



Grade 4 Mathematics

Course Syllabus

Prince George's County Public Schools

Prerequisites: None

Course Description: In Grade 4, instructional time should focus on three critical areas: (1) developing understanding and fluency with multi-digit multiplication, and developing understanding of dividing to find quotients involving multi-digit dividends; (2) developing an understanding of fraction equivalence, addition and subtraction of fractions with like denominators, and multiplication of fractions by whole numbers; (3) understanding that geometric figures can be analyzed and classified based on their properties, such as having parallel sides, perpendicular sides, particular angle measures, and symmetry.

1. Students generalize their understanding of place value to 1,000,000, understanding the relative sizes of numbers in each place. They apply their understanding of models for multiplication (equal-sized groups, arrays, area models), place value, and properties of operations, in particular the distributive property, as they develop, discuss, and use efficient, accurate, and generalizable methods to compute products of multi-digit whole numbers. Depending on the numbers and the context, they select and accurately apply appropriate methods to estimate or mentally calculate products. They develop fluency with efficient procedures for multiplying whole numbers; understand and explain why the procedures work based on place value and properties of operations; and use them to solve problems. Students apply their understanding of models for division, place value, properties of operations, and the relationship of division to multiplication as they develop, discuss, and use efficient, accurate, and generalizable procedures to find quotients involving multi-digit dividends. They select and accurately apply appropriate methods to estimate and mentally calculate quotients, and interpret remainders based upon the context.
2. Students develop understanding of fraction equivalence and operations with fractions. They recognize that two different fractions can be equal (e.g., $15/9 = 5/3$), and they develop methods for generating and recognizing equivalent fractions. Students extend previous understandings about how fractions are built from unit fractions, composing fractions from unit fractions, decomposing fractions into unit fractions, and using the meaning of fractions and the meaning of multiplication to multiply a fraction by a whole number.
3. Students describe, analyze, compare, and classify two-dimensional shapes. Through building, drawing, and analyzing two-dimensional shapes, students deepen their understanding of properties of two-dimensional objects and the use of them to solve problems involving symmetry.

****The Standards for Mathematical Practice: The eight Standards for Mathematical Practice will be embedded in all mathematics instruction preK-12 and outline how students should think, reason, communicate and model mathematically. The eight practices are:**

- Make sense of problems and persevere in solving them.
- Reason abstractly and quantitatively.
- Construct viable arguments and critique the reasoning of others.
- Model with mathematics.
- Use appropriate tools strategically.
- Attend to precision.
- Look for and make use of structure.

**** Details for each practice may be found at;**

[http://mdk12.msde.maryland.gov/instruction/academies/resources/Mathematics/MathD1/Standards for Mathematical%20 Practice.pdf](http://mdk12.msde.maryland.gov/instruction/academies/resources/Mathematics/MathD1/Standards%20for%20Mathematical%20Practice.pdf)

Fluency Definition: Skill in carrying out procedures flexibly, accurately, efficiently and appropriately.

Grade 4 Fluency Expectations: Students will fluently add and subtract multi-digit whole numbers using the standard algorithm up to 1,000,000

INSTRUCTOR INFORMATION:

NAME:

E-MAIL ADDRESS:

PLANNING TIME:

SCHOOL PHONE NUMBER:

CLASS INFORMATION:

COURSE NUMBER:

CLASS MEETS:

ROOM:

TEXT:

End of the Year Assessments:

GRADING:

Grade 4 Mathematics

Overview: The goal of grading and reporting is to provide the students with feedback that reflects their progress towards the mastery of the Maryland College and Career-Ready Standards.

Elementary Mathematics (Grades 2 – 5)

Overview: The goal of grading and reporting is to provide the students with feedback that reflects their progress toward the mastery of the indicators and objectives found in the Mathematics Curriculum Framework Progress Guide.

Factors	Brief Description	Grade Percentage Per Quarter
Class Work	<p>This includes work completed in the classroom setting. Class work can include, but is not limited to:</p> <ul style="list-style-type: none">• Group Participation• Notebooks/journals• Written responses to Constructed Responses. (brief or extended), where applicable• Active participation in whole/small group discussions, presentations and activities• Active participation in math projects• Completion of class assignments	35%
Homework	<p>This includes all work completed outside the classroom to be graded on its completion and student's preparation for class (materials, supplies, etc.). Assignments can include, but are not limited to:</p> <ul style="list-style-type: none">• Problem of the Week• Friday Night Homework• Winter/Spring Break Packets	15%
Assessments	<p>This category encompasses both the traditional (exams and quizzes) and alternative (presentations, projects, portfolios) methods of assessing student learning with the goal of mastery.</p> <ul style="list-style-type: none">• Exams• Tests• Quizzes• Portfolios• Research/Unit Projects• Oral presentations/Interview <p>Suggested criteria for grading presentations, projects, portfolios:</p> <ul style="list-style-type: none">• Concepts/objectives have been met.• Completion of project.	50%