue to utilize FLEX to provide additional support to students.
- Additional structures are in place to support students including Special Education, Math Lab (SV), Learning Lab (VV) and SMATH Lab (EHS).
- 9th grade Teaming has been helpful in transitioning students to high school.
- The current school day structure with very limited time for core math instruction is seen as a structural barrier by the design team.

Major Shifts: New Standards

In reviewing our mathematics curriculum, it is vital to distinguish the 2022 Minnesota Academic Standards as a strategic evolution rather than a simple update. While the 2007 standards prioritized procedural fluency—mastering the 'how-to' of specific calculations—the 2022 framework shifts the focus toward mathematical literacy and reasoning. This new benchmark requires students to not only arrive at the correct answer but to engage in rigorous mathematical practices, such as modeling, constructing arguments, and identifying patterns, ensuring they can apply their knowledge to complex, real-world challenges.

Anchor Standards:

The 2007 standards were organized in a way that sometimes led to siloed learning at each grade level. These standards were broken down into 4 strands; Numbers & Operations, Algebra, Geometry & Measurement, and Data Analysis & Probability. The 2022 standards utilize 7 Anchor Standards across three strands; Data and Probability, Spatial Reasoning, and Patterns and Relationships. These 7 Anchor Standards remain consistent from kindergarten through high school. This provides a clear vertical articulation of the learning across grade levels and has placed a significantly greater emphasis on Data. Here are the 7 Anchor Standards:

1. Data Science
2. Chance & Uncertainty
3. Measurement
4. Geometry
5. Number Relationships
6. Equivalence & relational Thinking
7. Patterns & Relationships

Definition of Rigor:

In the 2022 framework, "rigor" is defined as a balance of three equal priorities:

- Conceptual Understanding: Understanding the *why* behind a mathematical principle.
- Procedural Fluency: Maintaining accuracy and efficiency in calculation.
- Application: Using math to solve novel problems in unfamiliar contexts.

EPS must ensure that all three aspects of rigor are addressed with the same level of intensity.

Integrated Mathematical Practices:

Under the 2007 standards, students often approached math as a series of isolated rules to be memorized. The 2022 standards integrate Standards for Mathematical Practice directly into the benchmarks. This means students are now assessed not just on whether they found the correct answer, but on their ability to:

- Construct and defend mathematical arguments.
- Model real-world scenarios using abstract concepts.
- Critique the logic of their peers.

Contextual Integration:

In addition to the integration of mathematical practices, these new standards embed math within broader contexts. This includes:

- Contributions of Minnesota's Tribal Nations: Recognizing the mathematical

foundations used by the Dakota and Anishinaabe people.

- Cross-Disciplinary Connections: Explicitly linking math to financial literacy, and computer science.
- Modeling and real world applications.

Instructional Shifts

The transition to the 2022 standards necessitates several instructional shifts in our daily classroom practices. These are not just changes in what we teach, but in how students interact with the material and each other.

The 2022 standards prioritize Standards of Mathematical Practice. To address this change, instruction will prioritize student-led inquiry. Students will spend more time grappling with mathematical tasks that allow multiple entry points and various strategies for solution. In addition, these new standards demand that Conceptual Understanding, Procedural Fluency, and Applications are pursued with equal intensity throughout a unit. This ensures student learning is robust, durable, and transferable to new situations. Students will need to engage in complex, real-world problem-solving from the very beginning of the learning cycle. This can be addressed through the use of Problem Based Learning (PBL).

Transitioning to Problem-Based Learning (PBL) directly addresses the 2022 standards by shifting the learner from passive recipient to an active sense-maker. In a PBL environment, students engage with open-ended challenges through an inquiry process. This approach naturally facilitates the Standards of Mathematical Practice by requiring students to persevere through complex tasks, justify their reasoning, and critique the strategies of their peers. Ultimately, PBL transforms the teacher from a lecturer into a facilitator, ensuring that students are the ones doing the mathematical thinking, which leads to the durable and flexible understanding demanded by the new framework.

Curriculum Resource Review - Elementary

In the spring of 2025 the K-5 Math Design Team developed a rubric for the evaluation of core curricular materials. This rubric was based upon research on best practices in math instruction, current reality and stakeholder feedback. They then used EdReports to collect a list of resources that could possibly meet our needs. Here is the list of resources that were evaluated.

Curricular Resource:

Amplify Desmos Math - Amplify

Bridges in Mathematics - Math Learning Center

Clear Math - Carnegie Learning

EnVision Mathematics - Savvas
Eureka Math - Great Minds
Eureka Math2 - Great Minds
Go Math - Houghton Mifflin Harcourt
Imagine IM - Imagine Learning
Into Math - Houghton Mifflin Harcourt
iReady Mathematics - Curriculum Associates
Math & You - Big Ideas Learning
Math in Focus - Houghton Mifflin Harcourt
Open Up Resources K-5 Math- Open Up Resources
Reveal Math - McGraw Hill
Stemscopes Math - Accelerate Learning

Each of the resources was evaluated by each of the design team members individually. This process was completed between September 1st and November 1st of 2025. In November the entire Design Team met to collectively discuss all resources and to determine a group of finalists. As part of this process there were four resources that separated themselves from the rest. They were Amplify Desmos Math, Carnegie Learning - Clear Math, Imagine Learning - Imagine IM, McGraw Hill - Reveal Math.

At this time the Design Team decided that they needed to take a different direction with Normandale French Immersion School as none of the resources had materials in French. Therefore the team felt it was best to move forward with the process for other programming including Spanish Dual Language and Continuous Progress but to explore other options for Normandale.

In December the team heard presentations from all finalists and began discussions on which one resource would best meet the needs of students in Edina Public Schools. At the conclusion of this meeting the team decided to explore two of the products with students, Amplify Desmos Math and Reveal Math. In December, classroom teachers on the design team did lessons with students to get feedback and a better feel for each product.

Curriculum Resource Final Decision Elementary

In January 2026, the selection team reconvened to identify the resource best equipped to meet the rigor of the updated Minnesota standards and the diverse needs of EPS students. Following a

rigorous period of investigation and analysis, the team reached a consensus that Amplify Desmos Math is the optimal choice. The committee concluded that this program most effectively addresses the instructional shifts required by the new standards, ensuring our students develop deep conceptual understanding alongside procedural fluency.

Below are some key reasons for the selection of Amplify Desmos Math:

- Illustrative Mathematics: Amplify Desmos Math is built on the Illustrative Mathematics (IM) framework, a highly rated research based curriculum. This creates a cohesive program across K-12 when paired with the recommendations of the Secondary Design Team.
- Low-Floor, High-Ceiling Tasks: Every lesson starts with an invitation to the math that all students can access (the "low floor"), but the problems quickly scale in complexity to challenge advanced learners (the "high ceiling").
- The Launch, Monitor, Connect Lesson Structure: The curriculum follows a predictable, research-backed flow. Teachers Launch a curious problem, Monitor as students work and share ideas, and then Connect those ideas to the day's mathematical goal. This structure reduces the "lecture-style" teaching that often disengages younger learners.
- Integrated Print, Hands-on Manipulatives and Digital: Amplify strikes a balance for K-5. It includes the use of manipulatives, learning activity centers and print workbooks, but also features "Desmos-powered" digital activities that provide Responsive Feedback.
- Asset-Based Differentiation ("Support, Strengthen, Stretch"): Instead of just giving easier work to struggling students, the curriculum provides support scaffolds that keep them on grade-level. For students who master concepts quickly, Stretch activities offer deep, conceptual extensions rather than just more of the same problems.
- mCLASS Integrated Assessments: The program includes built-in screening and progress monitoring. This allows teachers to see where a student's thinking might be breaking down, providing actionable data to address gaps and align with MTSS (Multi-Tiered System of Supports) requirements.
- Focus on Mathematical Identity: The K-5 materials celebrate multiple ways to solve a problem and highlight "Unit Stories" that feature diverse characters and real-world contexts, it builds student confidence and curiosity early in their academic careers.
- Adaptive Spaced Repetition for Mastery: Amplify Desmos Math uses an evidence-based Spaced Repetition system (powered by "Multiplication by Heart"). This digital tool tracks which facts a student has mastered and which they struggle with, automatically adjusting the daily practice to focus on the specific gaps in their memory. By spending just 5-10 minutes a day on these personalized "flashcards," students build automaticity in the basic operations—addition, subtraction, multiplication, and division.

- Integrated Coaching and Unit Prep Support: Amplify's PD isn't just a one-time seminar; it is "job-embedded." Teachers have access to Unit Refresh videos and planning protocols that help them internalize the math before they teach it. This ensures that even teachers who may feel less confident in math have the high-level support needed to facilitate deep conceptual discussions.

Unique Edina Elementary Programming

One challenge is meeting the needs of our unique elementary programming options. This decision is a good fit for all programming except for French Immersion students. A challenge for this group is finding resources that provide student facing materials in French. In addition, because they are immersion students and not native speakers, materials from France have proved to be challenging from a language development standpoint. To address this concern we are currently exploring Canadian resources that are written for immersion students. While this provides some challenges from a standards alignment standpoint, we feel this can be dealt with through targeted lessons. The team has decided not to do an early implementation at Normandale during the 2026-2027 school year and continue in the exploration phase of matching viable Canadian resources to MN standards.

Next Steps with Elementary

The K-5 Math Design Team will transition to a focus on implementation. They will meet this spring to discuss standard misalignments to ensure new teachers have all supplementary lessons needed to address the new standards. In addition this team will help make determinations about necessary professional development and key expectations for math programming and instruction.

Beginning in the fall of 2026-2027, the team is recommending having one team per grade level across the district begin implementation of these new materials. All teams that are part of the early implementers made the choice to participate in this initial year. To prepare this group, the Teaching & Learning Department will ensure that they get formal training on the evidence-based instructional practices, curricular procedures and materials to ensure an effective initial implementation. In addition this group will have meetings throughout the year to help facilitate this transition.

Teaching and Learning will work with Amplify Desmos math to make sure early implementers have all necessary materials by the beginning of the 2026-27 school year. This group will help facilitate the transition for the remaining teachers who will begin implementation in the 2027-2028 school year.

Curriculum Resource Review - Secondary

The secondary review process mirrored the elementary process both in scope and timeline. Below is a list of resources that were examined at the secondary level.

Curricular Resource:

Amplify Desmos Math - Amplify

HS Mathematics Solutions - Carnegie Learning

MS Mathematics Solutions - Carnegie Learning

EnVision Mathematics - Savvas

Math Nation - Accelerate Learning

Core Connections - CPM

Inspiring Connections - CPM

Imagine IM - Imagine Learning

Into Math - Houghton Mifflin Harcourt

iReady Mathematics - Curriculum Associates

Math & You - Big Ideas Learning

Open Up Resources K-5 Math- Open Up Resources

Reveal Math - McGraw Hill

Each of the resources was evaluated by each of the Design Team members. This process was completed between September 1st and November 1st of 2025. In November the entire Design Team met to discuss all resources and to determine a group of finalists. This meeting produced three finalists; Carnegie Learning - MS and HS Mathematics Solutions, Imagine Learning - Imagine IM, and Accelerate Learning - Math Nation.

In December the team heard presentations from all finalists and began discussions on which one resource would best meet the needs of EPS students. At the conclusion of this meeting the team decided to continue to explore these three materials and to reconvene on January 5th to continue discussions.

Curriculum Resource Final Decision Secondary

On January 5th, the evaluation team unanimously recommended Imagine IM for our secondary

schools. Because both this program and our K-5 selection (Amplify Desmos Math) utilize the Illustrative Mathematics curriculum, the district will achieve total vertical alignment. This consistency eliminates transitional gaps, ensuring that students encounter familiar strategies and high standards as they move from elementary to secondary math.

Some positive attributes include:

- Evidence-Based PBL: Unlike traditional models where a teacher "shows" and students "copy," Imagine IM uses a problem-based design. Students grapple with mathematical ideas first, which research shows leads to deeper conceptual understanding and better long-term retention.
- Built-in Support for Diverse Learners: The curriculum includes specific "Instructional Routines" designed to support Multilingual Learners and students with disabilities. It provides heavy scaffolding (like "Notice and Wonder" and "Mathematical Language Routines") that helps all students access complex Algebra and Geometry concepts without "watering down" the content.
- Focus on Mathematical Discourse: The secondary years are critical for developing reasoning. Imagine IM prioritizes "math talk," requiring students to explain their thinking and critique the reasoning of others. This directly aligns with the Minnesota Mathematical Practices that accompany the new benchmarks.
- Integrated Digital and Print Tools: Imagine IM offers a robust digital platform that allows for real-time feedback while also allowing for students to go off line as materials can be in print as well.
- Empowering Teachers as Facilitators: The "Imagine" version of Illustrative Math includes enhanced teacher notes and professional learning resources. This shifts the teacher's role from a lecturer to a facilitator, allowing them to focus on student thinking and targeted interventions.

Pathways

In January this school board approved the dropping of Compacted Algebra. As described in that report, the Secondary Design Team will be creating two new courses to compact Intermediate Algebra, Geometry and Algebra 2 into two courses. This work will be completed so that the courses are ready for implementation during the 2027-28 school year. While these courses do not have an official title, the design team will work with high school counselors to ensure they are approved by the NCAA Eligibility Center.

As part of the development of these new courses, the team will also develop an on-ramp to Course 2 if a student chose not to take Course 1. In addition, students will be able to transition off the compacted pathway to Geometry if the choice is not a good fit. However, like all off ramps this will require a repeat of some content. This would be similar to the off ramp from Compacted

Algebra to Intermediate Algebra that currently exists. Finally, as new students come into our secondary system, and as individual situations arise, administration can and do work with teachers, students and families to find a good fit course. The priority of EPS is to always find the best fit for students.

Next Steps Secondary

The Secondary Math Design Team will transition to a focus on implementation. They will meet this spring to discuss standard misalignments to ensure new teachers have all supplementary lessons needed to address the new standards. In addition they will help make determinations about necessary professional development. This team will also begin the development of the new compacted courses for the compacted pathway.

The plan would be to start the 2026-2027 school year with Imagine Learning in four courses; Math 6, Pre-Algebra, Algebra 1, and Intermediate Algebra. In addition a unit of new standards will be developed for Geometry students to ensure they are prepared to take a MCA IV in 2028. In the 2027-2028 New Course 1, Geometry and Algebra 2 will begin use of the new materials and finally in the 2028-29 school year the New Course 2 will come online with the new materials.

To prepare this group, the Teaching & Learning Department will ensure that they get formal training on the evidence-based instructional practices, curricular procedures and materials to ensure an effective initial implementation. In addition, where possible, professional learning time will prioritize cross-district teaming to help harness collective knowledge.

Budget Elementary

At this time we are still negotiating with both Amplify Desmos Math and Imagine Learning so we do not have final quotes. For Elementary, we are expecting 75% of licenses/workbooks to cost \$30 per student per year and 25% at \$40 per student per year, each license/workbook in Spanish is an additional \$45/student for 7 years of licenses. Licenses for early implementers will be extended to 8 years. In total licenses and workbooks will cost about \$785,000. Each classroom will have a cost for classroom manipulatives, teacher licenses and print editions, a total for these classrooms of about \$310,000. In addition, approximately \$25,000 for professional development. This represents a total costs of:

Capital Expenditures	\$1,095,000
Profession Development	\$25,000

Budget Secondary

For secondary, we expect licenses to be about \$17 per student per year for a total of 8 years and a total cost of \$500,000. We are planning to do printing in house of workbooks which we should be able to print for between \$8-\$10 per workbook per year for materials. This is a cost of

approximately \$16,000 for year one and \$27,000 per year for subsequent years. This is a savings of \$22 per workbook per year and provides additional flexibility in how resources are used across courses. Additional costs will be approximately \$23,400 for professional development, Teacher licenses and print editions \$200 per teacher per course or approximately \$6000, manipulative kits for middle school \$579 per teacher for a total cost of just under \$10,000.

This represents a total costs of:

Capital Expenditures	\$516,000
Consumable Expenditures (8 yrs):	\$205,000
Professional Development	\$23,400

While the numbers provided in this report accurately reflect current reality, we are still in active negotiations and will have more specific numbers for you in our April report.