

Boston Collegiate Charter School
5th Grade Math

Contact Information

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Course Overview

Welcome to Fifth Grade Mathematics! My goal for this year is to foster and enhance students' mathematical curiosity, skills, and readiness for the rigor of upper school mathematics. For that reason, 5th grade math will focus specifically on a fundamental mastery of addition, subtraction, multiplication, and division of whole numbers, fractions, and decimals. Additionally, students will explore geometry, as well as statistics and probability. Students will be able to show the depth of their understanding through their ability to perform computational procedures as well as the ability to solve problems requiring the application of these concepts.

In order to bring all of our students the opportunity to achieve in subsequent grades, students will have 7 periods of math per week. Math II is a math program for all 5th and 6th grade students that supplements the traditional curriculum and provides an opportunity for student to spend more time exploring important concepts in greater depth. During the school year, it is our goal to build students' confidence and skills in the area of mathematics while challenging them in a supportive environment.

Units of Study

The curriculum outline below covers the concepts and skills that are listed in the Massachusetts Curriculum Frameworks as well as the Common Core. Our 5th grade curriculum is designed primarily to ensure that students develop a comprehensive understanding of place value, basic operations, fractions and decimals concepts, and geometry. We will cover additional topics throughout May and June in order to prepare students for the Stanford-10, MCAS, and 6th grade mathematics.

- Unit 1: Place Value and Number Sense
- Unit 2: Addition and Subtraction
- Unit 3: Multiplication
- Unit 4: Division
- Unit 5: Introduction to Algebra
- Unit 6: Fractions
- Unit 7: Decimals
- Unit 8: Geometry
- Unit 9: Statistics and Probability
- Unit 10: MCAS
- Unit 11: Final Review

Primary Performance Standards

By the end of 5th grade, students will have further developed their ability to:

- Demonstrate their understanding of place value through billions and thousandths (whole numbers and decimals)
- Represent positive numbers in various forms (standard, written, and expanded)
- Estimate and round numbers
- Solve number stories using addition, subtraction, multiplication, and/or division
- Add, subtract, multiply, and divide whole numbers
- Translate expressions into written statements and written statements into expressions
- Simplify expressions when given the value of a variable
- Solve step-by-step equations to find the value of a variable
- Simplify algebraic expressions by using PEMDAS
- Demonstrate an understanding of fractions as a ratio of a whole number, as part of unit wholes, as parts of a collection, and as locations on a number line
- Add, subtract, and multiply fractions
- Simplify, compare, and find equivalent fractions
- Convert improper fractions and mixed numbers
- Order, compare, round decimals
- Add, subtract, multiply, and divide decimals
- Convert fractions, decimals, and percents
- Distinguish among points, lines, line segments, rays, parallel lines, perpendicular lines, and intersecting lines
- Identify geometric shapes and figures
- Name, classify and measure angles
- Identify congruent and similar figures
- Draw lines of symmetry
- Identify transformations
- Calculate the perimeter, area, surface area, and volume of various figures
- Plot points on a coordinate plane
- Identify 3D shapes, their number of edges, vertices, and faces
- Calculate the mean, median, mode, and range of a set of data
- Prepare for the MCAS

Assessments

Students will have regular quizzes in order to monitor their progress, as well as unit tests. In order for students to properly prepare for a test, students will be given “Test Alert” which will outline the objectives being covered.

Grades

Student grades will be determined based on four averages:

- 20% Homework
- 20% Classwork
- 30% Minor Assessments (i.e. quizzes)
- 30% Major Assessments (i.e. unit tests)

There will also be a cumulative final exam at the end of the year worth 5% of the total grade. Each quarter is weighed at 23.75% and the final exam at 5%.

Tutoring

The Lower School has moved to a targeted tutoring program, designed to provide additional skill support to struggling students. **As a result, tutoring is by invitation only.** More information about this change will be coming soon.

Organization/Materials

- 3 ring binder (2 inches)
- 1 – 2 pocket folder
- 5-tab dividers (Notes, Do Now, Classwork, Homework, Assessments)
- pencils
- erasers
- pencil sharpener with catch basin
- red pen
- loose-leaf paper

As a result of not having a traditional textbook, students will be expected to keep all Math I work in a 3-ring binder and all Math II work in their pocket folder. Students must keep all work unless otherwise directed by a teacher. *Students do not need a calculator and should never use one to complete homework.*

Class Policies and Procedures

Absences: If you are absent, it is **your** responsibility to complete all assigned work in the allotted time.

Homework: Homework will be given each night and is expected to be of excellent quality, otherwise students will receive homework club.

Finally, please refer to the BCCS Student and Family Handbook for additional policies regarding attendance, behavior/code of conduct and homework expectations.

Classroom Website and On-line Tools

This year, I am pleased to announce our classroom website which will house classroom resources (handouts), math support, and math practice. Please visit it often!

www.bccsmath5.weebly.com

Additionally, students can log on to www.khanacademy.com for skill practice. Students will need to use a gmail account. Once they have a gmail account, they can log onto Khan Academy and “Add a Coach”, enter the Coach ID (msfaheymath@gmail.com) and then click Register Coach. This will allow students to practice math at their own pace, watch videos for how to solve problems, and take assessments. I am then able to track student progress. If you have more questions about Khan Academy, please contact me. ***Please note my contact information on the first page.***

I am looking forward to working with you this year.

Sincerely,

Judy Fahey

Course Description Agreement

Once you and your family have read the above course description, please sign and comment (if necessary) below. Please return this last page tomorrow for your first homework grade.

I have thoroughly read the above material and understand the expectations set forth for Math.

Student Name (printed)

Advisory

Student Signature

Parent/Guardian Signature

Best Phone Number

So that I may best prepare to work with and support your child, please **put an X in the box for each skill that your child has been exposed to or practiced in the past year:**

- | | |
|---|--|
| <input type="checkbox"/> compare and order whole numbers | <input type="checkbox"/> subtracting fractions |
| <input type="checkbox"/> adding whole numbers with regrouping (borrowing) | <input type="checkbox"/> multiplying fractions |
| <input type="checkbox"/> adding whole numbers without regrouping (borrowing) | <input type="checkbox"/> dividing fractions |
| <input type="checkbox"/> subtracting whole numbers with regrouping (borrowing) | <input type="checkbox"/> compare and order decimals |
| <input type="checkbox"/> subtracting whole numbers without regrouping (borrowing) | <input type="checkbox"/> adding decimals |
| <input type="checkbox"/> multiplying whole numbers (one digit by one digit) | <input type="checkbox"/> subtracting decimals |
| <input type="checkbox"/> multiplying whole numbers (multi digit by multi digit) | <input type="checkbox"/> multiplying decimals |
| <input type="checkbox"/> dividing whole numbers (dividing by one digit) | <input type="checkbox"/> dividing decimals |
| <input type="checkbox"/> dividing whole numbers (dividing by two digits) | <input type="checkbox"/> geometry concepts |
| <input type="checkbox"/> compare and order fractions | <input type="checkbox"/> calculating the perimeter of figures |
| <input type="checkbox"/> adding fractions | <input type="checkbox"/> calculating the area of figures |
| | <input type="checkbox"/> statistics (calculating the mean, median, mode, and range of a set of data) |
| | <input type="checkbox"/> probability (identify the chance of outcomes) |

Should you have any questions or concerns, please feel free to contact me at the information on the first page. I look forward to working with you and your child!