

The Ridgewood Public Schools  
Curriculum and Program Review  
*Five-Year Cycle 2019-2024*

Mathematics Department Study Findings &  
Recommendations May 2019

# Curriculum Study Timeline

- **Year One: 2018-2019: Program Review, Research, and Recommendation.**
  - *A committee of teachers and administrators research best practices in the content area, and review current program, students achievement, and perceptions of staff, parents, and students. A recommendation is made to reaffirm or revise curricula and/or program.*
- **Summer of Year One: 2019: Curriculum Writing, Revising, and/or Reaffirmation.**
  - *A committee of teachers and administrators develop new or revised curricula, research and recommend professional development and instructional materials to support implementation.*
- **Year Two: 2019-2020: Implementation of New or Revised Curriculum and Materials, with consistent professional development as needed.**
- **Year Three and Four 2021-2023: Monitoring and Revising as needed**
  - *Implementation continues. Achievement and feedback are monitored. Modifications are made if needed.*
- **Year Five 2023-2024: Begin to prepare for next study of department**

# Year-One Research Study Process

- Compared the current math program offerings with those of surrounding and comparable districts
- Considered the reorganization of the current math sequence
- Considered different programs that can be offered in the middle school
- Considered online programs that can be used as differentiation or extensions
- All of this was completed during departmental meeting time

# Committee Members

## **All members of both the High School and Middle School Math Departments**

Christine Anderson, Robert Betrus, Elizabeth Costabile, Michelle Doris, Rebecca Gattoni, Alexandra Gould, Joe Gyulay, Justin Hwang, Brenda Ingoglia, Roman Litvak, Meredith McCann, Amanda McCullough, Rick McNamee, Lauren Mele, Jessica Mirkovich, Mike Pepe, Courtney Pfeiffer, Jim Ponchak, Jason Porod, Kristen Rosolanko, Adam Scevola, Susan Siok, Kelly Skettini, Lauren Truncale, Sean Turkington, Brian Van Hise, Mollie Van Horne, Christine Walker, Rebecca Wegner, and Laura Weinstein

# Standards Guiding Study

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## District Department Vision/Mission

The Ridgewood Public Schools Mathematics and Computer Science programs provide opportunities that encourage all students to develop a positive attitude about mathematics and computer science. By utilizing mathematics and computer science in meaningful ways to explore authentic tasks students are expected to go beyond repetition and memorization into problem solving and understanding. We believe that our students are well prepared for the future

## State Standards and or Content/Practice Professional Standards

Ridgewood Mathematics Department adheres to the most current version of the New Jersey Student Learning Standards

# Our Practices

- We currently use the Connected Math Program for our grade 6 and grade 7 Math courses.
- We currently use the Big Ideas text for our grade 8 Algebra I
- We have an accelerated math program starting in Grade 6 to address the needs of the truly gifted math students
  - Students in this program take Algebra I in grade 7 and Geometry in grade 8
- At the high school the majority of the students will take Geometry, Algebra II, and Precalculus to complete their three year state requirement.
- A fourth year of math is optional although it is recommended.
  - Students take Calculus or Statistics, or Advanced Mathematics for their 4th year
- We offer 2 AP classes and 3 AP tests in Mathematics
- We offer 2 AP classes and 2 AP tests in Computer Science



# Our Program Delivery

- The math department at both the middle school and at the high school levels stresses the ability for students to work collaboratively as well as individually.
- Students are actively encouraged to participate in each lesson
- There is an emphasis on applying concepts and not just rote memorization of algorithms
- In the middle schools, there is an emphasis on students working with each other to gain a deeper understanding of the material.
- At the high school there is a strong emphasis on getting the students to present their work to the class and defend their solutions

# How are we doing? - Student Data

- 2212 students from grades 6-12 responded to a student survey
- About 63% agreed that they have been challenged in mathematics(21% were neutral)
- 88% consider themselves to be an average or above average math student
- 9.9% stated that they are being tutored because they are struggling in math while 12.3% stated that they are being tutored in math but they are a good math student and they want a higher grade
- 79.7% stated that the amount of time spent on math outside of school is right or about right

# How are we doing? - Student Data

- 81% stated that the materials provided by teachers were appropriate (18.4% were neutral)
- 66% feel that they are being successfully prepared for the next level of mathematics (26.5% were neutral)
- Of the students that had completed through Algebra II, the students stated the most difficult course that took was Algebra II, followed by Geometry.

# How are we doing? Community Perceptions

- A survey was sent out to the parents of all middle school and high school students. There were 641 responses
- 58% responded that they were satisfied with their child's middle school math experience (15.2% were neutral)
- 68.7% responded that the time spent on math outside of middle school was right or about right(24.9% felt it was too little)
- 65% stated that their child feels successful in math in middle school(14.2% neutral)
- 61% are confident that their child is being prepared for the future(20.6% were neutral)

# How are we doing? Community Perceptions

- 52.7% responded that they were satisfied with their child's high school math experience (28.2% were neutral)
- 74% responded that the time spent on math outside of high school was right or about right(16.2% felt it was too little)
- 58% stated that their child feels successful in math in high school(21.1% neutral)
- 57.2% are confident that their child is being prepared for the future(24.5% were neutral)

# Program Perceptions

## Comments from Parent, Student, and Teacher Surveys

The following is a short summary of the comments collected from the parent survey.

- The comments made by the parents ranged from having an excellent experience to making suggestions for the restructuring of the entire department.
- Many of the parental comments focused on particular situations involving a certain teachers or the supervisor.
- There were comments concerning the Connected Math Program and the overall lack of practice available.
- There were comments about the overall difficulty of the Honors Math Program at the high school

# Summary of our Findings

- Ridgewood School District serves as a lighthouse district for other school district in this state.
  - Math Supervisors from around the state have reached out to find out what we are planning to do next year on both the middle and high school levels.
- The current middle school math program has served the district well but there are some drawbacks that the teachers have identified over time.
  - There is a lack of practice available.
  - Teachers are supplementing more and more.
  - Differentiating lessons is difficult due to the pedagogy associated with this program.
- Due to the state testing that leads to the graduation requirement, we feel that the responsibility for teaching the material falls best on high school teachers.
  - This also makes scheduling the remediation process for those students who were not successful easier on both the student and the building administrators and teachers

# Recommendations for 2019-2020

- Change the middle school program from Connected Math to Big Ideas for grades 6 and 7
- Change Algebra IA to Grade 8 math using the Big ideas text for Grade 8
- Make Geometry 8 the course for most of our 8th graders
- Move Algebra I to the High School as the first course for most of our students
- Create an Honors Algebra I for the 2020-2021 school year to be taught at the high school

# What has been done so far in anticipation of these changes

- On March 27, all 7th grade regular education and special education teachers met to lay out the new 7th grade program
- On March 28, all 8th grade regular education and special education teachers met to lay out the new 8th grade program inclusive of Geometry in 8th grade
- On April 23rd, all 6th grade regular education and special education teachers met to lay out the new 6th grade program
- I have met with all three HSAs and made a presentation to the parents discussing these changes

# Work Planned for Summer 2019

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- Write curriculum for Grade 6 math
- Write curriculum for Grade 7 math
- Write curriculum for Grade 8 math
- Write curriculum for Geometry 8
- Write curriculum for Algebra II Honors