



# LCPS Middle School Mathematics Course Selection Process

SY 2022-2023

This document contains detailed information about the Loudoun County Public School (LCPS) Middle School mathematics course options and the course selection process for rising 6th, 7th, 8th, and 9th grade students.

*Para ver este documento en español, haga clic [aquí](#).*

Grade level information is linked below:

- [Current 5th Grade Students \(rising 6th graders\)](#)
- [Current 6th Grade Students \(rising 7th graders\) enrolled in Math 6](#)
- [Current 6th Grade Students \(rising 7th graders\) enrolled in Foundations of Algebra](#)
- [Current 7th Grade Students \(rising 8th graders\) enrolled in Foundations of Algebra](#)
- [Current 8th Grade Students \(rising 9th graders\) enrolled in Pre-Algebra](#)

Other documents referenced within this document:

- [Teacher Recommendation Guidance](#)
- [Teacher Recommendation Conference Recording Sheet](#)
- [Pre-Algebra Readiness Assessment Guidance Document](#) - For incoming 6th
- Middle School Math Course Recommendation Information Session for Teachers/Counselors/Administrators SY 22-23 (Video) - *currently in production*
- Middle School Math Course Recommendation Information Session for Parents/Guardians School Year 22-23 (Video) - *currently in production*
- Middle School Math Course Recommendation Information Session for Parents/Guardians School Year 22-23 (Spanish Subtitles - Video) - *currently in production*
- [Parent/Guardian Math Course Selection Process Information Letter](#) (to be sent by January 14, 2022 via Blackboard Connect)
- [LCPS Math Curriculum Framework](#)
- [Proposed VDOE 2023 Mathematics Standards](#)
- Pre-Algebra Readiness Assessment Proctor Instructions (for staff) - *currently in production*
- Guidance for recommendations after the window (February 2022) - *currently in production*



# LCPS Middle School Mathematics Course Selection Process

SY 2022-2023



# LCPS Middle School Mathematics Course Selection Process

SY 2022-2023

## Math Course Selection Decision Process for Students Currently Enrolled in 5th grade

Students enrolled in 5th grade will receive a teacher recommendation for either Math 6 (Math 6 SOL) or Foundations of Algebra (Math 7 SOL). Teachers will use the [Teacher Recommendation Guidance](#) document as well as student and parent/guardian conferences, as needed, to help them make this recommendation. Once parents receive the teacher recommendation in ParentVue, they will approve the recommendation or request to have a meeting to discuss a change to the course recommendation.

This math course selection will determine which mathematics pathways a student has access to in high school and affect their opportunities to apply to some magnet schools.

### **This decision should be made based on the student’s long-term and short-term goals and aspirations.**

Some factors to consider are:

- Based on the proposed [VDOE 2023 Math Standards](#), regardless of choice, all students will have access to Calculus and other AP Math Courses in high school.
- Does the student want to skip Math 6 and accelerate one year?
- Does the student want to take Algebra 1 in middle school in order to be able to apply to AET/AOS, Thomas Jefferson HS, or other magnet school?

### **Other information that may be used to determine course selection:**

#### **Curriculum of Current Mathematics Class and of Mathematics Courses that may be skipped.**

Students should consider their level of understanding of mathematics concepts in their current math course when considering their course selection. Students should also consider their level of understanding of mathematics concepts in math courses they may be skipping. For more information about the topics included in each course students and parents/guardians may use the Yearly Overviews and/or Curriculum Frameworks [linked here](#).

The image below shows typical course progressions for students entering 6th grade who choose Math 6 or Foundations of Algebra. This chart includes the new mathematics pathways included in the [proposed VDOE 2023 Mathematics Standards](#).

Grade 6 2022-23	Grade 7 2023-24	Grade 8 2024-25	Grade 9 2025-26	Grade 10 2026-27	Grade 11 2027-28	Grade 12 2028-29
Math 6 (Math 6 SOL)	Foundations of Algebra (Math 7 SOL)	Pre-Algebra (Math 8 SOL) or Essential Concepts I* (VDOE 2023 Math Standards)	Essential Concepts II* (VDOE 2023 Math Standards)	Essential Concepts III* (VDOE 2023 Math Standards)	Mathematical Modeling Geometry and Design Advanced Mathematical Modeling Discrete Math for Computing Applications of Advanced Algebra Financial Modeling Precalculus Focus on Functions Data Science Computer Science Sets and Logic Quantitative Reasoning Probability and Statistics Trigonometric Applications AP Statistics AP Computer Science AP Calculus AB or BC	
Foundations of Algebra (Math 7 SOL)	Pre-Algebra (Math 8 SOL)	Algebra	Essential Concept II* (VDOE 2023 Math Standards)	Essential Concepts III* (VDOE 2023 Math Standards)		
			Geometry	Algebra 2	Precalculus	Calculus AB
				Algebra 2/Trig	Math Analysis	Calculus BC

\* The content from Algebra 1, Geometry, and Algebra 2 will be embedded throughout Essential Concepts I, II, and III.



# LCPS Middle School Mathematics Course Selection Process

SY 2022-2023

## Additional Acceleration in Mathematics

Some students may be interested in accelerating two years in mathematics, skipping Math 6 (Math 6 SOL) and Foundations of Algebra (Math 7 SOL), in order to access Multivariable Calculus in high school. Students who wish to enroll in Pre-Algebra (Math 8 SOL) in 6th grade must take an assessment and meet the qualifying score. This assessment should not be given to all 5th grade students, and will be available to all students who are interested in this mathematics pathway. Interested students will work with their 5th grade teacher to schedule taking this assessment. 5th grade teachers will use the [Pre-Algebra Readiness Assessment Guidance Document](#) to schedule and administer the assessment during the window of February 2 - February 16. Students who receive a qualifying score on the assessment will be recommended by their 5th grade teacher for Pre-Algebra (Math 8 SOL) in 6th grade.

The image below shows mathematics pathways for a 6th grade student enrolled in Pre-Algebra. This chart includes the new mathematics pathways included in the [proposed VDOE 2023 Mathematics Standards](#).

Grade 6 2022-23	Grade 7 2023-24	Grade 8 2024-25	Grade 9 2025-26	Grade 10 2026-27	Grade 11 2027-28	Grade 12 2028-29
Pre-Algebra (Math 8 SOL)	Algebra	Essential Concepts II* (VDOE 2023 Math Standards)	Essential Concepts III* (VDOE 2023 Math Standards)	Mathematical Modeling Geometry and Design Advanced Mathematical Modeling Discrete Math for Computing Applications of Advanced Algebra Financial Modeling Precalculus Focus on Functions Data Science Computer Science Sets and Logic Quantitative Reasoning Probability and Statistics Trigonometric Applications AP Statistics AP Computer Science AP Calculus AB or BC		
		Geometry	Algebra 2	Precalculus	Calculus AB	Calculus BC
			Algebra 2/Trig	Math Analysis	Calculus BC	Multivariable Calculus

\* The content from Algebra 1, Geometry, and Algebra 2 will be embedded throughout Essential Concepts I, II, and III.



# LCPS Middle School Mathematics Course Selection Process

SY 2022-2023

## Math Course Selection Decision Process for Students Currently Enrolled in Math 6

Students enrolled in Math 6 will receive a teacher recommendation for either Foundations of Algebra (Math 7 SOL) or Pre-Algebra (Math 8 SOL). Teachers will use the [Teacher Recommendation Guidance](#) document as well as student and parent/guardian conferences, as needed, to help them make this recommendation.

This math course selection will determine which mathematics pathways a student has access to in high school and affect their opportunities to apply to some magnet schools.

**This decision should be made based on the student’s long-term and short-term goals and aspirations.**

Some factors to consider are:

- Does the student want to accelerate one year by skipping Foundations of Algebra?
- Does the student want to take Algebra 1 in middle school in order to be able to apply to AET/AOS, Thomas Jefferson HS, or other magnet school?
- Does the student want to take Calculus in high school?

**Other information that may be used to determine course selection:**

**Curriculum in Current Mathematics Class and in Mathematics Courses that may be skipped.** Students should consider their level of understanding of mathematics concepts in their current math course when considering their course selection. Students should also consider their level of understanding of mathematics concepts in math courses they may be skipping. For more information about the topics included in each course students/parents may use the Yearly Overviews and/or Curriculum Frameworks [linked here](#).

The image below shows typical middle school mathematics pathways for current 6th grade students in Math 6. The [Program of Studies](#) (Pages 30-31) gives a full description of the mathematics courses offered in 7th grade.

Grade 6 2021-22	Grade 7 2022-23	Grade 8 2023-24
Math 6	Foundations of Algebra (Math 7 SOL)	Pre-Algebra (Math 8 SOL)
	Pre-Algebra (Math 8 SOL)	Algebra



# LCPS Middle School Mathematics Course Selection Process

SY 2022-2023

## Math Course Selection Decision Process for 6th Grade Students Currently Enrolled in Foundations of Algebra

Students enrolled in Foundations of Algebra (Math 7 SOL) will receive a teacher recommendation for either Pre-Algebra (Math 8 SOL) or Algebra 1 (Algebra SOL). Teachers will use the [Teacher Recommendation Guidance](#) document as well as student and parent/guardian conferences, as needed, to help them make this recommendation.

This math course selection will determine which mathematics pathways a student has access to in high school and affect their opportunities to apply to some magnet schools.

**This decision should be made based on the student’s long-term and short-term goals and aspirations.**

Some factors to consider are:

- o Does the student want to skip Pre-Algebra?
- o Does the student want to take Geometry in middle school?
- o Does the student want to take Multivariable Calculus in high school?

**Other information that may be used to determine course selection:**

**MAP data may be considered in determining course selection.**

All students in LCPS took the Winter MAP assessment. NWEA indicates a score of 235 is readiness for Algebra 1. If a student scored a 235 or higher in the winter, they will likely be ready for Algebra 1. RIT scores should **not** be used in isolation when making a decision.

**Curriculum in Current Mathematics Class and in Mathematics Courses that may be skipped.**

Students should consider their level of understanding of mathematics concepts in their current math course when considering their course selection. Students should also consider their level of understanding of mathematics concepts in math courses they may be skipping. For more information about the topics included in each course students/parents may use the Yearly Overviews and/or Curriculum Frameworks [linked here](#).

The image below shows typical middle school mathematics pathways for current 6th grade students in Foundations of Algebra. The [Program of Studies](#) (Page 35) gives a full description of the mathematics courses offered in 8th grade.

Grade 6 2021-22	Grade 7 2022-23	Grade 8 2023-24
Foundations of Algebra (Math 7 SOL)	Pre-Algebra (Math 8 SOL)	Algebra 1
	Algebra 1	Geometry



# LCPS Middle School Mathematics Course Selection Process

SY 2022-2023

## Math Course Selection Decision Process for 7th Grade Students Currently Enrolled in Foundations of Algebra

7th grade students currently enrolled in Foundations of Algebra (Math 7 SOL) will receive a teacher recommendation for either Pre-Algebra (Math 8 SOL) or Algebra 1 (Algebra SOL). Teachers will use the [Teacher Recommendation Guidance](#) document as well as student and parent/guardian conferences, as needed, to help them make this recommendation.

This math course selection will determine which mathematics pathways a student has access to in high school and affect their opportunities to apply to some magnet schools.

**This decision should be made based on the student’s long-term and short-term goals and aspirations.**

Some factors to consider are:

- Does the student want to accelerate one year by skipping Pre-Algebra?
- Does the student want to take Algebra 1 in middle school in order to be able to apply to AET/AOS, Thomas Jefferson HS, or other magnet school?

**Other information that may be used to determine course selection:**

**MAP data may be considered in determining course selection.**

All students in LCPS took the Winter MAP assessment. NWEA indicates a score of 235 is readiness for Algebra 1. If a student scored a 235 or higher in the winter, they will likely be ready for Algebra 1. RIT scores should **not** be used in isolation when making a decision.

**Curriculum in Current Mathematics Class and in Mathematics Courses that may be skipped.**

Students should consider their level of understanding of mathematics concepts in their current math course when considering their course selection. Students should also consider their level of understanding of mathematics concepts in math courses they may be skipping. For more information about the topics included in each course students/parents may use the Yearly Overviews and/or Curriculum Frameworks [linked here](#).

The image below shows typical middle school mathematics pathways for current 7th grade students in Foundations of Algebra. The [Program of Studies](#) (Page 35) gives a full description of the mathematics courses offered in 8th grade.

Grade 7 2021-22	Grade 8 2022-23
Foundations of Algebra (Math 7 SOL)	Pre-Algebra (Math 8 SOL)
	Algebra 1



# LCPS Middle School Mathematics Course Selection Process

SY 2022-2023

## Math Course Selection Decision Process for 8th Grade Students Currently Enrolled in Pre-Algebra

Students currently enrolled in Pre-Algebra (Math 8 SOL) will receive a teacher recommendation for Algebra 1 in 9th Grade. Algebra 1 can be taken as a single block year long course (540000 - 1 HS Math Credit) or as a double block year long course (543201 - 1 HS Math Credit and 543202 - 1 HS Elective Credit).

This math course selection will affect student schedules as it impacts the number electives available. Algebra 1 Double Block is an appropriate recommendation for students who wish to have additional class time and support in their Algebra 1 course.

If Algebra 1 Double Block (**ALG1\_DB** on the score menu) is recommended for a student, the teacher **must add a note to the recommendation** for the counselor to add the elective that coincides with the course to the student schedule. When the 8th grade counselor is inputting information for schedules he/she should assign the course along with the elective that coincides with the course.