Welcome to Geometry Newsletters

The BCPS Office of Mathematics is happy to share Geometry Newsletters with our students and their families. The Newsletters are provided to help give parents and guardians insight into each Unit of the course. There are 4 sections in each Newsletter: Unit at a Glance, Resources, Exploring Mathematics, and a Quote. In this first edition, there is an explanation of each of the Newsletter sections included below the section name. There are eleven Units in the Geometry course:

Unit 1: Foundations for Geometry	Unit 5: Triangle Congruence	Unit 9: Right Triangles and Trigonometry
Unit 2: Extending Transformational Geometry	Unit 6: Properties and Attributes of Triangles	Unit 10: Extending Perimeter, Circumference, and Area; Spatial Reasoning
Unit 3: Geometric Reasoning	Unit 7: Polygons and Quadrilaterals	Unit 11: Circles
Unit 4: Parallel and Perpendicular Lines	Unit 8: Similarity	

Each unit will have its own Newsletter. While the Newsletters are meant to be informative, parents and guardians are encouraged to keep communication directly with their student's teacher through Schoology, email, Back-to-School Nights and/or conferences.

Unit at a Glance

The "Unit at a Glance" section is provided to give an overview of the specific topics and skills that students will be expected to learn in the unit. An estimated time frame is also stated.

Topic	Length	Geometry Textbook Section(s)

Exploring Mathematics

In the "Exploring Mathematics" section, connections are made between the math in the unit and practical applications. This can be an exploration of related careers, applications of the math to real-world problems, discussion prompts to have with your child, or information about growth mindsets. One of the best ways to support your child in math class is to have positive conversations about math. The prompts in this section are meant to help start some positive discussions surrounding the math in the unit.

Resource Toolkit

Homework Help Section

Digital resources exist in the HMH online textbook that can support student learning outside of the classroom. To access these resources, students can log into HMH through BCPSone Digital Content, then select "Student Resources". The "Homework Helper" resource has a mini-lesson, then guided practice problems for students to complete that can help reinforce concepts that were learned in class. Also, check the "Videos & Activities" section where other beneficial resources can be found.

The Common Denominator

A Family Math Newsletter

Geometry Unit 1: Foundations for Geometry

Unit at a Glance

Foundations for Geometry establish the concepts and principles that will serve as the basis for the entire course. Students are reintroduced to the abstract concepts of points, lines, and planes and the facts and postulates. Students will construct and measure two-dimensional shapes and figures. Measurement of line segments and angles will dominate the remainder of the unit. Students will learn new geometric terminology and formulas in order to apply algebraic principles, including the use of formulas. Solving equations will deal with the measurement of line segments, angles, and areas of two-dimensional figures in both planes and coordinate planes. The following topics will be studied:

| Topic	Length	Geometry Text Section(s)
Topic A: Understanding Points, Lines, and Planes	Academic: 1 (90-min) lesson Honors: 1 (90-min) lesson	1.1
Topic B: Measuring and Constructing Segments	Academic: 2 (90-min) lessons Honors: 2 (90-min) lessons	1.2
Topic C: Measuring and Constructing Angles	Academic: 2 (90-min) lessons Honors: 2 (90-min) lessons	1.3
Topic D: Pairs of Angles	Academic: 2 (90-min) lessons Honors: 2 (90-min) lessons	1.4
Topic E: Using Formulas in Geometry	Academic: 0.5 (90-min) lesson Honors: 0.5 (90-min) lesson	1.5
Topic F: Midline and Distance in the Coordinate Plane	Academic: 1 (90-min) lesson Honors: 1 (90-min) lesson	1.6

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Khan Academy Videos

Topic A: Terms and Labels in Geometry
Topic B: Equation Practice with Segment Addition
Topic C: Equation Practice with Supplementary Angles
Topic D: Equation Practice with Vertical Angles
Topic E: Radius, Diameter, Circumference and π
Topic F: Distance Formula; Midpoint Formula
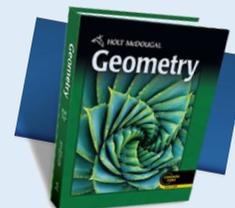
Exploring Mathematics

Every day we are surrounded by space, and the shape of things in that space. To be able to understand the wonder of the worlds shape and appreciate it, we need to have knowledge of spatial use; or the areas related to space and the position, size and shape of things in it. When we know how to apply and understand the relationship between shapes and sizes we will be better prepared to use them in our everyday lives. Geometry will assist us in doing that, because it provides the knowledge of how to deal with measurements and relationships of lines, angles, surfaces and solids. Geometry can also help you tap into both sides of your brain. It will require you to use your logical, technical left-brain, as well as ask you to call upon your right-brain, which helps you visualize and tap into your creativity and inspiration (adapted from Math Worksheet Center).

- Look at some ways geometry is used in the world around us: Geometry in the Real World
- Visit these links to read about careers that require knowledge and use of geometry:
    - Careers that Require Geometry
    - Jobs in Geometry
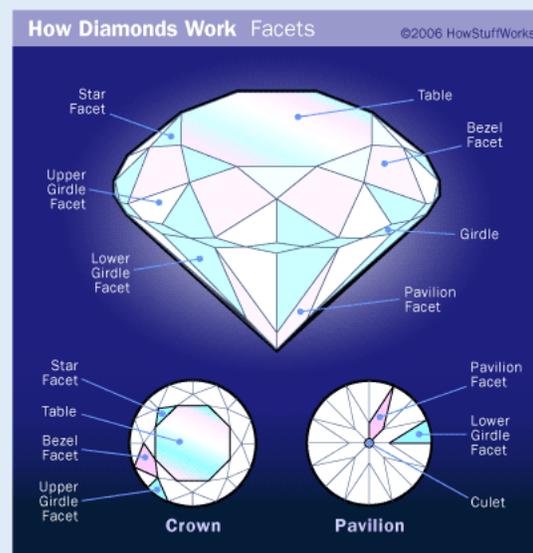
"Music is the arithmetic of sounds as optics is the geometry of light."
– **Claude Debussy**