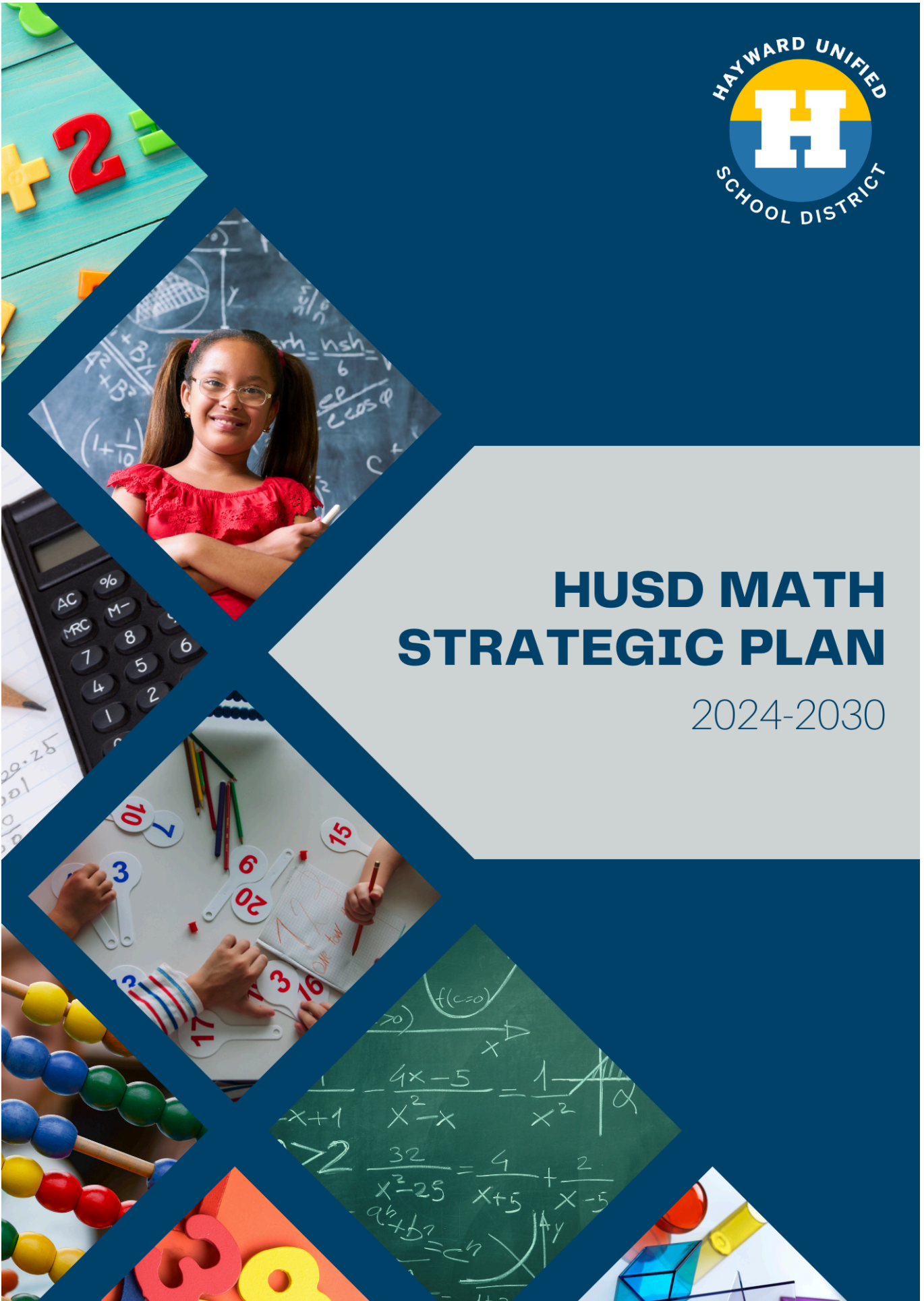




HUSD MATH STRATEGIC PLAN

2024-2030



HUSD Mathematics Strategic Plan 2024-2030

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Acknowledgments

Hayward Unified School District gratefully acknowledges the hard work and dedication of HUSD educators and educational partners who contributed to the development of this initial Mathematics Strategic Plan.

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Executive Summary

Math is everywhere and all around us. Mathematics serves as the universal language of the world and is an essential part of our daily lives. Mathematics is fundamental to understanding and quantifying various aspects of the world, from everyday activities to complex scientific concepts. On any given day, we use math to manage personal finances, budget, cook, monitor our health, estimate driving distances and interpret sports statistics. Math allows us to quantify relationships, make predictions, and model real-world situations. The beauty of math is also found in the natural world around us: the patterns of spirals in seashells, the arrangement of petals on a flower, and the structure of a snowflake. Math connects us on a human level and is truly indispensable for understanding our world.

Likewise, mathematics and social justice are deeply interconnected. Mathematics serves as a powerful tool to understand and address systemic inequalities. Through data analysis, mathematical models, and statistical methods, researchers and activists can highlight disparities in areas such as education, healthcare, housing, and income. For instance, mathematical tools can uncover patterns of bias in algorithms, track wealth distribution, or assess the effectiveness of policies aimed at reducing inequity. Moreover, promoting equitable access to quality mathematics education is essential to empower marginalized communities, providing them with skills to navigate and influence a data-driven world.

Now, more than ever, our HUSD students need access and immersion into real life mathematical experiences and instruction to be able to use mathematics to better their lives. By bridging mathematics with social justice, our society can move closer to creating systems that are fair, transparent, and inclusive for all.

This is why HUSD needs a strategic plan for mathematics. This plan will provide clear, needed guidance to drive our mathematics support and reform work in HUSD.

The mathematics strategic plan supports all students, specifically including students furthest from opportunity. It involves providing tailored resources and interventions to address systemic inequities and ensure equitable access to quality education. This includes addressing learning gaps, providing access to appropriate grade-level instruction, creating engaging learning experiences and providing an acceleration point in Middle school (Algebra and Geometry) and High School (Geometry in Summer) for acceleration.

The plan outlines:

- **Early Identification and Intervention:**

Implement early warning systems to identify students at risk of falling behind and provide timely interventions.

- **Accelerated Learning:**

Offer accelerated learning programs to help students catch up to grade-level expectations and accelerate where appropriate.

- **Supplemental Support:**

Provide supplemental support during and after school, to address specific learning needs and personalized learning approaches.

- **High Expectations:**

Foster a culture of high expectations for all students, regardless of their background.

- **Extend Learning Opportunities:**

Implement extended learning opportunities, such as after-school programs and summer learning initiatives, to provide more time for learning and enrichment.

- **Mentorship, Internships and Support:**

Pair students with mentors who can provide academic support, guidance, and role modeling as well as STEM internships that will provide access to a real world environment where students can see the necessity of math skills in the workplace.

- **Support to Teachers:**

Equip teachers with the instructional practices, strategies, and resources they need to deliver high-quality culturally and linguistically relevant instruction. Empower teachers to create safe and engaging learning environments. This includes following a coaching model and providing targeted ongoing professional learning.

- **Engage families & community:**

Develop and promote math learning opportunities between parents/community members and the classroom in order to deeply understand and joyfully engage in mathematics, and to understand why math understanding offers benefits to all.

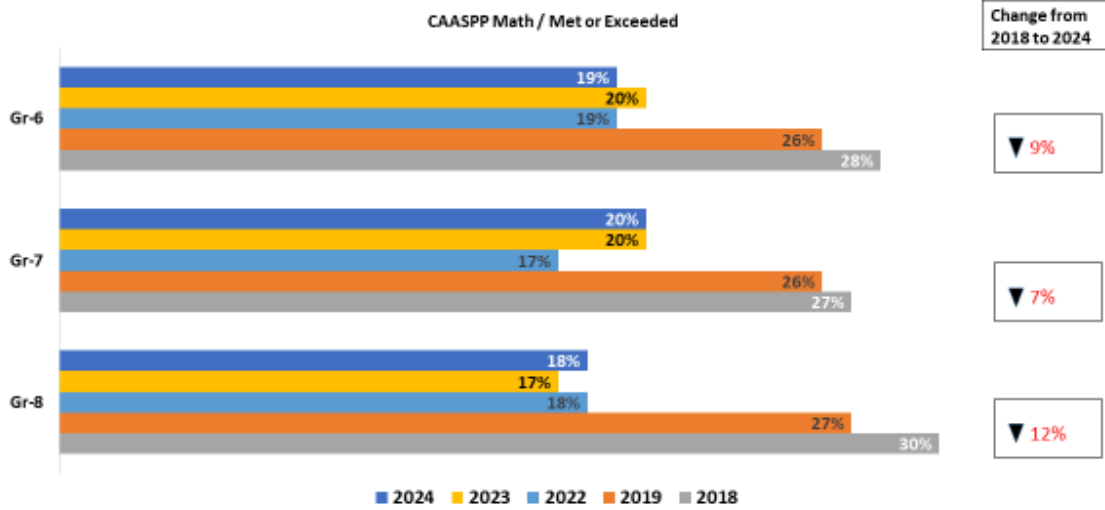
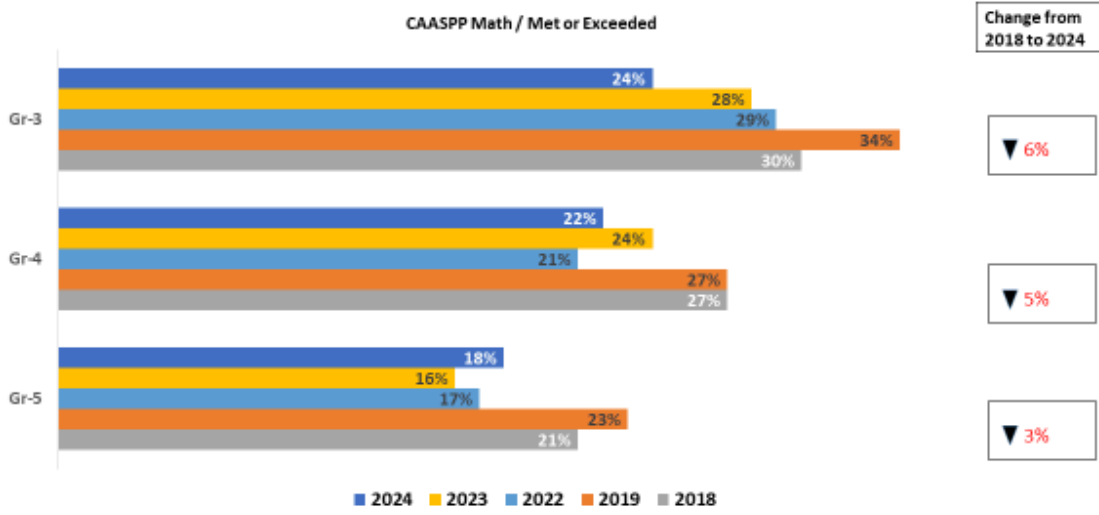
This dynamic and ever evolving strategic plan is created with the ideals of social justice at the forefront. Math is social justice. A strong foundation in mathematics is crucial for students to thrive in today's rapidly changing competitive world, fostering critical thinking and problem-solving skills essential for various fields. A well-rounded mathematics education prepares students for diverse career paths and equips them with the analytical abilities needed for informed decision-making in all aspects of life. This strategic plan will provide a level playing field for our students. Investing in a strong mathematics education for students is an investment in their future and the future of society. Multiple studies and reports indicate a strong correlation between higher levels of mathematical knowledge and higher incomes and report greater life satisfaction.

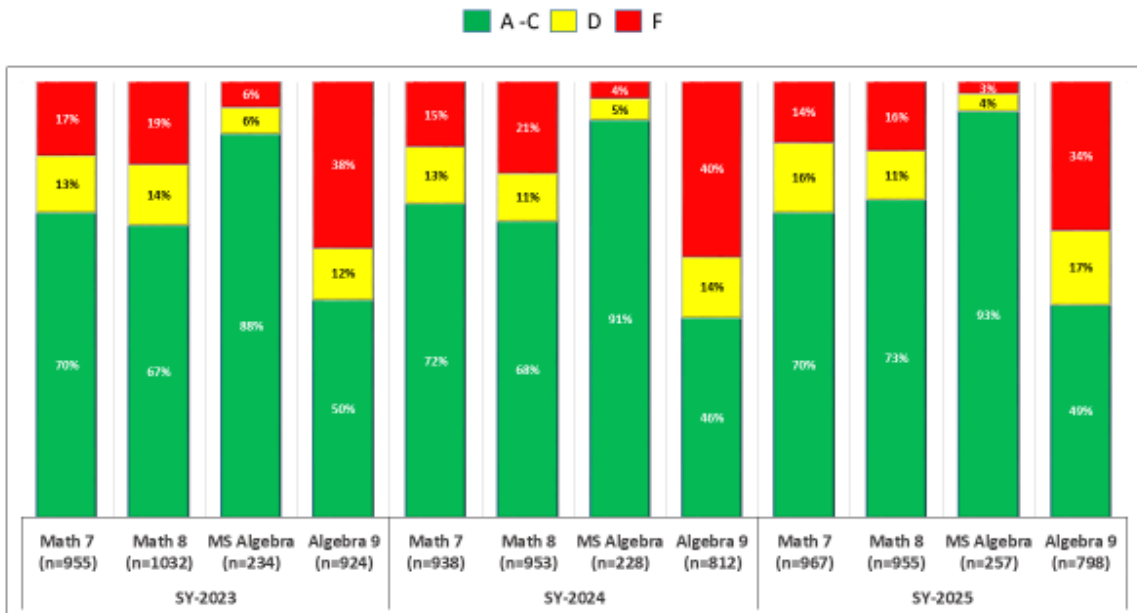
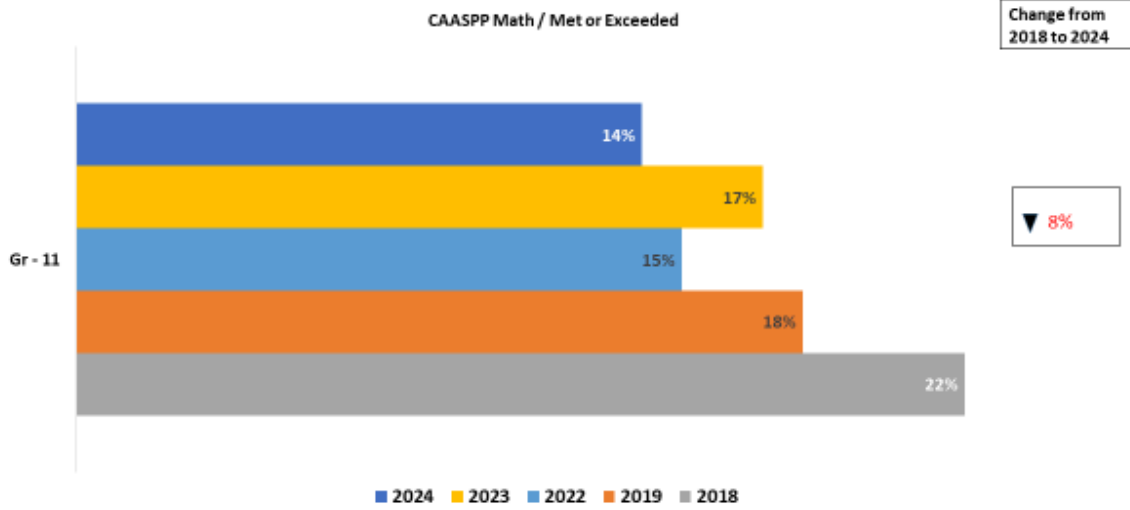
The HUSD mathematics strategic plan will help ensure that all HUSD mathematics students receive a high-quality mathematics education that prepares them for success in a rapidly evolving world. This plan provides a clear vision and sets measurable goals for improving mathematics instruction, aligning curriculum to assessments and professional development aligned to research-based best practices. This plan will help address gaps in achievement, ensuring all students, regardless of background, have access to rigorous and engaging learning opportunities. Additionally, this mathematics strategic plan fosters consistency across schools, supports teachers with the necessary resources and training, and promotes data-driven decision-making to track progress and adjust strategies as needed. By prioritizing mathematics through this mathematics strategic plan, HUSD can cultivate critical thinking, problem-solving, and numeracy skills essential for students' academic and career success.

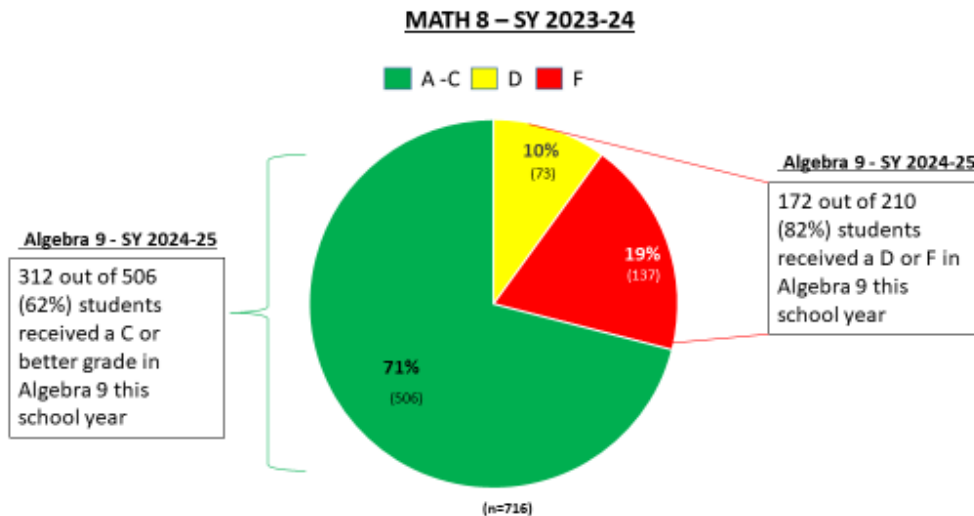
Mathematics Results for HUSD Students

A comprehensive analysis of student math performance in Hayward Unified School District reveals trends that highlight the need for a district-wide strategic approach. This section shares three critical data sets: (1) **trend data from 2018-2024 California Assessment of Student Performance and Progress (CAASPP) Math results** for all tested grade levels, highlighting overall proficiency growth and persistent achievement gaps; (2) **a three-year review of middle school Math and Algebra grades** for students in grades 7, 8, and 9, providing insight into course performance and readiness for higher-level math; and (3) **a district-wide gap in consistent Math benchmark assessments**, which limits the ability to track student progress in real-time and implement timely staff professional learning, student acceleration and intervention opportunities and overall resource support. Together, these data points illustrate the urgent need for a cohesive, structured math plan that provides teachers and staff with the necessary support to strengthen their instruction and provide struggling students with just-in-time math tutoring and intervention so that all HUSD learners are equipped with the skills necessary for long-term math success.

CAASPP Mathematics Results (2018-2024) and Secondary Math Grades (3-years)







These CAASPP results for 3-8 and 11th graders and three-year trend of earned grades in secondary math classes highlight critical areas that require attention:

1. Student Performance Trends (2018-2024):
 - Over the past six years, math proficiency rates for HUSD students have shown a decline since 2018.
 - These percentages indicate that a large portion of students are still not meeting grade-level expectations in math.
2. Challenges in Foundational Math Skills:
 - Third grade is a crucial turning point where students transition from basic arithmetic to more complex problem-solving. If they fall behind at this stage, it can impact their long-term mathematical development.
 - Fourth and fifth graders are expected to apply their math skills to real-world problems and multi-step equations. Stagnant or slower growth in proficiency at these grade levels indicates a need for teacher professional learning support and implementation of robust instructional strategies.
3. Implications for Future Success:
 - If our HUSD students are struggling in elementary math, they will be more likely to face difficulties in middle and high school, leading to increased failure rates in advanced courses like Algebra.
 - The current pass/fail rate in Algebra 9, as seen in the middle school data, suggests that early gaps in understanding are compounding over time.

The intent of this HUSD Strategic Math Plan is to provide a road map for a comprehensive approach to increase mathematics achievement of all HUSD students. It

recognizes the importance of including all HUSD community partners, teachers, district leadership, site administrators, parents and students in our efforts to reach these higher levels of mathematics achievement and better the life outcomes of all HUSD students.

Vision for Mathematics Learning in Hayward Schools

Our HUSD vision is for all students to develop a positive mathematical mindset through engagement in collaborative student-centered learning experiences that build curiosity, promote productive struggle, *and* are connected to students' real lives and cultural backgrounds, ultimately setting them up for success in college and/or career.

Mathematics is not merely a subject to be learned; it is a fundamental aspect of human cognition, the natural world, and the technological advancements that shape our modern society. As renowned mathematician and science writer, Keith Devlin, describes, human minds are inherently drawn to patterns, and mathematics provides the language through which these patterns are understood. From the geometric precision of honeycombs to the mathematical constants embedded in natural phenomena like rivers and seashells, the beauty and relevance of mathematics are undeniable.

Similarly, the overarching goal of our Hayward Unified School District Strategic Math Plan is to help describe a vision and pathway that leads to powerful and uplifting mathematics teaching and learning in all HUSD classrooms. By embracing a balanced approach that prioritizes conceptual understanding, procedural fluency, and real-world application, we develop mathematics classrooms where students are empowered to take ownership of their learning. We use language scaffolds, manipulatives, and visual aids to ensure the access of content to all students, including our multilingual and neurodivergent students.

We recognize that traditional approaches to mathematics education often fall short of inspiring curiosity and engagement among students. Instead of fostering a deep understanding and appreciation for the subject, mathematics is often presented as a fixed set of methods or algorithms to be memorized and often leads to feelings of anxiety and disinterest among math learners.

In HUSD math classrooms, we nurture curiosity about mathematics. We empower students to see mathematics not as a daunting obstacle but as a source of wonder and endless possibilities. We pave the way for a generation of learners who approach mathematics with joy, fascination, and a thirst for discovery as they acquire conceptual proficiency and fluency to meet the demands of today's rapidly changing world and career roles that they will be asked to carry out.

Why Math Literacy — Math Numeracy?

“Math literacy will be a liberation tool for people trying to get out of poverty and the best hope for people trying not to get left behind.”

Bob Moses - civil rights activist and educator

According to the National Council of Teachers of Mathematics (NCTM), numeracy refers to a deep understanding of mathematical concepts and skills that allows individuals to apply mathematics effectively in real-world situations, including problem-solving, reasoning, and critical thinking, with the core belief that every student deserves access to quality mathematics education to achieve high levels of numeracy for productive citizenship and employment.

"Math numeracy" refers to the ability to understand and apply basic mathematical concepts in everyday life situations, essentially meaning the practical use of math skills to solve real-world problems, including interpreting data, calculating measurements, and making informed decisions based on numbers; it's not just about performing complex calculations but also about reasoning and applying math knowledge in context.

Best First Instruction

The HUSD Strategic Math Plan has been developed through the collective efforts of Hayward USD teacher leaders, parents, students and community partners focused on improving math learning outcomes for HUSD students. This is the first version of the plan and the expectation is that it will be a living document which continues to be modified and adapted as resources are developed, staffing support and materials allocated and new learning is incorporated.

The Strategic Math Plan has gone through the following stages:

- Visioning and development of collaborative hopes and dreams for HUSD Math teacher and learning
- Review of HUSD student Math data along with assessment and professional learning and teaching practices
- Unpacking and understanding the new California Mathematics Framework
- Connecting our HUSD vision for Math learning to the guidance provided in the California Mathematics Framework
- Development of the first draft of an HUSD Strategic Mathematics Plan

While this first draft of the HUSD Strategic Math Plan provides a broad vision about how an HUSD student should expect to experience Math learning, it also recognizes the importance of defining practices, schedules and resources that are unique to the elementary or secondary grade span and/or specific groups of students (ie: multilingual or neuro-divergent students).

It is also important to note that the Strategic Math Plan team has been guided by the California Math Framework (July, 2023). We have bridged whenever possible the evidence-based practice and research references noted in the Framework. Specifically, the California Math Framework (CMF) outlines the [“Five Components of Equitable and Engaging Teaching”](#) (Chapter 2 of the CA Math Framework).

These are identified as:

1. Plan Teaching Around Big Ideas
2. Use Open, Engaging Tasks
3. Teach Toward Social Justice
4. Invite Student Questions and Conjectures
5. Prioritize Reasoning and Justification

Signature Instructional Practices

The five components of equitable and engaging teaching noted in the California Math Framework serve as the backbone for the identified signature instructional strategies in HUSD elementary and secondary math classrooms. With a robust focus on providing the necessary professional learning and support needed by Math teachers to understand and engage in these signature practices, the professional learning goals will:

- Bring current district initiatives (such as AB/AR, CLRT, and Deeper Learning) into the math classroom by defining the instructional moves and how they directly connect to these initiatives.
- Expand our teacher and district support capacity to improve math outcomes across our district through proficiency with the instructional strategies and professional collaboration.
- Ensure that all students, including diverse learners (ie. MLL, neurodivergent, etc) are experiencing math instruction at the highest level of cognitive demand and through the Standards for Math Practice in the CCSMs.

The following instructional practices are specific ways to bring the “Five Components of Equitable and Engaging Teaching” to life in HUSD.

Elementary (Grades TK-6th) Signature Instructional Practices

Instructional Practice #1: Math Talks

Math Talks are short, engaging group activities where students solve a math problem mentally and then share their strategies aloud. Lasting about 7-10 minutes these sessions are facilitated by the teacher who records and displays students' thought processes. The main goal of Math Talks is to compare different methods for solving problems, encouraging students to move towards more efficient strategies. By discussing their approaches openly, students develop academic discourse skills and deepen their understanding of numbers. This practice fosters a supportive environment where explaining and justifying reasoning are valued, helping students build confidence in their mathematical abilities. Mistakes are seen as opportunities for learning, and each student's contribution enriches the collective understanding. When choosing a Math Talk problem, teachers can use various formats such as dot talks, geometry talks, estimation talks, and activities like "Which One Doesn't Belong." Problems can also be left open-ended to encourage further exploration and discussion. Planning and reflection on Math Talks should include strategies for concluding the session effectively, ensuring that students leave with clear takeaways and questions that extend their mathematical thinking.

Instructional Practice #2: Re-Engagement

A re-engagement lesson involves using student work samples to deepen understanding of a key mathematical concept. This student-centered approach focuses on keeping students engaged with a problem long enough to uncover new insights. The lesson structure mirrors a traditional format: starting with a warm-up, possibly a number talk related to the problem to ease students back into thinking mode. The core of the lesson involves analyzing selected student work, whether identifying errors, comparing strategies, or exploring different approaches. This phase encourages collaborative learning and allows students to revise explanations or try new strategies in guided practice with a partner. Following this, students engage in independent practice, tackling a related problem or applying learned strategies.

Critical to this approach is task selection, prioritizing tasks that emphasize mathematical practices, strategy development, and communication over mere solution finding. These tasks, such as performance tasks or open middle problems, are culturally and linguistically relevant, helping to surface misconceptions and promote mathematical discourse. During the lesson, the teacher presents and discusses student work to highlight key mathematical ideas, including partial successes, errors, or exemplary samples that set benchmarks for student work.

A re-engagement lesson supports all learners, including neurodivergent and multilingual learners, by encouraging them to make connections and revisit concepts in a supportive environment. Unlike traditional reteaching, this whole-class approach ensures that all students benefit from revisiting and deepening their understanding of the math concept without singling out a struggling group. Overall, re-engagement lessons foster a collaborative learning community where students actively participate in exploring and mastering mathematical concepts through reflective analysis of their own and peers' work.

Instructional Practice #3: Facilitating Classroom Discussions

Teachers strategically plan for questioning as part of their math instruction. Their role as facilitator means that they are proficient at protocols that incorporate student-to-student dialogue using sentence frames or stems, and fostering academic discourse where students articulate their mathematical reasoning and build on each other's ideas. Teachers are adept at focusing questions on student thinking, using following up questions to understand and uncover that thinking. Furthermore, teachers understand the role of task in creating a math class focused on discussion. Tasks are deliberately chosen to be open-ended and engaging, challenging students to think deeply and apply their understanding in meaningful ways. They are also designed to be culturally and linguistically relevant, ensuring all students can connect with the content and contribute actively to discussions. Collaborative opportunities are integral to these routines, allowing students to work together to solve problems and develop shared strategies.

Teachers utilize two resources when planning questions and discussions: Talk Moves: A Teacher's Guide for Using Classroom Discussions in Math (Chapin, et al, 2022) and Math Language Routines (MLRs) from Stanford Center for Assessment, Learning, and Equity (SCALE). Both of these resources provide support for diverse learners, particularly MLLs and anyone struggling with the linguistic components of mathematics.

Talk Moves refers to discussion strategies to promote equitable participation in a rigorous classroom learning environment. Chapin's talk moves include revoicing, repeating, reasoning, adding on, and waiting. In an effective math classroom, these moves are made by both teachers and students.

The eight MLRs are designed to develop, amplify, and assess students' language in math class. Students must be able to read, write, listen, and speak about math. These flexible yet structured routines provide meaningful and authentic opportunities for students to understand and discuss the math content.

This approach not only supports language development but also cultivates a classroom culture where students engage deeply with mathematics and each other's perspectives, fostering collaborative, interpretive, and productive communication skills essential for academic success.

Instructional Practice #4: Math Classroom Culture/Environment

In math classrooms that fosters deep and rich math learning culture, several key elements contribute to student engagement and achievement. First and foremost, there is a strong emphasis on promoting visible sharing and learning, where students are encouraged to think out loud and ask questions about their responses. This approach not only enhances understanding but also builds confidence in articulating mathematical reasoning. The classroom environment is intentionally designed as a safe space where students feel comfortable taking risks and learning from their mistakes, which are celebrated as opportunities for growth.

Aligned with the HUSD Instructional Framework, teachers in this setting serve as facilitators rather than answer-givers. They guide students through thoughtful questioning that stimulates critical thinking and problem-solving skills. Collaboration is central to the learning process, with students frequently working together on math tasks and concepts. There is a deliberate focus on revisiting thought-provoking math tasks to deepen understanding over time.

Technology and math manipulatives are integrated regularly to anchor conceptual learning in real-world contexts, making abstract ideas tangible and relevant to students' lives. This approach not only enhances engagement but also supports differentiated instruction. Throughout these activities, there is a consistent emphasis on the Common Core Standards for Math Practices, reinforcing that mathematically proficient students engage in specific behaviors such as reasoning abstractly and quantitatively, constructing viable arguments, and using appropriate tools strategically.

In essence, a deep and rich math learning culture in an HUSD classroom is characterized by active student participation, collaborative problem-solving, and a supportive environment that encourages exploration and celebrates both successes and learning opportunities.

Instructional Practice #5: Planning Instruction

Planning instruction is vital for an elementary math teacher. HUSD recognizes that teachers need professional learning opportunities and collaboration time to become proficient at planning for math instruction. Each of the instructional strategies in the

strategic math plan is an important component of a powerful math classroom. However, in order to have the highest impact on student learning outcomes, the instructional moves have to be used intentionally and purposefully for comprehensive learning and engagement.

Teaching for Robust Understanding (TRU) Mathematics (Schoenfeld and Folden) describes powerful math classrooms using five dimensions. These dimensions are infused across professional learning and collaboration for the other instructional strategies. This means that for each instructional strategy teachers:

- deeply understand the content they are teaching and the way it sits in relation to previous and future learning
- choose tasks and differentiation techniques that ensure each student is working at their level of “productive struggle”
- choose and implement the instructional strategies and classroom activities to support the active engagement of all learners
- use classroom discourse to build students’ mathematical identity and agency
- understand how to use formative assessment to build on productive beginnings and address emerging misconceptions.

Through the consistent practice of these instructional moves, purposefully implemented, teachers support student fluency, application, and conceptual understanding across different contexts. By embracing this holistic approach to planning and instruction, we create a dynamic and inclusive learning environment where all students can thrive in mathematics.

Secondary (Grades 7-12) Signature Instructional Practices*

Instructional Practice #1: Establish mathematics goals to focus on learning.

Effective teaching of mathematics establishes clear goals for the mathematics that students are learning, situates goals within learning progressions, and uses the goals to guide instructional decisions.

Instructional Practice #2: Use and connect mathematical representations.

Effective teaching of mathematics engages students in making connections among mathematical representations to deepen understanding of mathematics concepts and procedures and as tools for problem solving.

Instructional Practice #3: Build procedural fluency from conceptual understanding.

Effective teaching of mathematics builds fluency with procedures on a foundation of

conceptual understanding so that students, over time, become skillful in using procedures flexibly as they solve contextual and mathematical problems.

Instructional Practice #4: Facilitate meaningful mathematical discourse.

Effective teaching of mathematics facilitates discourse among students to build shared understanding of mathematical ideas by analyzing and comparing student approaches and arguments.

Instructional Practice #5: Elicit and use evidence of student thinking.

Effective teaching of mathematics uses evidence of student thinking to assess progress toward mathematical understanding and to adjust instruction continually in ways that support and extend learning.

**cited from: National Council of Teachers of Mathematics*

Mathematics Professional Learning: What's needed and what works?

The need for high quality professional learning for existing teachers centered on the mathematics content of state standards, a better understanding of how students learn, and bringing that knowledge to classroom instruction is clear. Solid evidence of the link between content-focused professional development for teachers and improved student outcomes has begun to transform high quality professional development to center on the importance of the teacher' skill and content knowledge as well as the classroom context.

More recently, another aspect of professional development has gained prominence—professional development that encourages individual and collective responsibility for student outcomes in order to achieve long-term success.

Strategic alignment of professional development at the district and school level—including supporting classroom practice, alignment of school improvement goals, and school level collaboration—are especially important. These reforms are best facilitated when districts lead the coordination of professional development efforts aligned with their policy priorities with the guidance and support of skilled Math specialists/professional learning experts.

The HUSD approach to Mathematics professional learning aims at incorporating these current research-based practices in the way that professional learning is structured and offered to HUSD teachers. To ensure that professional development leads to sustainable and impactful changes in classroom practices, HUSD will invest in instructional coaches to support teachers in implementing these new strategies and techniques.

Instructional coaches play a pivotal role in supporting the implementation of professional development for teachers by bridging the gap between theory and practice. They provide individualized, job-embedded support that helps teachers translate new knowledge and skills into effective classroom strategies. Coaches can model lessons, co-teach, observe, and provide constructive feedback, tailoring their guidance to each teacher's unique needs and context. This personalized approach not only enhances teacher understanding and confidence but also fosters a collaborative learning environment where teachers feel empowered to experiment and refine their instructional practices. By working alongside teachers in their classrooms, coaches can help ensure that professional development translates into meaningful improvements in student learning outcomes. HUSD math coaches will also participate in professional development through the ongoing mentoring from lead trainers and more experienced coaches in which they are shadowed and visited during coaching sessions.

Assessment

Why Assess?

Math teachers believe in the essential need to have a robust and consistent set of formative and summative assessments to inform their teaching practice and collaborate with other Math teachers. What follows is a specific set of assessment goals and assessment tools that the HUSD district support and teaching staff will implement for secondary Math staff : Common Benchmark Assessments for all mathematics classroom K-12.

In HUSD math classrooms, timely and relevant assessments of student math learning provide essential guidance in daily instructional decisions, site collaboration practices, district level resource allocation, and fostering effective communication with caregivers and families. These assessments enable teachers to continuously monitor student progress, adjust teaching strategies accordingly, and provide a focus for collaboration with colleagues, and identify areas for intervention and/or enrichment. Teachers recognize the value of incorporating data from multiple sources: including their own classroom assessments, as well as common school-level and district-wide summative assessments. Each of these data points offers valuable insights into student learning and helps gauge progress towards mastery of specific grade-level standards.

[Chapter 12 of the California Math Framework](#) underscores the importance of assessment as a pivotal component in the teaching and learning process. Ultimately, comprehensive assessment practices not only inform instructional decision-making but also empower teachers, administrators, and parents to support student success in mathematics throughout the district.

Types of Assessments

In TK-12 education, assessments play a crucial role in gauging students' progress and understanding. HUSD teachers use two essential types of assessment: formative and summative.

Formative assessment, also known as assessment *for* learning, is an ongoing process that occurs during instruction. Formative assessment is not a single event or tool but rather a continuous cycle of clarifying learning goals, engaging in meaningful discussions and activities, and providing constructive feedback that propels students forward. They are categorized into short-, mid-, and long-cycle formative assessments.

Summative assessment, also known as assessment *of* learning, typically occurs at the end of a learning cycle. It aims to measure students' overall acquisition of knowledge and skills as well as mastery of grade level content standards. By evaluating students'

progress toward mastery, summative assessments help educators and stakeholders make informed decisions about instruction, curriculum, and student placement.

Assessment at the District Level

In our Strategic Math Plan, we prioritize the use of common summative assessments that are based on teacher input and collaboration, and are consistently administered. We prioritize flexibility and inclusivity, accommodating diverse means of representation and expression, particularly for Multilingual Learners (MLLs) and neurodivergent learners. To ensure accessibility and usability for teachers, summative assessments are designed with clear administration windows and user-friendly data input mechanisms. In order to support teachers and administrators in effectively administering and analyzing assessment data, comprehensive professional learning opportunities are provided.

The results of these summative assessments play a crucial role in shaping school site plans and district-wide decisions. They inform discussions on funding allocations, resource needs, professional learning priorities, staffing support, and classroom instructional materials.

These common summative assessments can also be used as long-cycle formative assessments by classroom teachers. These assessments serve as key tools for evaluating student learning across grade levels and informing instructional decisions year-over-year.

Professional learning sessions that are data focused, guide educators in interpreting classroom and site-based data trends. Teachers and site administrators receive support to access and visualize student data effectively, facilitating timely and informed decision-making.

By leveraging these assessments as a cohesive district-wide tool, we strive to enhance teaching and learning outcomes in mathematics while fostering a data-informed culture that supports continuous improvement across our schools.

Assessment at the school site

Site level summative assessments are designed to not only measure student progress but also to foster collaboration among educators across grade levels and math disciplines. Common summative assessments used across grade levels or within secondary math disciplines like algebra, serve as pivotal tools for collaborative planning and re-engagement tasks. These assessments generate common data, which becomes the focus of Professional Learning Community (PLC) work and collaboration sessions, such as designated Collaboration Wednesdays. Grade levels and departments utilize

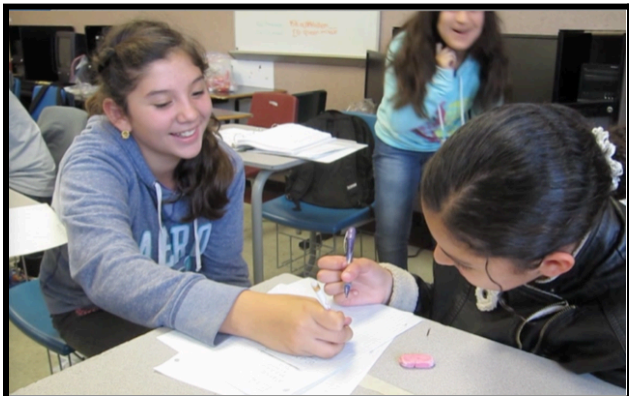
cycles of inquiry to analyze this data, employing structured protocols to identify effective instructional practices that support math learning across all grades.

Schools compile and analyze common summative data to identify trends within specific math strands or standards. This data-driven analysis informs professional development sessions scheduled during minimum days or staff meetings, guiding future instructional practices and interventions. Based on these findings, intervention plans are developed to support site-based leadership teams, including School Site Councils and Coordination of Services teams, in allocating resources effectively. These also inform administrative decisions related to resource allocation and support structures like Multi-Tiered System of Supports (MTSS).

These site level assessments that are traditionally considered summative can also be powerful mid-cycle formative assessments for classroom teachers. These include benchmark exams, quizzes, worksheets, and homework assignments. They provide a snapshot of students' understanding at a particular point in time and can measure students' mathematical growth over a unit or series of lessons. These assessments not only inform teachers about individual and collective understanding but also serve as valuable tools for communicating progress with students and their caregivers, and collaborating with grade-level colleagues. They guide the selection of instructional strategies and learning experiences tailored to students' evolving needs throughout the unit.

This strategic use of assessment data not only enhances instructional planning and support but also ensures that resources are allocated where they are most needed, ultimately fostering continuous improvement in math education throughout our district.

Assessment in a classroom



In HUSD math classrooms, effective student assessment can help us recognize whether our students have understood what we have taught and how they are progressing, as well as help to improve our decisions and inform our actions. Teaching and learning is a complex process and assessment is the bridge between them.

A comprehensive mathematics assessment plan, classroom teachers receive professional learning on administering, analyzing, and using a variety of summative assessments to measure student growth,

assess student progress toward mastery of grade level standards, and communicate with students and caregivers. District and site level summative assessments are also used as long- and mid-cycle formative assessments when used by teachers in a cycle of inquiry and/or collaboration.

In addition, teachers receive professional learning and ongoing support in using short-cycle formative assessments. Formative assessment is a process teachers and students use during instruction that provides feedback to adjust ongoing teaching moves and learning approaches. Well-supported by research evidence, it improves students' learning in time to achieve intended instructional outcomes.

Short-cycle formative assessments encompass ongoing teacher-student interactions and student-student discussions, where teachers gather real-time data through questioning, problem posing, and instructional adjustments. This immediate feedback informs the next steps in instruction, guiding teachers in planning re-engagements or adjusting lesson sequences within the day or over the next class period. Through these strategies, teachers can gain valuable insights into students' strengths and areas for development, enabling them to tailor instruction to meet individual needs.

Equity and Access

As stated by the National Council of Teachers of Mathematics (NCTM), addressing equity and access includes both ensuring that all students attain mathematics proficiency and increasing the numbers of students from all racial, ethnic, linguistic, gender, and socioeconomic groups who attain the highest levels of mathematics achievement.



Practices that support access and equity require comprehensive understanding and ongoing staff professional learning support and coaching. These practices include, but are not limited to, holding high expectations, ensuring access to high-quality mathematics curriculum and instruction, allowing adequate time for students to learn, placing appropriate emphasis on differentiated processes that broaden students' productive engagement with mathematics, and making strategic use of mathematics teaching, support staff and material resources. When access and equity have been successfully addressed, student outcomes—including achievement on a range of mathematics assessments, disposition toward mathematics, and persistence in the mathematics pipeline—transcend, and cannot be predicted by students' racial, ethnic, linguistic, gender, and socioeconomic backgrounds.

To maintain this equity and access focus in HUSD, we need to strengthen our staff and support systems that provide the best first mathematics instruction possible across all mathematics classrooms. To achieve this goal, we need to identify and close existing mathematics learning gaps of HUSD students with specific teacher professional learning, student acceleration support and review of student data to check whether the student support has translated into better learning outcomes. In summary, achieving access and equity requires that all HUSD staff:

- ensure that all students have access to a challenging district adopted mathematics curriculum that is consistently used by staff

- taught by skilled and effective teachers who differentiate instruction and complement the curriculum as needed
- monitor student progress and make needed accommodations based on the use of consistent student progress assessment tools
- offer acceleration and additional challenges when appropriate

Taking these steps requires that HUSD mathematics teachers work collaboratively with other education specialists, including those in special education, gifted education, and multilingual education. This collaboration is essential to ensure that all students have the necessary support to maximize their success in the mathematics classroom. In addition, teachers need to collaborate with colleagues to implement the mathematics teaching practices that promote a growth mindset in their classrooms and school. High-quality educational opportunities for teachers across the professional continuum are imperative for realizing this vision.

What follows are specific expectations/recommendations/best practices that should occur in HUSD:

- Shifts to Support Improved Mathematics for ALL Students
 - The HUSD mathematics reform efforts will consist of the following four components. These four components were utilized with fidelity when HUSD student CAASPP math scores were at their highest rates:
 - Professional learning (content specific professional development)
 - Lesson design (developing and sharing best practice lessons)
 - Content coaching
 - Formative assessment
 - Grading
 - Discuss and establish consistent and equitable grading practices K-12
 - Begin with conversations in Curriculum Councils
 - Grading Practices will be included in the core syllabi
 - Pathway Options – Course Offerings in HUSD
 - All students receive California Mathematics Standards instruction and based on their performance on a variety of assessment measures within the Multiple Measure Placement Matrix (MMPM), their placement in Grade 7 will be determined (see Secondary Mathematics Progression Flowchart)
 - Provide common course offerings
 - Bell Schedule
 - HUSD currently uses a modified block schedule in the high schools.
 - Mathematics is a language and needs to be taught DAILY in all grade levels.

- District universal expectations for mathematics instructional minutes:
 - Elementary: Minimum of 75 minutes per day are recommended
 - Secondary: Students receive math instruction daily
 - Coring at Grades 5 and 6:
 - Definition: Grade 5 and Grade 6 teachers would specialize in teaching two core subjects. For example, a Grade 6 teacher would only teach Mathematics & Science or Language Arts & Social Studies.
- Acceleration/Intervention:
 - Best First Instruction guided by teacher analysis of student math data to determine small group instruction
 - Time set aside daily during Math instructional period for small group intervention, error analysis and mitigation of student's math
- Student support programs include:
 - Summer Mathematics Achievement Academies programs
 - Geometry acceleration (for 9th graders)

Multiple Measures Placement Matrix

The Multiple Measure Placement Matrix (MMPM) is an equity process for HUSD to ensure that students are placed in a challenging but appropriate mathematics course at the secondary level that will help them develop their skills, understanding, and achievement in mathematics. The MMPM aims to provide students with a course placement that promotes students' successful completion of the following year's course at the highest reasonable course level for each student.

- All students take a foundational course in mathematics in Grade 6, and based on their performance on a variety of assessment measures (MMPM), their placement in Grade 7 is determined.
- Upon completion of Grade 6, all students in our district go through a placement process to determine if they will go to the Grade 7 mathematics course, Grade 7/ 8 Compression course, or Algebra I. At the end of Grade 7, all students completing the Grade 7 mathematics course will go through a similar placement process to determine if they will go to the Grade 8 mathematics course or Algebra I.
- The MMPM performance assessments include scores on the CSU/UC Algebra Readiness Test, CAASPP state assessments, and average scores on the HUSD benchmark assessments.
- The MMPM provides for the averaging and balancing of the assessment measures listed above, along with recommendations from teachers, as needed, for the student's course placement. The MMPM contains score ranges for each placement

level, and is “calibrated” based on actual performance of successful previous students.

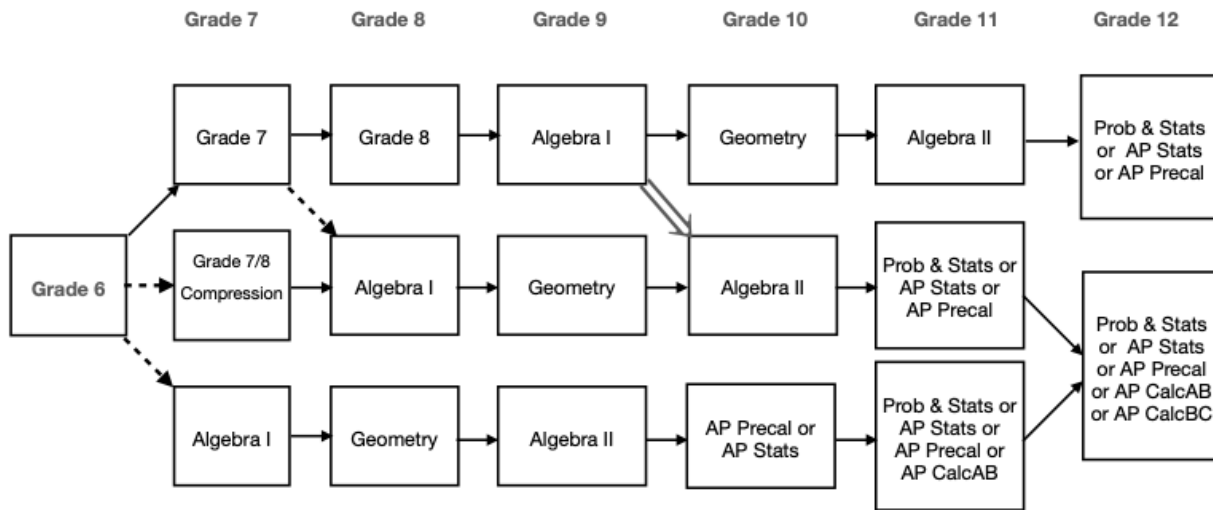
- District mathematics staff members, in collaboration with school sites, prepare the results of the MMPM.
- Classroom teachers administer each of the assessments included in the MMPM.
- Accommodations are provided for students with IEPs and 504 plans.
- If a parent disagrees with the course placement recommended for the student as part of the MMPM, and requests that the student is placed in a more advanced course than is recommended, there is a waiver form that the parent signs. The waiver states that the student’s grades will be checked during and after the first quarter, and that low grades may result in the student’s placement back into the grade level course, in order to promote the student’s continued progress and mathematics learning at an appropriate academic level.

The following documents supporting the HUSD Multiple Measure Placement Matrix (MMPM) are included in the appendix:

- [MMPM Overview](#)
- [MMPM](#)
- [MMPM waiver](#)

HUSD Secondary Mathematics Course Progressions Flowchart:

HUSD Secondary Mathematics Course Progressions Flowchart



-----> Multiple Measure Placement Matrix which includes scores from: CAASPP, CSU/UC Algebra Readiness Test, and HUSD Benchmark Assessments

————> Progression placement

====> With summer Geometry for acceleration

12/19/24

5 Year Plan Outline

Color Key:

- Yellow: Completed/In Progress Activities and Actions
- Green: Jumpstart
- Rose: Year 1
- Blue: Year 2-4

2024-2025	HUSD TK - 12 Mathematics Plan Outline	Metrics
<i>Jump Start</i>		
Professional Learning	Professional Development: <ul style="list-style-type: none"> 2-day Algebra series for Algebra teachers Hayward High feeder pattern content specific learning 2 half days of content specific learning for all math teachers in grades 6-12 (Aug. 13 and Nov. 1) 1 day Introduction to CA Math Framework: TK-8 1 day Early Math session focused on CA Math Framework and best first instruction: TK-2 	Participant summary evaluations
	Summer Professional Development* <ul style="list-style-type: none"> Session focus on math content in the morning; afternoon focus on assessments, curriculum guide development, vertical alignment, planning, major standards/clusters review, and specific instructional practices outlined earlier in HUSD strategic plan <p style="text-align: center;"><i>* Pending availability of district or grant funding</i></p>	Participant summary evaluations Development of hyperlinked Curriculum Guides
	Math Coach: <ul style="list-style-type: none"> Ongoing learning cycles focused on math pedagogy & strategies Serve teachers in TK-6 with an emphasis on new teachers 	Metrics on teachers served Participant summary feedback
	Assessment: <ul style="list-style-type: none"> Update and begin implementation of HUSD Grades 6-8, and Algebra I Benchmark Assessments Update and begin using Multiple Measures Placement 	Development and Implementation of HUSD Benchmark Assessments

Student Performance & Support	Matrix (MMPM) for students in Grades 6-7 not in Algebra I <ul style="list-style-type: none"> Update Math Pathways Flowchart and communicate with staff and families 	
	Summer Mathematics Support Programs for Students <ul style="list-style-type: none"> Summer Math Achievement Academics to support incoming grades 7 - 9 students (<i>grant funded</i>) 	Student Pre-Post assessment data
	Summer Geometry Acceleration for Students <ul style="list-style-type: none"> Grade 9 students take Geometry Acceleration during the summer to receive Geometry credit and take Algebra II in the fall (<i>pending negotiations</i>) 	Student enrollment and grade data
Community Outreach	Parents & Community: <ul style="list-style-type: none"> Share plan with families & community Share the Multiple Measures Placement Matrix Develop online resources (i.e., Students Teaching Students Mathematics video series, Parent Guides, ...) 	Parent summary evaluations Online resources
	Annual HUSD Board Reporting	Reports
Year 1: 2025-2026 <i>Foundation</i>	HUSD TK - 12 Mathematics Plan Outline	Metrics
Professional Learning	Professional Development: <ul style="list-style-type: none"> Districtwide Mathematics Professional Development and Articulation Days (during school year) Grade TK-12 	Participant summary evaluations
	Summer Professional Development <ul style="list-style-type: none"> Session focus on math content in the morning; afternoon focus on assessments, curriculum guide development, vertical alignment, planning, and specific instructional practices outlined in strategic plan <p><i>* Pending availability of district or grant funding</i></p>	Participant summary evaluations Development of hyperlinked Curriculum Guides
	Math Coaching Support TK-12*	Metrics on teachers

	* Pending availability of district or grant funding	served Participant summary feedback
	Provide Professional Development sessions for District and Site Administration <ul style="list-style-type: none"> • Calibration walk throughs with administrators, coaches, and teachers 	Participant summary feedback
Student Performance & Support	Assessment: <ul style="list-style-type: none"> • Update and implement HUSD Grades TK-12 <ul style="list-style-type: none"> ◦ Benchmark data analysis focused on re-engagement strategies including development and implementation of instructional mitigations • Recalibrate the Multiple Measures Placement Matrix (MMPM) • Discuss in Curriculum Councils and establish consistent and equitable grading practices K-12 	Development and Implementation of HUSD Benchmark Assessments
	Summer Mathematics Support Programs for Students <ul style="list-style-type: none"> • Summer Math Achievement Academics to support incoming grades 7 - 9 students (grant funded) • Develop and implement elementary mathematics support programs 	Student Pre-Post assessment data Student enrollment and grade data
	Summer Geometry Acceleration for Students <ul style="list-style-type: none"> • Grade 9 students take Geometry Acceleration during the summer to receive Geometry credit and take Algebra II in the fall (pending negotiations) 	
Community Outreach	Parents & Community: <ul style="list-style-type: none"> • Share Parent Mathematics Guides • Share the Multiple Measures Placement Matrix and student math progress reports with staff and parents/caregivers 	Parent summary evaluations
	Annual HUSD Board Reporting	Reports
Textbook Adoption	Textbook Adoption K-12 <i>*pending funding</i>	
Year 2-4:	HUSD TK - 12 Mathematics Plan Outline	Metrics

<p>2026-2029</p> <p>Growth & Sustainability</p>		
<p>Professional Learning</p>	<p>Professional Development:</p> <ul style="list-style-type: none"> Districtwide Mathematics Professional Development and Articulation Days (during school year) Grade TK-12 	<p>Participant summary evaluations</p>
	<p>Summer Professional Development</p> <ul style="list-style-type: none"> Session focus on math content in the morning; afternoon focus on assessments, curriculum guide development, vertical alignment, planning, and specific instructional practices outlined earlier in HUSD strategic plan 	<p>Participant summary evaluations</p> <p>Development of hyperlinked Curriculum Guides</p>
	<p>Expand and/or fully implement mathematics coaching support TK-12*</p> <p><i>* Pending availability of district or grant funding</i></p>	<p>Metrics on teachers served</p> <p>Participant summary feedback</p>
	<p>Continue Professional Development sessions for District and Site Administration</p> <ul style="list-style-type: none"> Calibration walk throughs with administrators, coaches, and teachers 	<p>Participant summary feedback</p>
<p>Student Performance & Support</p>	<p>Assessment:</p> <p>Continue revision and implementation of HUSD Benchmark Assessments and consistent data analysis by administrators and teachers</p>	<p>Development and Implementation of HUSD Benchmark Assessments</p>
	<p>Summer Mathematics Support Programs for Students</p> <ul style="list-style-type: none"> Summer Math Achievement Academics to support incoming grades 7 - 9 students (<i>grant funded</i>) Implement elementary mathematics support programs 	<p>Student Pre-Post assessment data</p> <p>Student enrollment and grade data</p>
	<p>Summer Geometry Acceleration for Students</p> <ul style="list-style-type: none"> Grade 9 students take Geometry Acceleration during the summer to receive Geometry credit and take Algebra II in the fall 	

Community Outreach	Parents & Community: <ul style="list-style-type: none"> Share the Multiple Measures Placement Matrix and enrollment data 	Parent summary evaluations Online Parent/Guardian resources
	Annual HUSD Board Reporting	Reports

RESOURCES

[CAASPP Data Dashboard 2024](#)

[Common Core Standards for Mathematics](#)

[California State Comprehensive Mathematics Framework](#)

[MTSS \(Multi-Tiered Systems of Support\)](#)

[CDE College and Career Anchor Standards](#)

[TRU Framework](#)

APPENDIX

- [HUSD Strategic Math Plan Budget](#)
- Multiple Measure Placement Matrix [MMPM Overview](#)
- Multiple Measure Placement Matrix [MMPM](#)
- Multiple Measure Placement Matrix [MMPM waiver](#)
- [Data Slides](#)