

## Introduction

Welcome to the PK-6 Mathematics department for the Livingston Public Schools. Our program provides engaging instruction that is fully aligned with the focus, coherence, and rigor of the New Jersey Student Learning Standards (NJSLS <http://www.nj.gov/education/aps/cccs/math/>). We offer multiple and diverse opportunities to meet our students' learning needs. In each grade level, instruction is focused on conceptual understanding, visualization, mathematical variation, application, and procedural skill and fluency in math. We also believe that within classrooms, positive norms for math, developed by Dr. Jo Boaler, lay at the foundation of student learning.

- Mistakes are valuable.
- Questions are really important.
- Math is about creativity and making sense.
- Everyone can learn math to the highest levels.
- Math is about connections and communicating.
- Math is about learning.
- Depth is more important than speed.

## Resources

Students in grades K, 1, and 2 are using Math in Focus 2020 by Houghton Mifflin Harcourt. All students receive a consumable textbook and access to the program's rich online components from their classroom teacher.

<https://www.hmhco.com/one/login/>

Students in grades 3, 4, and 5 are using My Math by McGraw-Hill. All students receive a consumable textbook and access to the programs rich online component from their classroom teachers.

<https://connected.mcgraw-hill.com/connected/login.do>

Students in grades 6 are using Big Ideas Math by Houghton Mifflin Harcourt. Students are provided with a textbook and access to the programs rich online component from their classroom teachers.

<https://www.bigideasmath.com/BIM/login>

### Mathematics Basic Skills Intervention (BSI)

Students who need additional support in mathematics as determined by their grades and assessments in previous math classes, teacher recommendation, and/or their performance on the NJSLA test may be recommended for BSI Math instruction. The BSI Math support, depending on the grade level, is a combination of pull out/push in services that work to provide small group targeted instruction to support, strengthen, and enrich a student's foundational math skills.

### The 5 - 6 Mathematics Program

Throughout the year in 5th grade, data is collected to determine 6th grade math placement. The process is completed by way of a math matrix which factors in the average of marking period grades, average of two math placement tests, and a rubric score, completed by the math teacher, to assess a student's mathematical practices. Once all data points are factored, a student will place into level A, B, or C for 6th grade math. The process takes into consideration that math success is closely related to developmental readiness in terms of conceptual and abstract thinking. Careful consideration is taken for each student to ensure that a student's placement is the "just right" fit for them. Letters will go out through the year to inform parents/guardians of the dates for placement tests and the process.

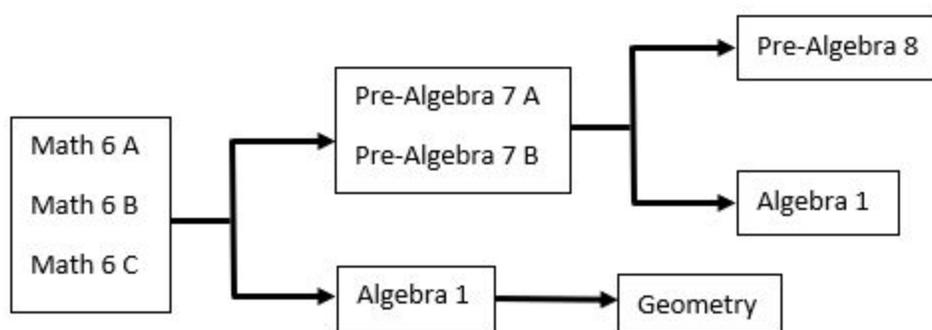
### The 6 - 7 Mathematics Program

Throughout the year in 6th grade, data is collected to determine 7th grade math placement into Algebra 1, Pre-Algebra A, or Pre-Algebra B. The process is completed by way of a math matrix which factors in the average of marking period grades, the Orleans Hanna Assessment, the Otis Lennon School Ability Test, and a rubric score, completed by the math teacher, to assess a student's mathematical practices. The process takes into consideration that math success is

closely related to developmental readiness in terms of conceptual and abstract thinking. Careful consideration is taken for each student to ensure that a student's placement is the "just right" fit for them. Students are not at a disadvantage, regardless of placement, and will still be able to take advanced courses, in math, in high school regardless of their initial mathematics placement. Letters will go out through the year to inform parents/guardians of the dates for placement tests and the process.

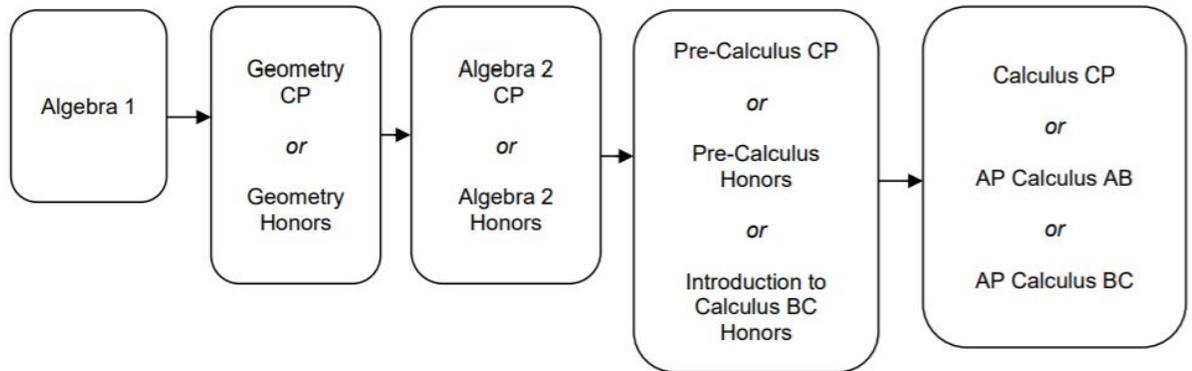
### Middle School Math Sequence

The middle school mathematics sequence takes into account student developmental readiness as well as the progression of the New Jersey Student Learning Standards (NJSLS). The mathematics placement process takes into consideration that math success is closely related to developmental readiness in terms of conceptual and abstract thinking. It is a data driven process that includes multiple data points including marking period grades, a placement test score, standardized test scores, and a teacher score based on a rubric of observable mathematical behaviors (e.g., Does the student engage in mathematical discussion? Is the student able to work independently on challenging math problems? Can the student apply mathematical thinking to novel problems?). Careful consideration is taken for each student to ensure that a student's placement is the "just right" fit for them. All students will have the opportunity to take advanced mathematics courses in high school regardless of their initial placement in middle school mathematics. Below are two samples of the middle school mathematics sequence beginning with grade 6:



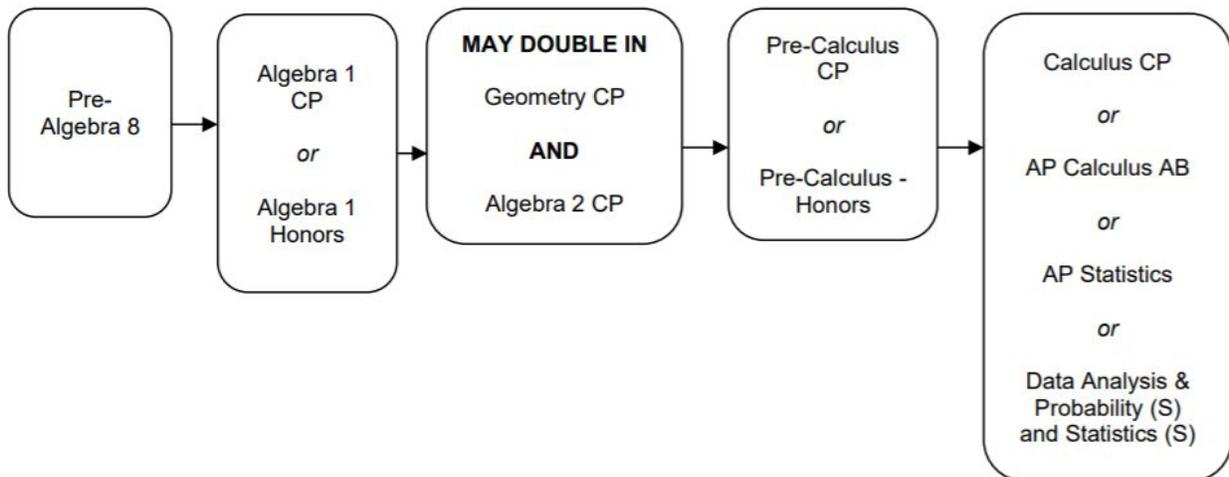
Students interested in mathematics and science related fields might benefit from completing Calculus in high school. Therefore, we have multiple entry points for students to take Calculus before they graduate high school.

- Students who complete Algebra 1 in grade 8 will follow the math sequence listed below:



Students who complete Pre-Algebra in grade 8 will pursue the following sequence, if they are interested in Calculus in 12th grade:

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## Extracurricular Opportunities

Our extracurricular activities provide students with wonderful opportunities to deepen their love of mathematics outside of the classroom.

All students in fourth grade are welcome to participate in our 24 Game competition which is held in the spring afterschool. Students will receive more information about the competition from their teachers in the second half of the school year.

In sixth grade, students are able to participate in the Continental Math League (CML). This competition takes place throughout the year through participating in 5 different competitions. These competitions take place during the day, within math class. Students will be provided with more information about CML by their math teacher.

<https://www.cmleague.com/>

In sixth grade, students are invited to compete in the New Jersey Math League competition. In 2020, Mt. Pleasant Middle School students placed fourth in the state among 115 schools which participated. The competition is held each year afterschool at Mt. Pleasant Middle School in February. Students will be provided with more information about the competition by the district as the date approaches.

<http://www.mathleague.com/>

Sixth grade students are also invited to participate in the Math Counts afterschool club. Meetings begin in the fall. Students will receive more information about Math Counts by their school.

<https://www.mathcounts.org/>

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