

Math Acceleration Update

Platte County R-3 School District
Presentation to the Board of Education

Purpose



The purpose of math acceleration is to provide rigorous and **meaningful mathematics experiences** to students who demonstrate above grade level knowledge and skills in mathematics.

Math acceleration honors the PCR-3's Vision, Mission, and Values as well as our Principles of Learning by **preparing individual learners for success in life**, focusing on the individual student, and respecting that students learn at different rates and different times.



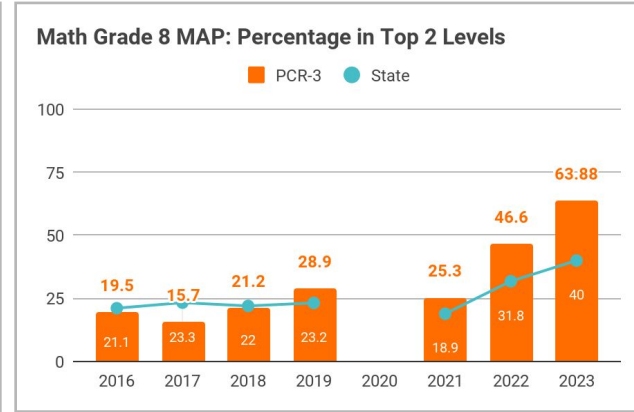
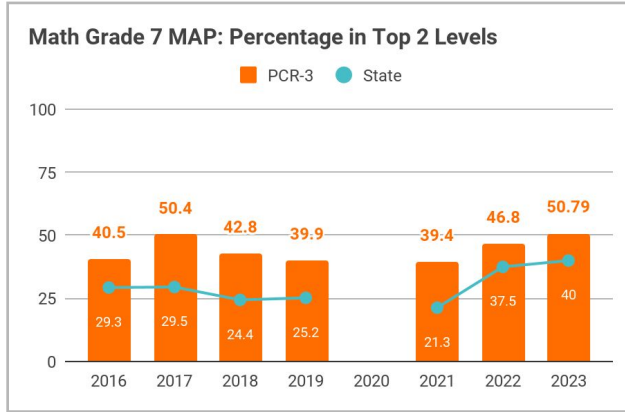
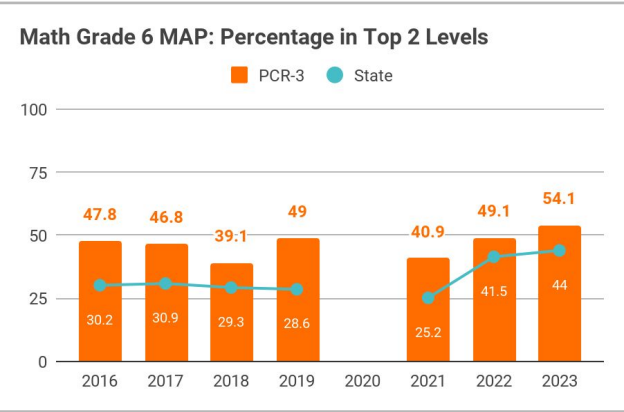
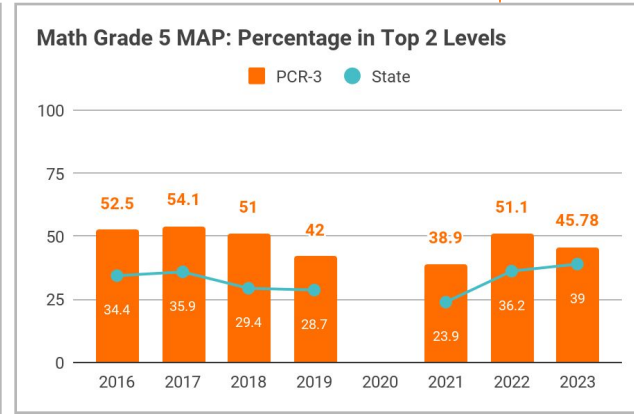
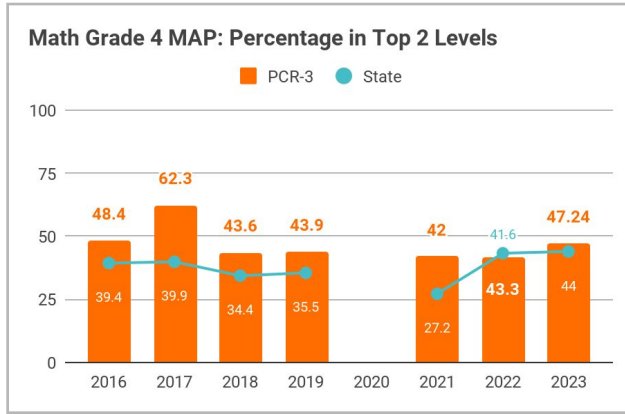
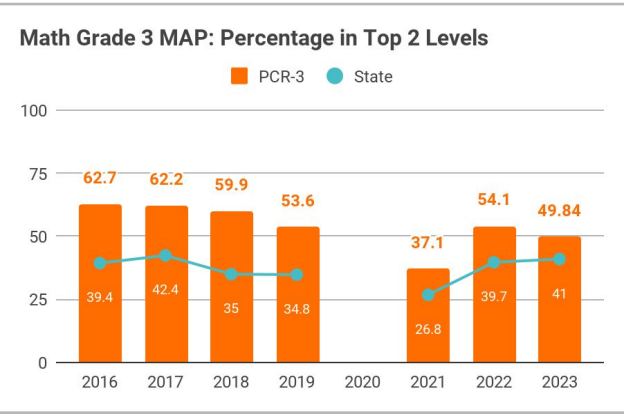
What Story Does Our Data Tell?



Results



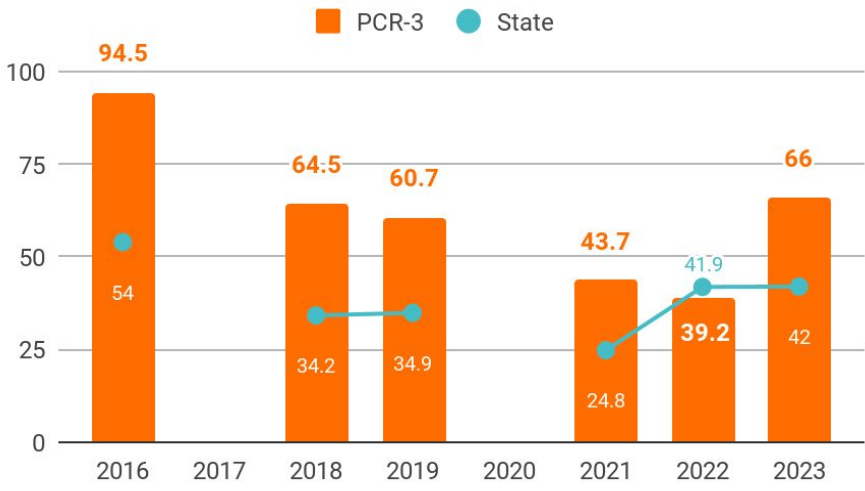
Achievement Data



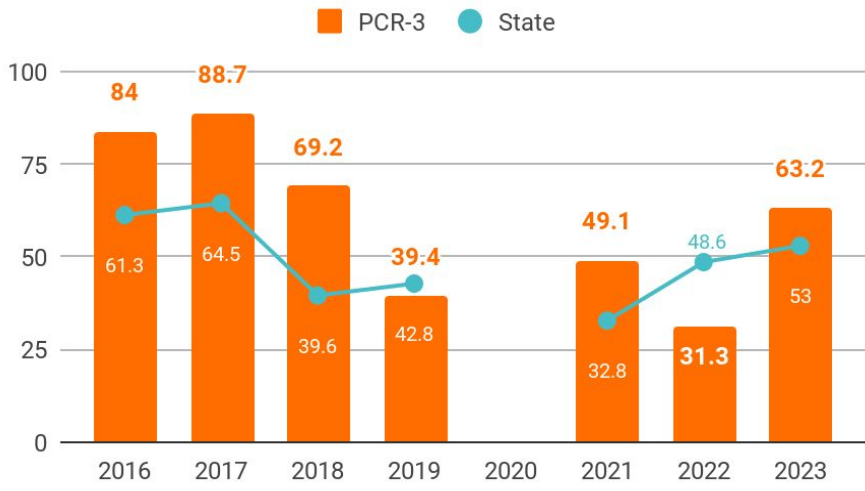
Achievement Data



Algebra I EOC: Percentage of Students in Top 2 Levels



Algebra II EOC: Percentage of Students in Top 2 Levels

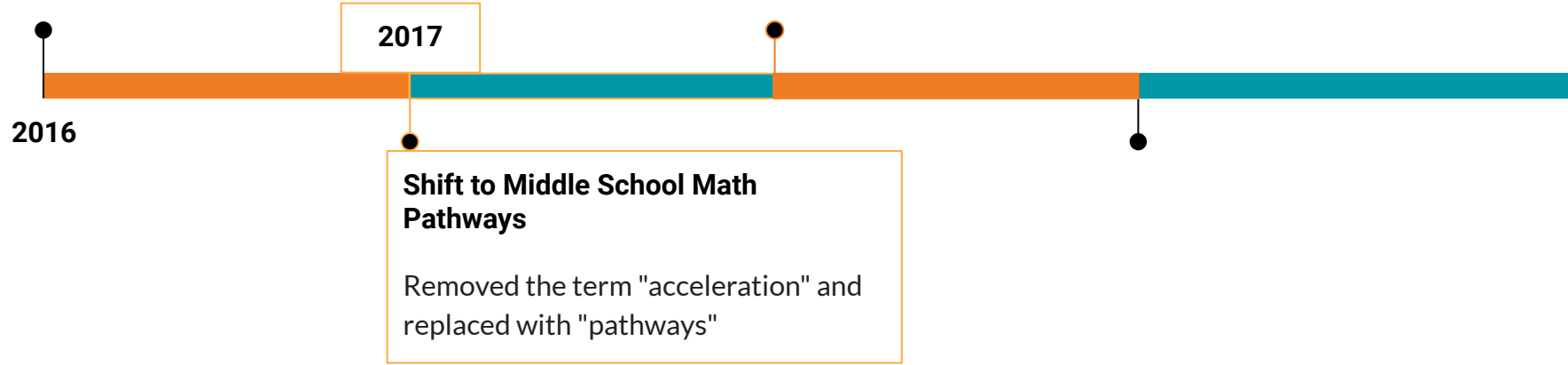


Historical Timeline



Middle School Math Acceleration

Change from "Challenge" to course specific titles and curriculum.



Historical Process for Determining Math Placement



Current 6th Graders

Student must meet the below data points to take the placement test

- Grades (Bs and above)
- Winter STAR - 80th percentile and above
- MAP-Performance Level (Proficient or Advanced)
- Teacher Recommendation

***Students who meet the above data points, will take the 7th grade Released MAP Assessment. Proficiency on this assessment will qualify a student for Pre-Algebra in the 7th Grade.**

Current 7th Graders

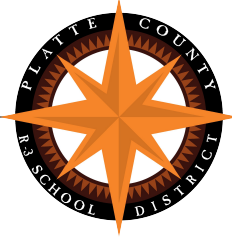
Student must meet the below data points to take the placement test

- Grades (Bs and above)
- Winter STAR - 80th percentile and above
- MAP-Performance Level (Proficient or Advanced)
- Teacher Recommendation

***Students who meet the above data points, will take the 8th grade Released MAP Assessment. Proficiency on this assessment will qualify a student for Algebra in the 8th Grade.**



How Do We Compare to Our Neighbors?



% of students in Algebra 1 in Middle School in 2020

- St. Joe - 22%
- Liberty - 20%
- Smithville - 15-30%
- West Platte - 40-45%
- Kearney - 37%
- NKC - 7%
- PH - 32%
- PCR-3 - 60%

*For the majority, students take 6th grade math, then 7th grade math or Challenge/Pre-Algebra, followed by 8th grade math or Algebra 1 in 8th grade.



Data Analysis Discussion: MS Math Pathways



2021 Reflection of Math Placement by Math Curriculum Council Teachers Grades 5-12

Plus	Delta
<ul style="list-style-type: none">● Differentiation for math students● Families and the community like the pathways● Student and families want their student on the advanced pathway● Students on accelerated track doing well on Algebra 1 EOC	<ul style="list-style-type: none">● Students who accelerated in MS sometimes struggle in the higher level HS Math courses (Calc, Trig, Stats, etc)● Students who took Alg 1 and/or Geo in MS must still take 3-4 Math courses in HS for graduation● Students who accelerate in MS are skipping/missing core grade level content which is foundational in nature and assessed on the AST



Understanding the Impact of Math Tracks



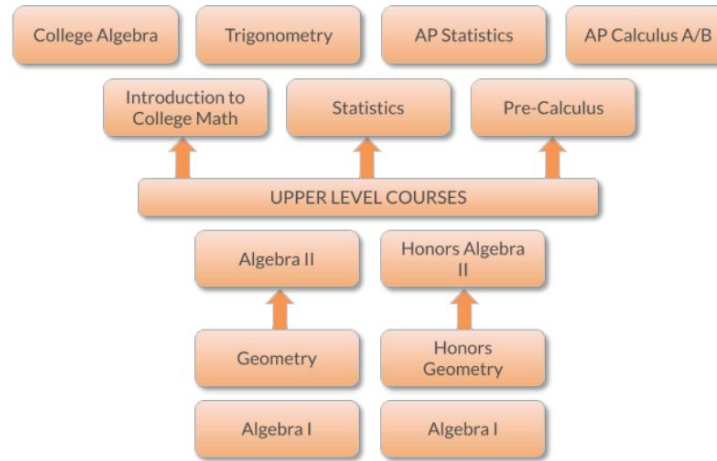
MATH

Graduation Requirement: 3 Units

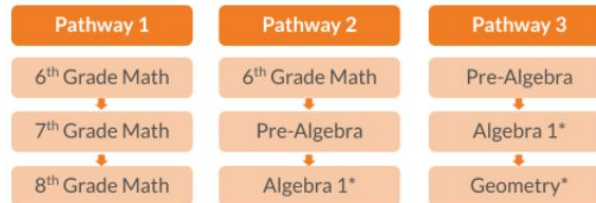
College Prep: 4 Units

All students must take the Algebra EOC prior to completing high school. Below are recommended pathways to meet graduation requirements.

High School Offerings



Middle School Offerings



Understanding the Impact of Math Tracks



Below outlines the mathematical categories within each course and the range of emphasis for each assessment. The percentage identifies how much of each assessment is tested on that particular category.

Example of Student Learning in Pathway 2

*Nonnegotiable knowledge and skills for 8th Grade Students to be on Target for College and Career Readiness.

	Number Base Ten	Number Sense and Operations in Fractions	Relationships and Algebraic Thinking	Geometry and Measurement / Data & Statistics	Ratios & Proportions	Number Sense & Operations	Expressions, Equations and Inequalities	Geometry & Measurement	Data Analysis, Statistic & Probability	Functions	Algebra	Number & Data	Congruence/ Similarity, Coordinate Geometry & Circles
3rd Grade	17-21%	17-21%	17-36%	14-32%									
4th Grade	19-23%	16-29%	10-22%	20-37%									
5th Grade	15-19%	23-31%	10-22%	16-36%									
6th Grade					13-17%	17-26%	22-34%	19-28%	19-28%				
7th Grade					19-22%	15-19%	20-28%	18-33%	18-33%				
8th Grade						32-46%	32-46%	23-37%	23-37%	13-20%			
Algebra I										37-43%	37-43%	17-23%	
Geometry								12-20%	12-20%				64-70%
Algebra II										22-28%	50-60%	20-24%	

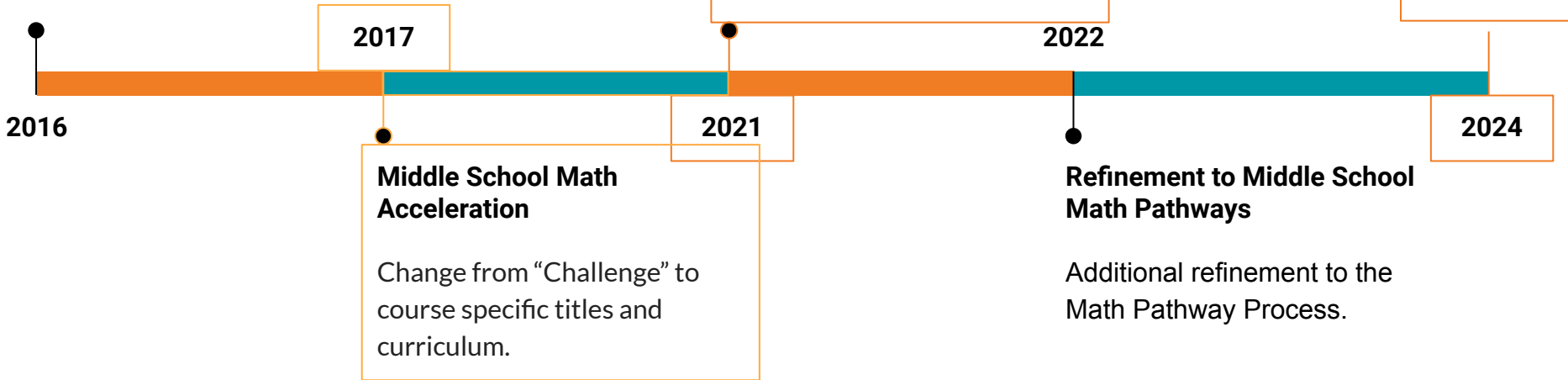


Timeline to Present



Middle School Math Acceleration

Change from “Challenge” to course specific titles and curriculum.



How Do We Compare to Our Neighbors?

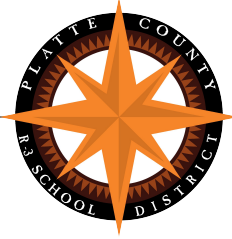


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- **PCR-3 - 60%**
 - 2021-22 - 24%
 - 2022-23 - 20%
 - 2023-24 - 21%



Success Rate for Accelerated Students?

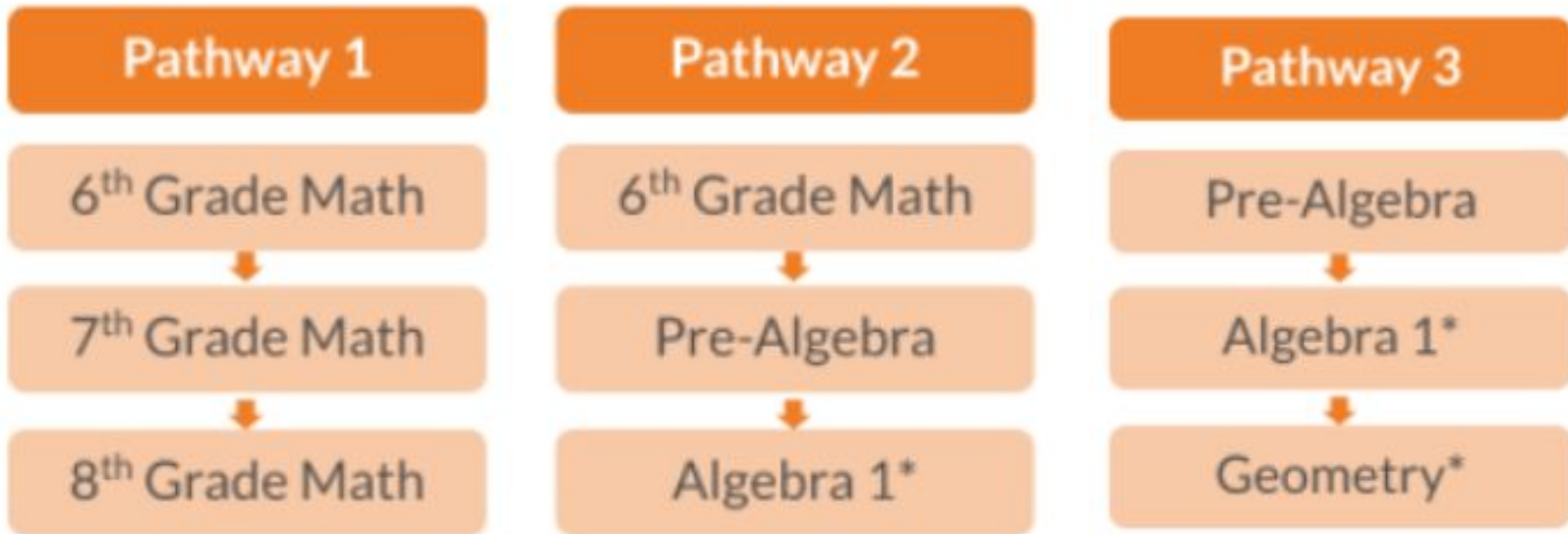
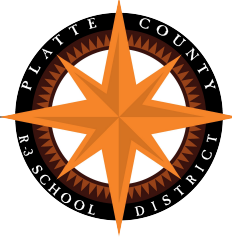


This data represents the number of students who have taken Geometry as an 8th Grader and their success rate following the track into Upper Level Math Courses based on Grades, State Assessments, AP Exams, and ACT Composite Score.

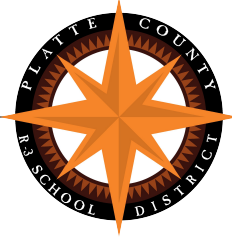
Graduating Cohort of Accelerated Students on Track 3	Successful Completion of 8th Grade Geometry	Successful Participation of Pre-Req Courses to Calc BC
2023-24 Graduates	37 Students	7 Students
2024-25 Graduates (Seniors)	52 Students	10 Students
2025-26 Graduates (Juniors)	28 Students	All Currently Enrolled in AP Calc AB
2026-27 Graduates (Sophomores)	10 Students	All 10 On Track for Calc BC



2023 Revisions - Process for Math Placement



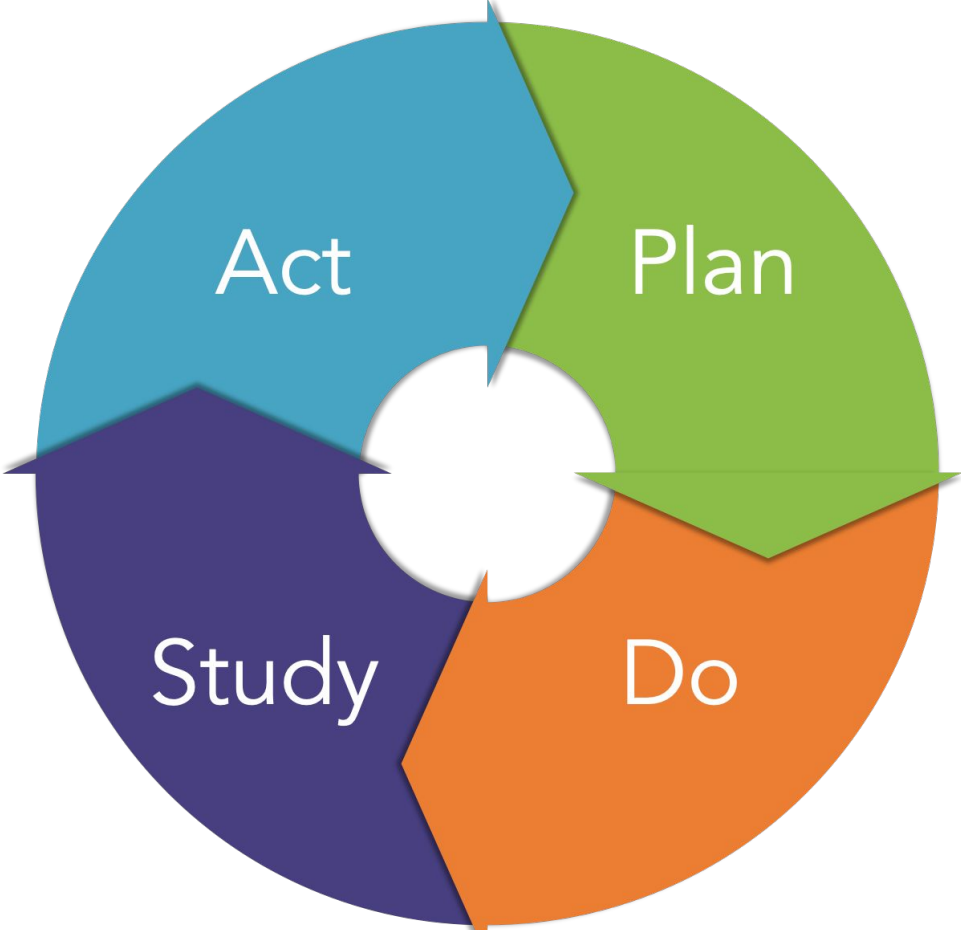
Updates: 2025-26 Criteria for Math Placement



Criteria	Pathway 2 Above Grade Level Track	Pathway 3 Accelerated Track
Grades	1st, 2nd, and 3rd quarter grades - <ul style="list-style-type: none"> Bs and above 	1st, 2nd, and 3rd quarter grades - <ul style="list-style-type: none"> Mostly As
Universal Screener	Fall and Winter Universal Screener - <ul style="list-style-type: none"> 80th percentile and above 	Fall and Winter Universal Screener - <ul style="list-style-type: none"> 90th percentile and above
State Assessment	MAP-Performance Level - <ul style="list-style-type: none"> Proficient or Advanced 	MAP-Performance Level - <ul style="list-style-type: none"> Advanced
Teacher Recommendation	Essential Skills appropriate for acceleration - self-motivated, time management, organization	Essential Skills appropriate for acceleration - self-motivated, time management, organization
Completion of Placement Test	Placement Test of Grade to be “skipped” with Advanced Course	Placement Test of Grade to be “skipped” with Advanced Course



Continuous Improvement



Questions & Feedback

