

# Portales Municipal School District Mathematics Framework 

Current School Year: 2023-2024
Updated September 1, 2023

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## Rationale for District Mathematics Framework

A Mathematics Plan is necessary to support district leaders, administrators, teachers, and community members in Portales Municipal School District with math instruction that supports student-centered learning and high achievement. The mathematics plan provides guidance on the critical components that are the foundation to build, implement and strengthen math instruction.

## MATHEMATICS VISION \& MISSION

## PMSD VISION

All students will be productive and successful citizens.

## NMPED MISSION

The PED partners with educators, communities, and families to ensure that all students are healthy, secure in their identity, and holistically prepared for college, career, and life.

## NMPED VISION

Students in New Mexico are engaged in a culturally and linguistically responsive educational system that meets the social, emotional, and academic needs of all students.

## Strategic Goals

- An educational system that benefits the whole child
- A vibrant educator ecosystem
- Equitable access to educational opportunities for students and families
- College and career pathways aligned with the profile of a New Mexico graduate


## PMSD VISION FOR MATHEMATICS

Students in Portales Municipal School District value mathematics, acquire rigorous mathematical knowledge \& skills, are persistent problem-solvers, and are enabled to fulfill personal ambitions and career goals.

## PMSD MISSION FOR MATHEMATICS

Portales Municipal School District

- believes that all students are capable of learning math and sets high expectations.
- facilitates instruction that is student-centered, inquiry-based, and coherent.
- refines lessons to best promote student learning based on evidence gained from assessment.
- provides content opportunities for students to engage in productive struggle with cognitively-demanding mathematical concepts that have real-world connections.
- fosters a classroom environment where students communicate \& reason mathematically.


## LEADERSHIP

PMSD provides guidance, clarity, and focus for developing strong leadership within school, district, community, and state-level stakeholders to lead and implement a strategic approach to high-quality K-12 mathematics education for all students.

| Element \& Goal | Strategies for Success |
| :---: | :---: |
| Leadership <br> Structure <br> We will ensure that leadership structures exist at multiple levels to promote professional growth that meets teaching and learning needs. | PMSD Stakeholders will work to create the conditions, structures, and policies necessary to ensure all students have high-quality, engaging, relevant, and meaningful mathematics learning experiences. <br> Leadership establishes the belief that all students can learn and achieve proficiency in mathematics. <br> District Leaders, Principals, Math Coaches, and School Leaders will support mathematics educators by: <br> - Providing opportunities for them to improve and enhance their mathematical knowledge for teaching, their knowledge of mathematical pedagogy, and their knowledge of students as mathematical learners. <br> - Creating a work environment that motivates educators to achieve professional growth. <br> - Serving as a conduit for information, sharing new knowledge and research about mathematics standards, assessments, instructional programs, and high-quality instructional materials. <br> - Anchor all stakeholders in a shared vision and understanding of high-quality mathematics learning experiences for all students. <br> $>$ School leadership teams share ideas, insights, and practices surrounding current mathematics instruction. <br> $>$ School leaders collaborate to promote mathematics success for all students by considering these questions within professional learning communities: <br> - What do we want students to learn? (essential standards) <br> - How will we know if they have learned? (team-developed common assessments) <br> - What will we do if they do not learn? (systematic interventions) <br> - What will we do if they already know it? (extended learning) |

## Implementation

We will intentionally
implement and continue to adapt the plan over time, reflecting on what is (and is not) working, and how the district can do even better.

## School leadership teams include committed district administrators, principals, assistant principals, instructional coaches, educators, parents, and community members.

## Actions for Educators: (Adapted from the New Mexico Mathematics Framework)

## Administrators:

$>$ Ensure leadership is distributed among different individuals and groups within the school and conceptualized as leadership functions, not linked to specific key individuals
$>$ Ensure that the instructional leadership is knowledgeable in evidence-based practices in elementary and secondary mathematics, as well as possessing strong communication and instructional leadership skills.
$>$ Identify, articulate, and monitor grade-level mathematics learning goals, and prioritize the attainment of mathematics learning goals for all students, ensuring a targeted focus on mathematics learning goals and objectives.
$>$ Ensure that subject-specific mathematics learning and mathematics instruction across the content areas is based on the Common Core State Standards for Mathematics, including the Standards for Mathematical Practice.
$>$ Maintain communication with all stakeholders around potential impacts to the strategic plan.
$>$ Actively ensure that all educators provide classroom instruction that meets student needs; regularly conducting observations and walkthroughs to understand how mathematics instruction is being delivered and using this information to support educators in providing effective mathematics instruction to all students.
$>$ Actively model and support data-driven decision making using a variety of data points related to student mathematics learning and success.
$>$ Ensure that there is sufficient time for planning mathematics instruction; ensure the day-to-day implementation of planned instruction.
> Based on grade level, schedule an uninterrupted mathematics learning block and specified time for tiered interventions.
> Ensure that classroom educators and school-based teams have ample opportunity to work with a mathematics coach.
$>$ Develop an environment that fosters common planning time and collaboration for instructional improvements within a Professional Learning Community.
> School leaders will use the NM DASH annual plan to:

- Analyze mathematics data and identify focus areas
- Determine root cause and determine hypothesis
- Develop outcome statements and action steps to reach goals
- Review progress and generate new action steps in a second 90-day plan
$>$ Every 30 days, evaluate the effectiveness of the school's strategic math plan and adapt if progress is insufficient; determine which variables can be manipulated, and take appropriate actions to result in improved mathematics learning.

|  | Teacher Leaders: <br> $>$ <br> Provide consistently high-quality mathematics instruction for all students and support colleagues to do the same <br> through mentorship, collaboration, peer observations, and sharing strategies. |
| :--- | :--- |
| $>$Promote a solid understanding of the Standards for Mathematical Practice, and support daily student engagement <br> with the SMPs |  |
| $>$Work with preservice and in-service educators to support research-informed instructional practices and implement <br> effective instruction as described by the Mathematics Teaching Principles (NCTM, 2014). <br> $>$ |  |
| Support all grade-level or PLC team members to provide on-grade-level mathematics learning opportunities for all <br> students. |  |


| PMSD Instructional Leadership Opportunities |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| - Superintendent | - Assistant Superintendent and Director of Personnel | - Director of Federal Programs/ Curriculum \& Instruction | - Director of Special Student Services | - Coordinator of Curriculum \& Instruction | - Vertical Team Leaders by Content Area <br> - District Math Coaches |
| BROWN | JAMES | VALENCIA | LINDSEY-STEINER | PJHS | PHS |
| - Administration Team <br> - NM DASH Team <br> - PLC Team Leaders | - Administration Team <br> - NM DASH Team <br> - PLC Team Leaders | - Administration Team <br> - NM DASH Team <br> - PLC Team Leaders | - Administration Team <br> - NM DASH Team <br> - PLC Team Leaders | - Administration Team <br> - NM DASH Team <br> - Department Leader | - Administration Team <br> - Online Coordinator <br> - NM DASH Team <br> - Department Leader |

DISTRICT MATHEMATICS PROFICIENCY ACHIEVEMENT \& GOALS

| Student Achievement: Math Proficiency by Cohort |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Grade | 2018-2019 |  | 2019-2020 | 2020-2021 | 2021-2022 |  | 2022-2023 |  | 2023-2024 |
|  | PMSD Proficient | State Average | PMSD Proficient | PMSD Proficient | PMSD Proficient | State Average | PMSD Proficient | State Average | Tentative Goal |
| Cohort 2036 |  |  |  |  |  |  |  |  | 85\% <br> K Number Writing |
| Cohort 2035 |  |  |  |  |  |  | 77\% <br> K Number Writing | N/A <br> K Number Writing | $46 \%$ <br> 1st Grade ISIP |
| Cohort 2034 |  |  |  |  | N/A <br> K Number Writing | N/A <br> K Number Writing | $\begin{gathered} \mathbf{4 2 \%} \\ \text { 1st Grade ISIP } \end{gathered}$ | $\begin{gathered} \mathbf{5 4 \%} \\ \text { 1st Grade ISIP } \end{gathered}$ | $\begin{gathered} \mathbf{4 6 \%} \\ \text { 2nd Grade ISIP } \end{gathered}$ |
| Cohort 2033 |  |  |  | N/A <br> K Number Writing | $\begin{gathered} \text { N/A } \\ \text { 1st Grade ISIP } \end{gathered}$ | $\begin{gathered} \text { N/A } \\ \text { 1st Grade ISIP } \end{gathered}$ | $\begin{gathered} \mathbf{2 0 \%} \\ \text { 2nd Grade ISIP } \end{gathered}$ | $\underset{\text { 2nd Grade ISIP }}{23 \%}$ | $\begin{aligned} & \text { 25\% } \\ & \text { 3rd Grade MSSA } \end{aligned}$ |
| Cohort 2032 |  |  | N/A <br> K Number Writing | $\begin{gathered} \text { N/A } \\ \text { 1st Grade ISIP } \end{gathered}$ | $\begin{gathered} \text { N/A } \\ \text { 2nd Grade ISIP } \end{gathered}$ | $\begin{gathered} \text { N/A } \\ \text { 2nd Grade ISIP } \end{gathered}$ | $\begin{gathered} 30 \% \\ \text { 3rd Grade MSSA } \end{gathered}$ | $\begin{gathered} \mathbf{2 2 \%} \\ \text { 3rd Grade MSSA } \end{gathered}$ | $\begin{gathered} 33 \% \\ \text { 4th Grade MSSA } \\ \hline \end{gathered}$ |
| Cohort 2031 | N/A <br> K Number Writing | N/A <br> K Number Writing | $\begin{gathered} \text { N/A } \\ \text { 1st Grade ISIP } \end{gathered}$ | N/A <br> 2nd Grade ISIP | 24\% <br> 3rd Grade MSSA | $\begin{gathered} \mathbf{2 3 \%} \\ \text { 3rd Grade MSSA } \end{gathered}$ | $\begin{gathered} \text { 27\% } \\ \text { 4th Grade MSSA } \end{gathered}$ | $\begin{gathered} \text { 24\% } \\ \text { 4th Grade MSSA } \end{gathered}$ | $\begin{gathered} \text { 30\% } \\ \text { 5th Grade MSSA } \end{gathered}$ |
| Cohort 2030 | $\begin{gathered} \text { N/A } \\ \text { 1st Grade ISIP } \end{gathered}$ | $\begin{gathered} \text { N/A } \\ \text { 1st Grade ISIP } \end{gathered}$ | $\begin{gathered} \text { N/A } \\ \text { 2nd Grade ISIP } \end{gathered}$ | N/A <br> 3rd Grade MSSA | $\begin{gathered} \mathbf{3 2 \%} \\ \text { 4th Grade MSSA } \end{gathered}$ | $\begin{gathered} \mathbf{2 5 \%} \\ \text { 4th Grade MSSA } \end{gathered}$ | $\begin{gathered} \text { 32\% } \\ \text { 5th Grade MSSA } \end{gathered}$ | 34\% <br> 5th Grade MSSA | $\begin{gathered} \text { 35\% } \\ \text { 6th Grade MSSA } \end{gathered}$ |
| Cohort 2029 | N/A <br> 2nd Grade ISIP | N/A <br> 2nd Grade ISIP | N/A <br> 3rd Grade MSSA | N/A <br> 4th Grade MSSA | $29 \%$ <br> 5th Grade MSSA | 31\% <br> 5th Grade MSSA | $\begin{gathered} \text { 40\% } \\ \text { 6th Grade MSSA } \end{gathered}$ | 30\% <br> 6th Grade MSSA | 44\% <br> 7th Grade MSSA |
| Cohort 2028 | $\begin{gathered} \text { 44\% } \\ \text { 3rd Grade TAMELA } \end{gathered}$ | $\begin{gathered} \mathbf{3 2 \%} \\ \text { 3rd Grade TAMELA } \end{gathered}$ | $\underset{\text { 4th Grade MSSA }}{\text { N/A }}$ | N/A <br> 5th Grade MSSA | $\begin{gathered} \mathbf{4 8 \%} \\ \text { 6th Grade MSSA } \\ \hline \end{gathered}$ | $\begin{gathered} \mathbf{3 3 \%} \\ \text { 6th Grade MSSA } \\ \hline \end{gathered}$ | $\begin{gathered} \text { 31\% } \\ \text { 7th Grade MSSA } \end{gathered}$ | $\begin{gathered} 23 \% \\ \text { 7th Grade MSSA } \end{gathered}$ | 34\% <br> 8th Grade MSSA |
| Cohort 2027 | $\begin{gathered} \mathbf{4 0 \%} \\ \text { 4th Grade TAMELA } \end{gathered}$ | $\begin{gathered} \mathbf{2 8 \%} \\ \text { 4th Grade TAMELA } \\ \hline \end{gathered}$ | N/A <br> 5th Grade MSSA | N/A <br> 6th Grade MSSA | $\begin{gathered} \mathbf{3 4 \%} \\ \text { 7th Grade MSSA } \end{gathered}$ | $\begin{gathered} \mathbf{2 5 \%} \\ \text { 7th Grade MSSA } \end{gathered}$ | $\begin{gathered} \text { 23\% } \\ \text { 8th Grade MSSA } \end{gathered}$ | 17\% <br> 8th Grade MSSA | $\underset{\text { 9th Grade } \mathbf{N / A}}{\mathbf{N} / \mathbf{A}}$ |
| Cohort 2026 | $\begin{gathered} \mathbf{1 9 \%} \\ \text { 5th Grade TAMELA } \end{gathered}$ | $\begin{gathered} \mathbf{2 5 \%} \\ \text { 5th Grade TAMELA } \end{gathered}$ | N/A <br> 6th Grade MSSA | $\frac{\mathbf{N} / \mathbf{A}}{\text { 7th Grade MSSA }}$ | $\begin{gathered} \mathbf{2 2 \%} \\ \text { 8th Grade MSSA } \end{gathered}$ | $19 \%$ <br> 8th Grade MSSA | $\frac{\text { N/A }}{\text { 9th Grade N/A }}$ | $\begin{aligned} & \boldsymbol{N} / \boldsymbol{A} \\ & \text { 9th Grade N/A } \end{aligned}$ | $\begin{gathered} 25 \% \\ \text { 10th Grade PSAT } \end{gathered}$ |
| Cohort 2025 | $\begin{gathered} \mathbf{1 7 \%} \\ \text { 6th Grade TAMELA } \end{gathered}$ | $\begin{gathered} 17 \% \\ \text { 6th Grade TAMELA } \end{gathered}$ | $\underset{\text { 7th Grade MSSA }}{\text { N/A }}$ | N/A <br> 8th Grade MSSA | N/A <br> 9th Grade N/A | N/A <br> 9th Grade N/A | $\begin{gathered} \mathbf{1 9 \%} \\ \text { 10th Grade PSAT } \end{gathered}$ | 18\% <br> 10th Grade PSAT | $\begin{gathered} 23 \% \\ \text { 11th Grade SAT } \end{gathered}$ |
| Cohort 2024 | $\begin{gathered} \mathbf{2 4 \%} \\ \text { 7th Grade TAMELA } \end{gathered}$ | $\begin{gathered} \mathbf{1 9 \%} \\ \text { 7th Grade TAMELA } \end{gathered}$ | N/A <br> 8th Grade MSSA | N/A <br> 9th Grade N/A | $\begin{gathered} \mathbf{1 5 \%} \\ \text { 10th Grade PSAT } \end{gathered}$ | $\begin{gathered} \mathbf{1 9 \%} \\ \text { 10th Grade PSAT } \end{gathered}$ | $\text { 11th } \overline{\text { Grade SAT }}$ | 11th Grade SAT | N/A <br> 12th Grade N/A |

## Subgroup Student Achievement Goals

- Portales Municipal School District’s Economically Disadvantaged Students in grades 3-8 will increase mathematics proficiency by 5 percentage points from previous EOY to current EOY on the state summative assessment.
- Portales Municipal School District's English Language Learners in grades 3-8 will increase mathematics proficiency by 5 percentage points from previous EOY to current EOY on the state summative assessment.
- Portales Municipal School District will utilize the MLSS process to assist in students' progression on individualized goals on IEPs.
- Portales High School will increase their graduation rate from $82 \%$ to $84 \%$ as measured by the NMPED Graduation Rates by the end of the 2022-2023 school year.
- The number of proficient students in 1 st $\& 2$ nd Grade (ISIP levels 3,4 , and 5 ) will increase by 40 percent to support the increase in math proficiency over time.
- NWEA MAP Math Growth school conditional growth index in grades 3-11 will maintain a zero or above to measure adequate growth during fall, winter, and spring assessment windows.


## Program Improvement

- Layer 1 Instruction will be strengthened by anchoring in proficiency at each grade level, developing a strong understanding of the progression of NMPED Standards \& Benchmarks, \& maintaining solid instructional pace throughout the school year.
- MLSS Layer 2 Targeted Interventions and Layer 3 Intensive Interventions will be provided to students in order to meet their individualized needs.
- SSS will work throughout the year to develop a framework to support core academic areas.


## Factors Supporting Development

- Professional development opportunities will be aligned with the Portales Municipal Schools District Math Framework. The effectiveness of the professional development will be evaluated through classroom observations conducted by administrators.
- Math coaches will provide support through instructional coaching based on benchmark assessment data and observations of instructional practices.
- Collaboration will take place in PLC's to share resources and teaching strategies for specific subgroups.
- Portales Municipal School District will align the NM DASH annual plan to the NWEA MAP and ISIP benchmark data to support the development of the critical actions of the 90-Day plan.


## PMSD DASH

The New Mexico DASH Annual and 90-Day Plan is a roadmap that provides focus and urgent actions to increase achievement and improve outcomes for all students.

Action plans for each Goal from the Portales Municipal School District are embedded in the Annual Plan and 90-day NM Dash plans at each school, as appropriate to specific grade levels. The points of contact for each school are listed below. They are responsible for the development of the NM DASH plans and overseeing the implementation of the Mathematics Framework:

| Name | Role | Contact | Name | Role | Contact |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Rick Segovia | District Reviewer | rsegovia@portalesschools.com | Sara Hunton | District Reviewer | shunton@portalesschools.com |
| Amanda Crawford | District Math Coach <br> District Reviewer | acrawford@portalesschools.com | Julie Fraze | District Math Coach <br> District Reviewer | jfraze@portalesschools.com |
| Melanie Skinner | BECC Principal | mskinner@portalesschools.com | Shayne Lopez | James Principal | slopez@portalesschools.com |
| Ofelia Alvarez | Valencia Principal | oalvarez@portalesschools.com | Ginger Fowler | LSE Principal | gfowler@portalesschools.com |
| Scott Schumpert | PJHS Principal | sschumpert@portalesschools.com | Nathan Dodge | PHS Principal | ndodge@portalesschools.com |

## INSTRUCTION AND INTERVENTION

PMSD is committed to implementing instructional methods that are proven to be most effective in promoting mathematical proficiency.

High-quality mathematics instruction involves the integration of eight essential elements (NMPED, 2020a):

1. Instruction aligned to CCSS-M
2. Equitable math instruction for all students
3. Sufficient and effective use of time for math instruction
4. Using formative assessment data to formulate instructional goals and strategies
5. Focused instruction to address the key components of mathematical proficiency
6. Progress monitoring to deliver a range of layered supports
7. Implementation of high-quality instructional materials with a high level of fidelity
8. Effective instructional program delivery and administration

| Universal Instruction |  |
| :---: | :---: |
| PMSD implements research-based instruction, strategies, and interventions that promote active student engagement. |  |
| Focus | Foundation |
| Layer 1 Core Instruction | The delivery of Layer 1 core instruction and the implementation of effective scaffolding strategies is the foundation upon which student achievement is built. In Portales Municipal Schools, math educators are committed to implementing and utilizing high-quality instructional materials paired with the New Mexico Instructional ScopeMathematics to prepare all students for career, college, and citizenship. <br> The CCSS-M establishes the foundation for planning, implementing, and evaluating mathematics instruction in Portales Municipal Schools. To succeed in helping students master the aspects of rigor embedded in the standards, educators possess a working knowledge of: <br> > Instructional standards aligned to the NMIS-M specifically relevant to their teaching assignments <br> $>$ Integrating CCSS-M learning progressions across grade levels, particularly those adjacent to the grade-level(s) or content area(s) <br> $>$ Layering interventions based on data-informed students needs identified in the New Mexico Multi-Layered System of Supports (MLSS) Manual <br> Principles for facilitating instruction: <br> - Consistent instruction centered around grade-appropriate or content-specific assignments <br> - Strong instruction, where students are challenged to be problem solvers <br> - Operate with a growth mindset <br> - Deep engagement, in what they are learning, that includes productive student discourse <br> - High expectations for students, believing they can meet grade-level expectations. |


| Equitable <br> Access to Mathematics Instruction | Math educators in Portales Municipal Schools believe that all learners are diverse and can equitably access meaningful mathematics. Equity does not mean that every student should receive identical instruction; instead, reasonable and appropriate accommodations should be made as needed to promote access and attainment for all students. <br> To create a learning community that positions students as doers of mathematics, educators keep these ideas at the forefront: <br> - Assessment of student mathematics proficiency and learning needs as a means for focusing universal instruction <br> - Scaffolding techniques relevant to the student mastery of mathematical concepts and practices <br> - Research-based strategies to effectively respond to linguistic and cultural diversity in student populations <br> - Instructional techniques demonstrated to support the three aspects of rigor: <br> - Application to real-world problems <br> - Conceptual understanding <br> - Procedural skill and fluency <br> - An array of teaching strategies that strike a balance between explicit (procedural) and implicit (conceptual) instruction appropriate for the mathematical learning goal and student needs <br> - Ability to critically assess and select materials, equipment, and resources demonstrated to effectively support student learning in mathematics <br> - The focus should be on all students meeting or exceeding grade-level mathematics learning goals, which are part of a coherent, strategic plan for equitable mathematics instruction. |
| :---: | :---: |


| Coherence | Coherence is an integral part of teaching math. It requires that content be carefully connected across grades, intentionally building on prior knowledge, and that topics within a grade be connected to make sense of the mathematics and increase its relevance. <br> $>$ Elementary math educators require a working knowledge of the assigned content area-defined in the Common Core State Standards for Mathematics (CCSS-M) and an understanding of the learning progressions not only in previous grades leading up to the assigned grade level but also what students will encounter in later courses. Effective elementary math educators feel confident and fluent in fundamental concepts and skills. <br> $>$ Secondary math educators possess an exceptional grasp of their assigned content areas and an understanding of the learning progressions for Grades K-12. Secondary math educators support the learning of students who perform above and below grade-level or course-specific proficiency levels, which requires a deep knowledge of K -12 mathematics. <br> PMSD will use vertical teams and professional learning communities to build coherence within mathematics education. The work of vertical teams will result in the intentional design of academic programs, consistent use of academic vocabulary, foster teacher leadership, and encourage a culture of professional collaboration and shared responsibility. |
| :---: | :---: |



| Focus | Recommendations for Math Instruction for All Students |
| :---: | :---: |
| Grades K-5 <br> Recommended Time <br> Allocations and Critical Areas for Math Instruction | It is critical that enough time is scheduled during the school day for explicit mathematics instruction. This time commitment should be of the highest priority and considered non-negotiable. <br> Kindergarten (Recommended 60 minutes per day) <br> Instructional time should focus on two critical areas: <br> 1. Representing and comparing whole numbers, initially with sets of objects <br> 2. Describing shapes and space. More learning time in Kindergarten should be devoted to numbers than to other topics. <br> First Grade (Recommended 60 minutes per day) <br> Instructional time should focus on four critical areas: <br> 1. Developing understanding of addition, subtraction, and strategies for addition and subtraction within 20 <br> 2. Developing understanding of whole number relationships and place value, including grouping in tens and ones <br> 3. Developing understanding of linear measurement and measuring lengths as iterating length units <br> 4. Reasoning about attributes of, and composing and decomposing geometric shapes <br> Second Grade (Recommended 60 minutes per day) <br> Instructional time should focus on four critical areas: <br> 1. Extending understanding of base-ten notation <br> 2. Building fluency with addition and subtraction <br> 3. Using standard units of measure <br> 4. Describing and analyzing shapes <br> Third Grade (Recommended 60 minutes per day) <br> Instructional time should focus on four critical areas: <br> 1. Developing understanding of multiplication and division and strategies for multiplication and division within 100 <br> 2. Developing understanding of fractions, especially unit fractions <br> 3. Developing understanding of the structure of rectangular arrays and of area <br> 4. Describing and analyzing two-dimensional shapes <br> * Students should be provided with abundant opportunities to explore these concepts using both manipulatives and mathematical symbols. |



Grades 6-12
Recommended
Time
Allocations \&
Critical Areas
for Math
Instruction
(NM Math Framework 2021)

## Sixth Grade (Recommended 70 minutes per day)

Instructional time should focus on four critical areas:

1. Connecting ratio and rate to whole number multiplication and division and using concepts of ratio and rate to solve problems
2. Completing understanding of division of fractions and extending the notion of number to the system of rational numbers, which includes negative numbers
3. Writing, interpreting, and using expressions and equations
4. Developing understanding of statistical thinking

## Seventh Grade (Recommended $\mathbf{7 0}$ minutes per day)

Instructional time should focus on four critical areas:

1. Developing understanding of and applying proportional relationships
2. Developing understanding of operations with rational numbers and working with expressions and linear equations
3. Solving problems involving scale drawings and informal geometric constructions, and working with two- and three-dimensional shapes to solve problems involving area, surface area, and volume
4. Drawing inferences about populations based on samples

## Eighth Grade (Recommended 70 minutes per day)

Instructional time should focus on three critical areas:

1. Formulating and reasoning about expressions and equations, including modeling an association in bivariate data with a linear equation, and solving linear equations and systems of linear equations
2. Grasping the concept of a function and using functions to describe quantitative relationships
3. Analyzing two- and three-dimensional space and figures using distance, angle, similarity, and congruence, and understanding and applying the Pythagorean Theorem

## High School (Recommended 70 minutes per day)

Instructional time should focus upon the six major mathematical topic areas:

1. Number and Quantity
2. Algebra
3. Geometry
4. Functions
5. Modeling
6. Statistics and Probability

* The degree of focus upon any specific topical area should correspond to the specific high school math course and the standards established for that subject area.

| Focus | Focused Instruction |
| :---: | :---: |
| Focused Instruction to Address the Key Components of Mathematical Proficiency | Educators adopt a student-centered perspective when making their instructional design and delivery decisions. This means that all math instruction is focused upon the key components of mathematical proficiency. (See Five Strands of Mathematical Proficiency.) <br> Building upon this mathematical proficiency model, the CCSS-M proposes mathematical practices that all students should master in order to be considered proficient. These eight mathematical practices include: <br> 1. Make sense of problems and persevere in solving them. <br> 2. Reason abstractly and quantitatively. <br> 3. Construct viable arguments and critique the reasoning of others. <br> 4. Model with mathematics. <br> 5. Use appropriate tools strategically. <br> 6. Attend to precision. <br> 7. Look for and make use of structure. <br> 8. Look for and express regularity in repeated reasoning. <br> The five proficiency strands and eight mathematical practices serve to establish a comprehensive set of knowledge, skill, and a positive mindset within mathematics instruction. |

## Effective Instructional Program Delivery and Administration

## Framework for Strengthening the Teaching and Learning of Mathematics

## Effective Mathematics Teaching Practices

NCTM: Principles to Action (2014) identified eight effective mathematics teaching practices that provide a framework for strengthening the teaching and learning of mathematics. These practices establish a set of specific attributes all math teachers should strive to cultivate including:

1. Establish goals to focus learning. Effective math teachers establish clear goals for the mathematics that students are learning, situate goals within learning progressions, and use the goals to guide instructional decisions.
2. Implement tasks that promote reasoning and problem solving. Effective math teachers engage students in solving and discussing tasks that promote mathematical reasoning and problem solving and allow multiple entry points and varied solution strategies.
3. Use and connect mathematical representations. Effective math teachers engage students in making connections among mathematical representations to deepen understanding of mathematics concepts and procedures and as tools for problem solving.
4. Facilitate meaningful math discourse. Effective math teachers facilitate discourse among students to build shared understanding of mathematical ideas by analyzing and comparing student approaches and arguments.
5. Pose purposeful questions. Effective math teachers use purposeful questions to assess and advance students' reasoning and sense-making about important mathematical ideas and relationships.
6. Build procedural fluency from conceptual understanding. Effective math teachers cultivate student fluency with procedures based upon a foundation of conceptual understanding so that students, over time, become skillful in using procedures flexibly as they solve mathematical problems in real world applications.
7. Support productive struggle in learning mathematics. Effective math teachers consistently provide students, individually and collectively, with opportunities and support to engage in productive struggle as they grapple with new mathematical ideas and relationships.
8. Elicit and use evidence of student thinking (formative assessment). Effective math teachers use evidence of student thinking to assess progress toward mathematical understanding and to adjust instruction continually in ways that support and extend learning.

| High-Quality | nstructional Materials |
| :---: | :---: |
| Adopted Curriculum | Portales Municipal School District has approved and invested in specific HQIM for educators to implement in order to meet the learning needs of all students. Teachers play a vital role in the curriculum evaluation and adoption process and make recommendations to PMSD for board approval. <br> CORE CURRICULUM <br> - Elementary Grades K-6: Eureka Math (Great Minds). <br> - Junior High Grades 7-8: Carnegie Learning <br> - High School Algebra I, Geometry, and Algebra II: Carnegie Learning <br> High-quality instructional materials play a critical role in supporting effective teaching and learning, and are essential for ensuring that all students have the opportunity to succeed. <br> The current contract period for the adopted materials in mathematics started in 2020 and will end in the 2025-2026 school year. The next review of high quality materials in math will take place in June, 2025 for the 2026-2031 adoption period. <br> *Special Student Services: Alternative curriculum is to be determined and will be addressed in the PMSD SSS Framework (currently in development). |

## Multi-Layered System of Supports (MLSS) Framework

## Multi-Layered System of Supports (MLSS) Implementation Guide Multi-Layered System of Supports (MLSS) Manual 2021

The MLSS is a comprehensive instructional framework that aims to provide support to ALL students. MLSS enables teachers to use their professional judgment and make data-informed decisions swiftly regarding the students in their classrooms. It is not a supplementary process, program, or initiative, but is instead the research based framework for effective teaching and learning.


| Layer 1 <br> Universal Supports <br> All Students | Layer 1 ensures that all students receive strong instruction in a high quality differentiated core curriculum, a school-wide implementation of positive behavioral interventions and supports, data-driven instruction, teacher collaboration and monitoring, targeted interventions in small group instruction, universal screening, and English Language Development (ELD) for English Learners (ELs). This layer is proactive and is the foundation for meeting the academic and behavioral needs of most students. |  |  |
| :---: | :---: | :---: | :---: |
|  | Layer | Intervention Type | Intervention |
|  | Layer 1 | Academic | High-quality differentiated core instruction |
|  |  |  | High-quality differentiated materials |
|  |  |  | Differentiating work products to better meet student need |
|  |  |  | Smaller group instruction |
|  |  |  | More time receiving small group instruction |
|  |  |  | More frequent small group instruction |
|  |  | Behavior | 5:1 positive reinforcement to corrective feedback |
|  |  |  | Effective anti-bullying policies and messaging |
|  |  |  | Positive social interaction with each student each day |
|  |  |  | Processes and procedures for common classroom functions |
|  |  |  | Social contracts |
|  |  |  | Character development curriculum |
|  |  |  | Explicit behavior expectations for common areas |

## Layer 2

Targeted Interventions

Some Students PLUS
LAYER 1

The focus of Layer 2 interventions is individualized and targeted interventions to support students' acquisition of the knowledge and skills identified in the NMCS and to support student success with Layer 1 high-quality differentiated instruction. Students receiving Layer 2 targeted interventions receive core curriculum and instruction plus targeted evidence-based interventions. Targeted evidenced-based interventions may include, but are not limited to, applying evidenced-based interventions and data-driven instruction in small group learning settings, and/or instruction with reading or math coaches. Health and wellness interventions may include social or behavioral contracts or guided small-group social work interventions. Layer 2 also requires frequent progress monitoring to facilitate quick instructional adjustments if needed.

Any student being considered for retention must be receiving Layer 2 or 3 interventions prior to parents or guardians being notified of the school's desire to retain the student. Parents shall be notified no later than the end of the second grading period that their child is failing to make adequate yearly progress, and a conference consisting of the parent and the teacher shall be held to discuss possible remediation programs available to assist the student. Specific academic deficiencies and remediation strategies shall be explained to the student's parent and a written plan developed which contains timelines, academic expectations, and the measurements to be used to verify that a student has overcome academic deficiencies. Remediation programs and academic improvement programs include tutoring, extended day or week programs, summer programs, and other research-based models for student improvement (NMSA 22-2C-6). Students requiring a formal written intervention plan should be referred to the school's Student Assistance Team.

| In addition Layer 2 | Academic | High-quality supplemental instructional programs or curricula |
| :---: | :---: | :---: |
|  |  | Pullout instructional time to remediate students on specific skill deficits based on data |
|  |  | Extended time to complete assignments |
|  |  | Push-in staff supports to provide smaller group instruction, more time in small group or more frequent small group instruction |
|  | Behavior | Token economies |
|  |  | Counseling |
|  |  | Small groups focused on social issues that may precipitate changes in behavior (e.g. divorce, grief, body image issues, anger management, etc.) |
|  |  | Self-monitoring |
|  |  | Daily behavior logs |
|  |  | Behavior contracts |
|  |  | Sensory tools |
|  |  | Organizational tools |

## Layer 3

Intensive Interventions

Few Students PLUS
LAYERS 1 \& 2

The focus of Layer 3 intensive interventions is to provide students with instruction to meet their individualized and significant learning, behavioral, or social-emotional needs. Students receiving Layer 3 interventions require varying levels of intervention provided through Layer 3, Layer 2 and Layer 1 supports/reinforcements. These interventions may include school, health and wellness, and family and community support. Layer 3 evidence-based interventions may be provided for a longer duration than Layer 2 interventions, are provided more frequently, in smaller groups or otherwise be more intensive. Students receiving Layer 3 interventions receive all Layer 2 interventions and Layer 1 supports/reinforcements to achieve maximum learning.

Layer 3 intensive interventions may include but are not limited to pull out services provided by reading/math specialists, push-in services provided by a behavior specialist, counseling services, or interventions provided by the general education teacher in the classroom. Layer 3 intensive interventions include progress monitoring on a biweekly basis to assess students' responses to intensive interventions. Frequent communication (at least biweekly) with parent(s) or guardian(s) regarding assessed student progress is mandatory during Layer 3 intensive interventions.

| In addition to Layer 1 and Layer $\mathbf{2}$ interventions, students may require Layer $\mathbf{3}$ intensive interventions |  |  |
| :---: | :---: | :---: |
| Layer 3 | Academic | Pullout services to meet individualized needs |
|  |  | Longer, more frequent, smaller group, or otherwise more intensive interventions |
|  | Behavior | Behavioral contract |
|  |  | Continuous adult supervision |
|  |  | Social stories |
|  |  | Individual schedule |
|  |  | Structured breaks |
|  |  | Communication log with family |
|  |  | Proximity control |

## Student Assistance Team (SAT) Within MLSS Framework

A Student Assistance Team (SAT) is a school-based group of people whose purpose is to provide additional support to students who are experiencing academic or behavioral difficulties that are preventing them from benefiting from general education because they are either performing below or above expectations.

A SAT meeting is not required to increase or reduce layered supports, or to move back and forth across layers in the MLSS process. Additionally, there are no documentation requirements for moving a student in or out of a layer of support, and general education teachers should use the data available to them when making decisions for learner support.

## SAT Previous Role

## SAT referrals included:

" Obvious disability
" Gifted referral
» Student has been retained
" Student is in danger of being retained (must follow NMAC requirements)
" Student has been exited from Special Education
" Student has been restrained two or more times in a 30-day period

| A parent who requests his/her child be in SAT or <br> referred for an evaluation of a learning disability | A parent who requests his/her child be in SAT or <br> referred for an evaluation of a learning disability |
| :--- | :--- |
| A student could only be referred to SAT in Tier 2 | A student can be referred to SAT at any layer in MLSS |
| Tier 2 \& 3 targeted interventions could only <br> be accessed through SAT | Targeted interventions can be accessed at any layer |
| Teachers had to wait until the SAT meeting <br> to change an intervention if ineffective <br> SAT Intervention plans were monitored and <br> adjusted for efficacy after a certain time period | Based on data, a teacher can adjust or change <br> an intervention that is not effective at any time |
| The previous SAT process only allowed for <br> interventions to be developed and placed on the <br> Academic Intervention Plan, Behavior Intervention <br> Plan (BIP) or Academic Improvement Plan (AIP) | Accommodations and interventions can be included <br> in the Student Support Plan (Academic Improvement |
| Plan or Behavior Intervention Plan) |  |
| The SAT team was usually the only place to study <br> student performance and create interventions | Teacher PLCs collaborate weekly/biweekly to study <br> student performance and create school-wide supports <br> for interventions instead of just a SAT team doing this |

## ASSESSMENT

## New Mexico's Balanced Assessment System supports educators in continuously monitoring students' mathematical development and proficiency, coherently linking formative, interim, and summative assessment data.

| Purpose | Explanation | Frequency |
| :---: | :---: | :---: |
| Formative | Formative assessment is a process used by teachers and students during instruction that provides feedback to adjust ongoing teaching and learning to improve students' achievement of intended instructional outcomes. This process involves planning student learning, gathering evidence continuously, and providing feedback to adjust ongoing teaching moves and learning tactics. (CCSSO, 2014) <br> Formative assessments can be formal or informal. <br> Examples: exit cards, checking for understanding questions, classroom observations, student interviews, etc. | * Administered by teachers during the normal flow of instruction to quickly measure student progress minute by minute. <br> * Results provide frequent and timely feedback on teaching effectiveness and students' evolving understanding of essential concepts |


| Purpose | Explanation | Frequency |
| :---: | :---: | :---: |
| Interim | Interim assessments provide opportunities for educators to measure students' progress and monitor growth and achievement during the instructional year. Patterns of achievement are revealed within and across teachers, grades, and subjects. <br> The data can be aggregated across classrooms and are reported locally to influence grade level/department, school-, or district-level decisions regarding mathematics instructional delivery priorities and strategies. The results can be used by school leaders and teachers to better prepare students for future summative assessments. <br> Interim assessments are neither specific nor timely enough to guide teaching and learning, and so cannot serve the formative assessment process (Linquanti, 2014.) <br> Examples: <br> K-2 ISIP Math, NWEA MAP, District/School Common Formative Assessments, etc. | * Administered periodically separately from the process of instructing students. <br> * Interim assessments provide information at three points during the school year (BOY, MOY, and EOY) on student progress toward achieving the learning goals for a grade level. |


|  | Summative assessments determine overall levels of proficiency in grade-level knowledge <br> and skills and support evaluative judgments on the overall impact and effectiveness of <br> educational programs at the end of the school year. The intended use of summative data <br> is to evaluate programs, plan resource allocation, plan professional learning, and select <br> curriculum materials. <br> Summative <br> The data of state-required, standardized tests are aggregated and reported at the school, <br> district, and state levels and influence policy decisions aimed at better serving the needs <br> of all PMSD students. <br> Examples: <br> SAT, NM-MSSA, NM-ASR, NAEP, and K-2 ISIP Math | Administered at the end of <br> the school year. |
| :--- | :--- | :--- |


| Portales Municipal School District Current Assessments |  |
| :---: | :--- | :--- | :--- |


| GRADE | SUMMATIVE <br> Administered at the end of <br> each school year. | SCREENING \& BENCHMARK <br> Administered three times <br> per school year. | PROGRESS MONITOR <br> Administered frequently <br> in accordance with the need. |
| :---: | :--- | :--- | :--- |
| Grade 7 | NM-MSSA <br> WIDA-ACCESS for ELLs 2.0 <br> AVANT <br> DLM | NM-MSSA <br> NM-ASR <br> WIDA-ACCESS for ELLs 2.0 <br> AVANT <br> DLM <br> NAEP | NWEA MAP Mathematics 6+ Benchmark <br> Assessment |
| Grade 9 $\mathbf{9}$ | WIDA-ACCESS for ELLs 2.0 <br> AVANT <br> DLM | NWEA MAP Mathematics 6+ Benchmark <br> Assessment | Frequent Formative Assessments |

## PROFESSIONAL LEARNING

## PMSD supports multiple opportunities of professional learning and growth to enhance mathematics learning experiences, refine mathematics classroom instruction, and promote educator collaboration and reflection.

Research indicates a strong correlation between educator professional learning, teaching practices used in instruction, and positive student outcomes. In addition to workshops and conferences, job-embedded professional development which is aligned with the district's math plan and NM DASH 90-day Plan provides an effective, ongoing, sustained, and focused approach to teacher learning. PMSD offers opportunities for professional learning communities, grade-level, and department-level meetings to collaborate and analyze data, plan and reflect on instruction. The success of the professional development will be measured by administrator observation. Additional support will be provided through instructional coaching.
$>$ Educators should have access to a variety of professional learning opportunities, such as but not limited to:

- Peer observations
- Lesson study
- Guidance from research-based education resources
- Grade-level professional learning communities (PLCs)
- Department-level professional learning communities (PLCs)
$>$ School Leadership Teams support all educators in:
- Developing their craft with opportunities for professional growth
- Allocating time for collaborative planning and reflection among mathematics educators
- Allocating time to study the adopted curriculum
- Allocating time to apply reasonable variation in pacing and presentation to meet the students' diverse learning needs
- Modeling and supporting staff and students in developing a growth mindset
- Creating and sustaining effective professional learning communities of reflective practitioners
- Promoting the role of productive struggle in the learning process


## Seven Tenets of Effective Professional Learning:

(Darling-Hammond, Hyler, \& Gardner, 2017)

1. Content focused
2. Incorporates active learning utilizing adult learning theory
3. Supports collaboration, typically in job-embedded contexts
4. Uses models and modeling of effective practice
5. Provides coaching and expert support
6. Offers opportunities for feedback and reflection

## Possible Types of Professional Learning:

- Training
- Content-based Workshops
- School-based Study Groups
- Action Research Groups
- Individually Guided Activities
- Mentoring

7. Maintain a sustained focus and duration

## PMSD Topics for Math Professional Development

| BECC | James | Valencia |
| :---: | :---: | :---: |
| - K-12 Progression Study of Mathematics CCSS <br> - Pacing Calendar for Adopted Math Curriculum <br> - Components of Eureka Lessons <br> - Assessment Literacy <br> - MLSS <br> - Teaching Practices (Rigor, Questioning, Student Discourse, etc.) <br> - Acceleration vs. Remediation | - K-12 Progression Study of Mathematics CCSS <br> - Pacing Calendar for Adopted Math Curriculum <br> - Components of Eureka Lessons <br> - Assessment Literacy <br> - MLSS <br> - Teaching Practices (Rigor, Questioning, Student Discourse, etc.) <br> - Acceleration vs. Remediation | - K-12 Progression Study of Mathematics CCSS <br> - Pacing Calendar for Adopted Math Curriculum <br> - Components of Eureka Lessons <br> - Preparing Students for Summative Assessments through ongoing formative assessment <br> - Assessment Literacy <br> - MLSS <br> - Teaching Practices (Rigor, Questioning, Student Discourse, etc.) <br> - Acceleration vs. Remediation |
| Lindsey-Steiner | PJHS | PHS |
| - K-12 Progression Study of Mathematics CCSS <br> - Pacing Calendar for Adopted Math Curriculum <br> - Components of Eureka Lessons <br> - Preparing Students for Summative Assessments through ongoing formative assessment <br> - Assessment Literacy <br> - MLSS <br> - Teaching Practices (Rigor, Questioning, Student Discourse, etc.) <br> - Acceleration vs. Remediation | - K-12 Progression Study of Mathematics CCSS <br> - Pacing Calendar for Adopted Math Curriculum <br> - Specific Carnegie Learning Training <br> - Preparing Students for Summative Assessments through ongoing formative assessment <br> - Assessment Literacy <br> - MLSS <br> - Teaching Practices (Rigor, Questioning, Student Discourse, etc.) <br> - Acceleration vs. Remediation | - K-12 Progression Study of Mathematics CCSS <br> - Pacing Calendar for Adopted Math Curriculum <br> - Specific Carnegie Learning Training <br> - Preparing Students for Summative Assessments through ongoing formative assessment <br> - Assessment Literacy <br> - MLSS <br> - Teaching Practices (Rigor, Questioning, Student Discourse, etc.) <br> - Acceleration vs. Remediation |

PMSD Math Professional Learning Communities Plan

| BECC | James | Valencia |
| :---: | :---: | :---: |
| - Anchoring teaching to the standards <br> - Utilize district-approved curriculum materials to guide instruction <br> - Evaluate pacing progress <br> - Grade-level curriculum progression for each Module/Topic <br> - Collaborating to address standards and teaching practices through student work samples and/or teacher anecdotal records <br> - Authentic grading practices | - Anchoring teaching to the standards <br> - Utilize district-approved curriculum materials to guide instruction <br> - Evaluate pacing progress <br> - Grade-level curriculum progression for each Module/Topic <br> - Collaborating to address standards and teaching practices through student work samples <br> - Authentic grading practices | - Anchoring teaching to the standards <br> - Utilize district-approved curriculum materials to guide instruction <br> - Evaluate pacing progress <br> - Grade-level curriculum progression for each Module/Topic <br> - Collaborating to address standards and teaching practices through student work samples and PMSD NM-MSSA booklets <br> - Authentic grading practices |
| Lindsey-Steiner | PJHS | PHS |
| - Anchoring teaching to the standards <br> - Utilize district-approved curriculum materials to guide instruction <br> - Evaluate pacing progress <br> - Grade-level curriculum progression for each Module/Topic <br> - Collaborating to address standards and teaching practices through student work samples and PMSD NM-MSSA booklets <br> - Authentic grading practices | - Anchoring teaching to the standards <br> - Utilize district-approved curriculum materials to guide instruction <br> - Evaluate pacing progress <br> - Grade-level curriculum progression for each Module/Topic <br> - Collaborating to address standards and teaching practices through student work samples and PMSD NM-MSSA booklets <br> - Authentic grading practices <br> - Implementation of tools presented in Focus on Algebra PD (NMPED Partnership) | - Anchoring teaching to the standards <br> - Utilize district-approved curriculum materials to guide instruction <br> - Evaluate pacing progress <br> - Grade-level curriculum progression for each Module/Topic <br> - Collaborating to address standards and teaching practices through student work samples <br> - Authentic grading practices <br> - Intentional and continuous PSAT and SAT test prep |

## FAMILY ENGAGEMENT

| Focus | Rationale |
| :---: | :--- |
| Family Engagement <br> Plans | Family Engagement will be supported through a variety of programs, special events, and special interest groups <br> to aid parent involvement throughout the school year in order to support the home to school relationship and <br> academic success of all students. Information pertaining to the family engagement activities are shared with <br> families and all school staff in both English and Spanish. |

