

# 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 balictically propared for college, career, and life	<b>PMSD VISION FOR MATHEMATICS</b> 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.			
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.	<ul> <li>PMSD MISSION FOR MATHEMATICS</li> <li>Portales Municipal School District         <ul> <li>believes that all students are capable of learning math and sets high expectations.</li> <li>facilitates instruction that is student-centered, inquiry-based, and coherent.</li> </ul> </li> </ul>			
<ul> <li>Strategic Goals</li> <li>An educational system that benefits the whole child</li> <li>A vibrant educator ecosystem</li> <li>Equitable access to educational opportunities for students and families</li> <li>College and career pathways aligned with the profile of a New Mexico graduate</li> </ul>	<ul> <li>refines lessons to best promote student learning based on evidence gained from assessment.</li> <li>provides content opportunities for students to engage in productive struggle with cognitively-demanding mathematical concepts that have real-world connections.</li> <li>fosters a classroom environment where students communicate &amp; reason mathematically.</li> </ul>			

#### 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-guality K-12 mathematics education for all students. Element & Goal **Strategies for Success** 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. > Leadership establishes the belief that all students can learn and achieve proficiency in mathematics. > District Leaders, Principals, Math Coaches, and School Leaders will support mathematics educators by: • Providing opportunities for them to improve and enhance their mathematical knowledge for teaching, Leadership their knowledge of mathematical pedagogy, and their knowledge of students as mathematical Structure learners. We will ensure that Creating a work environment that motivates educators to achieve professional growth. 0 leadership • Serving as a conduit for information, sharing new knowledge and research about mathematics structures exist at standards, assessments, instructional programs, and high-guality instructional materials. multiple levels to • Anchor all stakeholders in a shared vision and understanding of high-guality mathematics learning promote experiences for all students. professional growth that meets teaching > School leadership teams share ideas, insights, and practices surrounding current mathematics instruction. and learning needs. > School leaders collaborate to promote mathematics success for all students by considering these questions within professional learning communities: • What do we want students to learn? (essential standards) • How will we know if they have learned? (team-developed common assessments) • What will we do if they do not learn? (systematic interventions) What will we do if they already know it? (extended learning) 0

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.

#### **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.

	<ul> <li><i>Teacher Leaders:</i></li> <li>Provide consistently high-quality mathematics instruction for all students and support colleagues to do the same through mentorship, collaboration, peer observations, and sharing strategies.</li> <li>Promote a solid understanding of the <i>Standards for Mathematical Practice</i>, and support daily student engagement with the SMPs</li> <li>Work with preservice and in-service educators to support research-informed instructional practices and implement effective instruction as described by the <i>Mathematics Teaching Principles</i> (NCTM, 2014).</li> <li>Support all grade-level or PLC team members to provide on-grade-level mathematics learning opportunities for all students.</li> </ul>
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PMSD Instructional Leadership Opportunities						
Superintendent	<ul> <li>Assistant Superintendent and Director of Personnel</li> </ul>	<ul> <li>Director of Federal Programs/ Curriculum &amp; Instruction</li> </ul>	Director of Special Student Services	Coordinator of Curriculum & Instruction	<ul> <li>Vertical Team Leaders by Content Area</li> <li>District Math Coaches</li> </ul>	
BROWN	JAMES	VALENCIA	LINDSEY-STEINER	PJHS	PHS	

DISTRICT MATHEMATICS PROFICIENCY ACHIEVEMENT & GOALS									
	Student Achievement: Math Proficiency by Cohort								
Orrede	2018-	·2019	2019-2020	2020-2021	2021-	-2022	2022·	2022-2023	
Grade	PMSD Proficient	State Average	PMSD Proficient	PMSD Proficient	PMSD Proficient	State Average	PMSD Proficient	State Average	Tentative Goal
Cohort 2036									<b>85%</b> K Number Writing
Cohort 2035							<b>77%</b> K Number Writing	<b>N/A</b> K Number Writing	<b>46%</b> 1st Grade ISIP
Cohort 2034					<b>N/A</b> K Number Writing	<b>N/A</b> K Number Writing	<b>42%</b> 1st Grade ISIP	<b>54%</b> 1st Grade ISIP	<b>46%</b> 2nd Grade ISIP
Cohort 2033				<b>N/A</b> K Number Writing	<b>N/A</b> 1st Grade ISIP	<b>N/A</b> 1st Grade ISIP	<b>20%</b> 2nd Grade ISIP	<b>23%</b> 2nd Grade ISIP	<b>25%</b> 3rd Grade MSSA
Cohort 2032			<b>N/A</b> K Number Writing	<b>N/A</b> 1st Grade ISIP	N/A 2nd Grade ISIP	N/A 2nd Grade ISIP	<b>30%</b> 3rd Grade MSSA	<b>22%</b> 3rd Grade MSSA	<b>33%</b> 4th Grade MSSA
Cohort 2031	<b>N/A</b> K Number Writing	<b>N/A</b> K Number Writing	<b>N/A</b> 1st Grade ISIP	<b>N/A</b> 2nd Grade ISIP	<b>24%</b> 3rd Grade MSSA	<b>23%</b> 3rd Grade MSSA	<b>27%</b> 4th Grade MSSA	<b>24%</b> 4th Grade MSSA	<b>30%</b> 5th Grade MSSA
Cohort 2030	N/A 1st Grade ISIP	<b>N/A</b> 1st Grade ISIP	N/A 2nd Grade ISIP	N/A 3rd Grade MSSA	<b>32%</b> 4th Grade MSSA	<b>25%</b> 4th Grade MSSA	<b>32%</b> 5th Grade MSSA	<b>34%</b> 5th Grade MSSA	<b>35%</b> 6th Grade MSSA
Cohort 2029	N/A 2nd Grade ISIP	N/A 2nd Grade ISIP	N/A 3rd Grade MSSA	<b>N/A</b> 4th Grade MSSA	<b>29%</b> 5th Grade MSSA	<b>31%</b> 5th Grade MSSA	<b>40%</b> 6th Grade MSSA	<b>30%</b> 6th Grade MSSA	<b>44%</b> 7th Grade MSSA
Cohort 2028	<b>44%</b> 3rd Grade TAMELA	<b>32%</b> 3rd Grade TAMELA	<b>N/A</b> 4th Grade MSSA	N/A 5th Grade MSSA	<b>48%</b> 6th Grade MSSA	<b>33%</b> 6th Grade MSSA	<b>31%</b> 7th Grade MSSA	<b>23%</b> 7th Grade MSSA	<b>34%</b> 8th Grade MSSA
Cohort 2027	<b>40%</b> 4th Grade TAMELA	<b>28%</b> 4th Grade TAMELA	<b>N/A</b> 5th Grade MSSA	<b>N/A</b> 6th Grade MSSA	<b>34%</b> 7th Grade MSSA	<b>25%</b> 7th Grade MSSA	23% 8th Grade MSSA	<b>17%</b> 8th Grade MSSA	<b>N/A</b> 9th Grade N/A
Cohort 2026	<b>19%</b> 5th Grade TAMELA	<b>25%</b> 5th Grade TAMELA	N/A 6th Grade MSSA	N/A 7th Grade MSSA	<b>22%</b> 8th Grade MSSA	<b>19%</b> 8th Grade MSSA	<b>N/A</b> 9th Grade N/A	<b>N/A</b> 9th Grade N/A	<b>25%</b> 10th Grade PSAT
Cohort 2025	<b>17%</b> 6th Grade TAMELA	<b>17%</b> 6th Grade TAMELA	<b>N/A</b> 7th Grade MSSA	N/A 8th Grade MSSA	<b>N/A</b> 9th Grade N/A	<b>N/A</b> 9th Grade N/A	<b>19%</b> 10th Grade PSAT	<b>18%</b> 10th Grade PSAT	<b>23%</b> 11th Grade SAT
Cohort 2024	<b>24%</b> 7th Grade TAMELA	<b>19%</b> 7th Grade TAMELA	N/A 8th Grade MSSA	<b>N/A</b> 9th Grade N/A	15% 10th Grade PSAT	<b>19%</b> 10th Grade PSAT	<b>%</b> 11th Grade SAT	<b>%</b> 11th Grade SAT	<b>N/A</b> 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 1st & 2nd 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 District Reviewer	acrawford@portalesschools.com	Julie Fraze	District Math Coach 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 imple	ements research-based instruction, strategies, and interventions that promote active student engagement.
Focus	Foundation
Layer 1 Core Instruction	<ul> <li>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 Scope-Mathematics to prepare all students for career, college, and citizenship.</li> <li>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:</li> <li>Instructional standards aligned to the NMIS-M specifically relevant to their teaching assignments</li> <li>Integrating CCSS-M learning progressions across grade levels, particularly those adjacent to the grade-level(s) or content area(s)</li> <li>Layering interventions based on data-informed students needs identified in the New Mexico Multi-Layered System of Supports (MLSS) Manual</li> <li>Principles for facilitating instruction:</li> <li>Consistent instruction centered around grade-appropriate or content-specific assignments</li> <li>Strong instruction, where students are challenged to be problem solvers</li> <li>Operate with a growth mindset</li> <li>Deep engagement, in what they are learning, that includes productive student discourse</li> <li>High expectations for students, believing they can meet grade-level expectations.</li> </ul>

	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.
	To create a learning community that positions students as doers of mathematics, educators keep these ideas at the forefront:
	<ul> <li>Assessment of student mathematics proficiency and learning needs as a means for focusing universal instruction</li> </ul>
Fquitable	Scaffolding techniques relevant to the student mastery of mathematical concepts and practices
Access to	Research-based strategies to effectively respond to linguistic and cultural diversity in student populations
Mathematics Instruction	<ul> <li>Instructional techniques demonstrated to support the three aspects of rigor:         <ul> <li>Application to real-world problems</li> <li>Conceptual understanding</li> <li>Procedural skill and fluency</li> </ul> </li> </ul>
	<ul> <li>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</li> </ul>
	• Ability to critically assess and select materials, equipment, and resources demonstrated to effectively support student learning in mathematics
	• 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.

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## Accelerated learning is an instructional framework that enables educators to connect unfinished learning with new ideas and new information, all while engaging with grade-level content.

- Learning acceleration is an approach that provides focused instruction to students, with emphasis on the specific skills and content they need in order to learn the new grade-level material. Learning is accelerated by moving students forward on grade level and setting them up for success with just-in-time training on required foundational skills, delivered prior to the grade-level content it supports.
- Educators deliver strong instruction that is inclusive of all learners, where all students are perceived as ready for grade-level learning, paired with strong instructional scaffolding to maximize access to grade-appropriate content.
- Different from this instructional framework is the traditional approach of remediation—teaching below grade level standards—though well intentioned, sometimes causes students to lose more academic ground and reinforces misguided beliefs that some students cannot do grade-level work.
- Targeted support may be required at specific times, addressing learning challenges as soon as they occur.
- *Region 7 Education Service Center* (www.esc7.net) provides a useful table comparing acceleration and remediation.

### Accelerated Learning



Focus	Recommendations for Math Instruction for All Students
Grades K-5 Recommended Time Allocations and Critical Areas for Math Instruction (NM Math Framework 2021)	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.
	<ul> <li>Kindergarten (Recommended 60 minutes per day)</li> <li>Instructional time should focus on two critical areas:</li> <li>1. Representing and comparing whole numbers, initially with sets of objects</li> <li>2. Describing shapes and space. More learning time in Kindergarten should be devoted to numbers than to other topics.</li> </ul>
	<ul> <li>First Grade (Recommended 60 minutes per day) <ul> <li>Instructional time should focus on four critical areas:</li> <li>Developing understanding of addition, subtraction, and strategies for addition and subtraction within 20</li> <li>Developing understanding of whole number relationships and place value, including grouping in tens and ones</li> <li>Developing understanding of linear measurement and measuring lengths as iterating length units</li> <li>Reasoning about attributes of, and composing and decomposing geometric shapes</li> </ul> </li> <li>Second Grade (Recommended 60 minutes per day) <ul> <li>Instructional time should focus on four critical areas:</li> <li>Extending understanding of base-ten notation</li> <li>Building fluency with addition and subtraction</li> <li>Using standard units of measure</li> <li>Describing and analyzing shapes</li> </ul> </li> </ul>
	<ul> <li>Third Grade (Recommended 60 minutes per day)</li> <li>Instructional time should focus on four critical areas: <ol> <li>Developing understanding of multiplication and division and strategies for multiplication and division within 100</li> <li>Developing understanding of fractions, especially unit fractions</li> <li>Developing understanding of the structure of rectangular arrays and of area</li> <li>Describing and analyzing two-dimensional shapes</li> <li>Students should be provided with abundant opportunities to explore these concepts using both manipulatives and mathematical symbols.</li> </ol> </li> </ul>

Grades K-5 Recommended Time Allocations and Critical Areas for Math Instruction (NM Math Framework 2021)	<ul> <li>Fourth Grade (Recommended 60 minutes per day) Instructional time should focus on three critical areas: <ol> <li>Developing understanding and fluency with multi-digit multiplication, and developing understanding of dividing to find quotients involving multi-digit dividends</li> <li>Developing an understanding of fraction equivalence, addition and subtraction of fractions with like denominators, and multiplication of fractions by whole numbers <li>Understanding that geometric figures can be analyzed and classified based on their properties, such as having parallel sides, perpendicular sides, particular angle measures, and symmetry </li> <li>Fifth Grade (Recommended 60 minutes per day) Instructional time should focus on three critical areas: <ol> <li>Developing fluency with addition and subtraction of fractions, and developing understanding of the multiplication to fractions and the division of fractions in limited cases (unit fractions divided by whole numbers and whole numbers divided by unit fractions) </li> <li>Extending division to 2-digit divisors, integrating decimal fractions into the place value system and developing understanding of operations with decimals to hundredths, and developing fluency with whole number and decimal operations</li> <li>Developing understanding of volume</li> </ol></li></li></ol></li></ul>
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	<ul> <li>Sixth Grade (Recommended 70 minutes per day) Instructional time should focus on four critical areas: <ol> <li>Connecting ratio and rate to whole number multiplication and division and using concepts of ratio and rate to solve problems</li> <li>Completing understanding of division of fractions and extending the notion of number to the system of rational numbers, which includes negative numbers</li> <li>Writing, interpreting, and using expressions and equations</li> <li>Developing understanding of statistical thinking</li> </ol> </li> </ul>
Grades 6-12 Recommended Time Allocations & Critical Areas for Math	<ul> <li>Seventh Grade (Recommended 70 minutes per day) Instructional time should focus on four critical areas: <ol> <li>Developing understanding of and applying proportional relationships</li> <li>Developing understanding of operations with rational numbers and working with expressions and linear equations</li> <li>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 </li> <li>Drawing inferences about populations based on samples</li> </ol></li></ul>
Instruction (NM Math Framework 2021)	<ol> <li>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</li> <li>Grasping the concept of a function and using functions to describe quantitative relationships</li> <li>Analyzing two- and three-dimensional space and figures using distance, angle, similarity, and congruence, and understanding and applying the Pythagorean Theorem</li> </ol>
	<ul> <li>High School (Recommended 70 minutes per day)</li> <li>Instructional time should focus upon the six major mathematical topic areas: <ol> <li>Number and Quantity</li> <li>Algebra</li> <li>Geometry</li> <li>Functions</li> <li>Modeling</li> <li>Statistics and Probability</li> <li>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.</li> </ol> </li> </ul>

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.)         Strategic competence: ability to formulate, represent, and solve mathematics problems       Conceptual understanding: competence; oncepts, operations, and relations         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 mathematics problems         Procedural fluency: skill in carrying out procedures flexibly, accurately, efficiently, and appropriately and appropriately and appropriately.         Adaptive reasoning: capacity for logical threeforting explanation, and justification         Broductive disposition: hought, reflection, explanation, and using the matices and one's own efficiency         Adaptive reasoning: capacity for logical threeforting explanation, and using the matube appropriate tools strategically.         Strategic competence: and one's own efficiently, and appropriately and one's own efficiently.         Adaptive reasoning: capacity for logical threeforting explanation and use sensible, useful, and worthwhile, coupled with a belief in diligence and one's own efficiency         Building upon this mathematics.         Subscience and one's own efficiency         Building upon this mathematics.         Concepts. operations, and use the first of the provide the term to the second to the second termatice.         Concepts. operations.
	Council. (2001). Adding it up: Helping children learn mothematics. J. Kilpatrick, J. Swafford, and B. Findell (Eds.). Mathematics Study Learning Committee, Center for Education, Division of Behavioral and Social Science and Education. Washington, DC: National Academy Press.
	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.
- 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 Instructional Materials					
	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.				
	CORE CURRICULUM				
	Elementary Grades K-6: Eureka Math (Great Minds).				
	<ul> <li>Junior High Grades 7-8: Carnegie Learning</li> </ul>				
Adopted Curriculum	<ul> <li>High School Algebra I, Geometry, and Algebra II: Carnegie Learning</li> </ul>				
	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.				
	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.				
	*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 ensures school-wide imp collaboration and Language Develo academic and be	that all stu lementatio d monitori opment (E ehavioral r	udents receive on of positive b ng, targeted in LD) for English needs of most	strong instruction in a high quality differentiated core curriculum, a behavioral interventions and supports, data-driven instruction, teac iterventions in small group instruction, universal screening, and Eng I Learners (ELs). This layer is proactive and is the foundation for m students.	a her glish eeting
		Layer	Intervention Type	Intervention	
l aver 1		Layer 1	Academic	High-quality differentiated core instruction	
				High-quality differentiated materials	
Universal				Differentiating work products to better meet student need	
Supports				Smaller group instruction	
••				More time receiving small group instruction	
All Students				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	

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).

## Targeted Interventions To student improvement (NMSA 22-20-6). Students requiring a formal written intervention plan should be referred to the school's Student Assistance Team.

Some Students PLUS LAYER 1

Layer 2

In additio	n to Layer 1 inte	erventions, students may require Layer 2 targeted interventions
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

	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 provided for a longer duration than Layer 2 interventions, are provided more frequently, in smaller groups or otherwis 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 special 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. 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 2 interventions, students may require Layer 3 intensive					
Layer 3 Intensive Interventions Few Students						
LAYERS 1 & 2		Layer 3	Academic	Pullout services to meet individualized needs		
				Longer, more frequent, smaller group, or otherwise more intensive		
				interventions		
			Behavior	Behavioral contract		
				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 within MLSS
<ul> <li>SAT referrals included:</li> <li>&gt;&gt; Obvious disability</li> <li>&gt;&gt; Gifted referral</li> <li>&gt;&gt; Student has been retained</li> <li>&gt;&gt; Student is in danger of being retained (must follow NMAC requirements)</li> <li>&gt;&gt; Student has been exited from Special Education</li> <li>&gt;&gt; Student has been restrained two or more times in a 30-day period</li> </ul>	<ul> <li>SAT is only required for the situations specified by law:</li> <li>» Obvious disability</li> <li>» Gifted referral</li> <li>» Student has been retained</li> <li>w Student is in danger of being retained (must follow NMAC requirements)</li> <li>» Student has been exited from Special Education</li> <li>» Student has been restrained two or more times in a 30-day period</li> </ul>
A parent who requests his/her child be in SAT or referred for an evaluation of a learning disability	A parent who requests his/her child be in SAT or 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 be accessed through SAT	Targeted interventions can be accessed at any layer
Teachers had to wait until the SAT meeting to change an intervention if ineffective SAT Intervention plans were monitored and adjusted for efficacy after a certain time period	Based on data, a teacher can adjust or change an intervention that is not effective at any time
The previous SAT process only allowed for interventions to be developed and placed on the Academic Intervention Plan, Behavior Intervention Plan (BIP) or Academic Improvement Plan (AIP)	Accommodations and interventions can be included in the Student Support Plan (Academic Improvement Plan or Behavior Intervention Plan)
The SAT team was usually the only place to study student performance and create interventions	Teacher PLCs collaborate weekly/biweekly to study student performance and create school-wide supports for interventions instead of just a SAT team doing this

ASSESSMENT							
New	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	<ul> <li>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)</li> <li>Table 6. Elicit and Use Evidence of Student Thinking – Teacher and Student Actions.         <ul> <li>What are teachers doing?</li> <li>Identifying what counts as evidence of student progress toward mathematics learning goals.</li> <li>Eliciting and gathering evidence of student understanding at strategic points during instruction.</li> <li>Interpreting student thinking to assess mathematical understanding, reasoning, and methods.</li> <li>Making in-the-moment decisions on how to respond to students with questions and prompts that probe, scaffold, and extend.</li> <li>Reflecting on evidence of student learning to inform the planning of next instructional steps.</li> </ul> </li> <li>Atbuefform Procepts to Action (2014)</li> </ul>	<ul> <li>Administered by teachers during the normal flow of instruction to quickly measure student progress minute by minute.</li> <li>Results provide frequent and timely feedback on teaching effectiveness and students' evolving understanding of essential concepts</li> </ul>					
	Formative assessments can be formal or informal. Examples: <b>exit cards, checking for understanding questions, classroom observations,</b> <b>student interviews, etc.</b>						

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. 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. Interim assessments are neither specific nor timely enough to guide teaching and learning, and so cannot serve the formative assessment process (Linquanti, 2014.) Examples: K-2 ISIP Math, NWEA MAP, District/School Common Formative Assessments, etc.	<ul> <li>Administered periodically separately from the process of instructing students.</li> <li>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.</li> </ul>

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

Portales Municipal School District Current Assessments					
GRADE	<b>SUMMATIVE</b> Administered at the end of each school year.	SCREENING & BENCHMARK Administered three times per school year.	<b>PROGRESS MONITOR</b> Administered frequently in accordance with the need.		
Kindergarten	ECOT Istation ISIP WIDA-ACCESS for ELLs 2.0 AVANT	CCSS Benchmark Assessment Istation ISIP	Frequent Formative Assessments CCSS Checkpoints		
Grade 1	Istation ISIP WIDA-ACCESS for ELLs 2.0 AVANT	Istation ISIP	Frequent Formative Assessments		
Grade 2	Istation ISIP WIDA-ACCESS for ELLs 2.0 AVANT	Istation ISIP	Frequent Formative Assessments		
Grade 3	NM-MSSA WIDA-ACCESS for ELLs 2.0 AVANT DLM	NWEA MAP Mathematics 2-5 Benchmark Assessment	Frequent Formative Assessments		
Grade 4	NM-MSSA WIDA-ACCESS for ELLs 2.0 AVANT DLM NAEP	NWEA MAP Mathematics 2-5 Benchmark Assessment	Frequent Formative Assessments		
Grade 5	NM-MSSA NM-ASR WIDA-ACCESS for ELLs 2.0 AVANT DLM	NWEA MAP Mathematics 2-5 Benchmark Assessment	Frequent Formative Assessments		
Grade 6	NM-MSSA WIDA-ACCESS for ELLs 2.0 AVANT DLM	NWEA MAP Mathematics 6+ Benchmark Assessment	Frequent Formative Assessments		

GRADE	<b>SUMMATIVE</b> Administered at the end of each school year.	SCREENING & BENCHMARK Administered three times per school year.	<b>PROGRESS MONITOR</b> Administered frequently in accordance with the need.
Grade 7	NM-MSSA WIDA-ACCESS for ELLs 2.0 AVANT DLM	NWEA MAP Mathematics 6+ Benchmark Assessment	Frequent Formative Assessments
Grade 8	NM-MSSA NM-ASR WIDA-ACCESS for ELLs 2.0 AVANT DLM NAEP	NWEA MAP Mathematics 6+ Benchmark Assessment	Frequent Formative Assessments
Grade 9	WIDA-ACCESS for ELLs 2.0 AVANT DLM	NWEA MAP Mathematics 6+ Benchmark Assessment Teacher-Created Semester Exams	Frequent Formative Assessments
Grade 10	PSAT WIDA-ACCESS for ELLs 2.0 AVANT DLM	NWEA MAP Mathematics 6+ Benchmark Assessment Teacher-Created Semester Exams	Frequent Formative Assessments
Grade 11	SAT NM-ASR WIDA-ACCESS for ELLs 2.0 AVANT SBA Spanish DLM Assessments for the Seal of Bilingualism-Biliteracy	NWEA MAP Mathematics 6+ Benchmark Assessment Teacher-Created Semester Exams	Frequent Formative Assessments
Grade 12	WIDA-ACCESS for ELLs 2.0 AVANT DLM Assessments for the Seal of Bilingualism-Biliteracy	Teacher-Created Semester Exams	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
- $\circ$   $\,$  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
- 7. Maintain a sustained focus and duration

Possible Types of Professional Learning:

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

PMSD Topics for Math Professional Development				
BECC	James	Valencia		
<ul> <li>K-12 Progression Study of Mathematics CCSS</li> <li>Pacing Calendar for Adopted Math Curriculum</li> <li>Components of Eureka Lessons</li> <li>Assessment Literacy</li> <li>MLSS</li> <li>Teaching Practices (Rigor, Questioning, Student Discourse, etc.)</li> <li>Acceleration vs. Remediation</li> </ul>	<ul> <li>K-12 Progression Study of Mathematics CCSS</li> <li>Pacing Calendar for Adopted Math Curriculum</li> <li>Components of Eureka Lessons</li> <li>Assessment Literacy</li> <li>MLSS</li> <li>Teaching Practices (Rigor, Questioning, Student Discourse, etc.)</li> <li>Acceleration vs. Remediation</li> </ul>	<ul> <li>K-12 Progression Study of Mathematics CCSS</li> <li>Pacing Calendar for Adopted Math Curriculum</li> <li>Components of Eureka Lessons</li> <li>Preparing Students for Summative Assessments through ongoing formative assessment</li> <li>Assessment Literacy</li> <li>MLSS</li> <li>Teaching Practices (Rigor, Questioning, Student Discourse, etc.)</li> <li>Acceleration vs. Remediation</li> </ul>		
Lindsey-Steiner	PJHS	PHS		
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PMSD Math Professional Learning Communities Plan		
BECC	James	Valencia
<ul> <li>Anchoring teaching to the standards</li> <li>Utilize district-approved curriculum materials to guide instruction</li> <li>Evaluate pacing progress</li> <li>Grade-level curriculum progression for each Module/Topic</li> <li>Collaborating to address standards and teaching practices through student work samples and/or teacher anecdotal records</li> <li>Authentic grading practices</li> </ul>	<ul> <li>Anchoring teaching to the standards</li> <li>Utilize district-approved curriculum materials to guide instruction</li> <li>Evaluate pacing progress</li> <li>Grade-level curriculum progression for each Module/Topic</li> <li>Collaborating to address standards and teaching practices through student work samples</li> <li>Authentic grading practices</li> </ul>	<ul> <li>Anchoring teaching to the standards</li> <li>Utilize district-approved curriculum materials to guide instruction</li> <li>Evaluate pacing progress</li> <li>Grade-level curriculum progression for each Module/Topic</li> <li>Collaborating to address standards and teaching practices through student work samples and PMSD NM-MSSA booklets</li> <li>Authentic grading practices</li> </ul>
Lindsey-Steiner	PJHS	PHS

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