

## In an Elementary Mathematics Classroom:

- Students explore problems in depth.
- Students solve problems using multiple strategies.
- Students choose from a variety of concrete materials and appropriate technology as a natural part of their everyday mathematical work.
- Students express their mathematical thinking through drawing, writing, and talking.
- Students work in a variety of groupings - - individually, in pairs, in small groups, and as a whole class.

### **Honors Mathematics Goal**

Provide an enriched and accelerated mathematics curriculum for our gifted mathematics students in grades three through twelve in a manner that encourages their life-long learning in the area of mathematics. This curriculum is consistent with the K-12 mathematics philosophy of the district.

## Mathematics Philosophy

Mathematics is a universal language that allows us to make sense of fundamental principles, thoughts, ideas, patterns, problems, and phenomena surrounding us and to communicate our understanding and resolutions of these concepts to others. In order to develop and enrich student understanding of mathematics, District 203 will provide a comprehensive and cohesive mathematics curriculum in which mathematical topics are explored and analyzed with significant depth.

The environment in every mathematics classroom will provide the following: active and responsible engagement in the learning of mathematics. An atmosphere of risk taking, in-depth investigation and analysis of intriguing situations and problems, ample opportunities for reflections and interaction, and connections to everyday life.

Instruction in every mathematics classroom will provide a rich variety of cognitively appropriate strategies and resources so that all students have opportunities to experience both success and challenge.

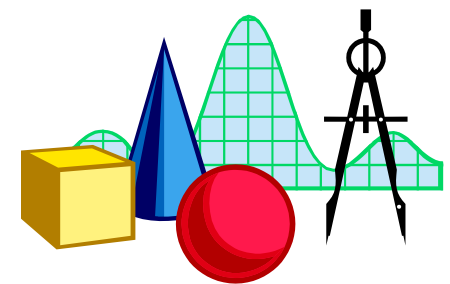
As a result of curriculum, environment and instruction, District 203 students will experience the utility, power and beauty of mathematics as they become proficient in using and applying fundamental mathematical concepts and skills including: computation, critical thinking, reasoning, and resourceful problem solving.

Property of Naperville Community Unit  
School District 203  
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## NAPERVILLE COMMUNITY UNIT SCHOOL DISTRICT 203



## FOURTH GRADE TRIMESTER THREE HONORS MATHEMATICS CURRICULUM



Web Site: [www.naperville203.org](http://www.naperville203.org)

## AREAS OF FOCUS

### Geometry

- Transformations
- Tessellations
- Symmetry
- Congruency
- Coordinate Geometry
- Spatial Visualization
- Perimeter
- Area
- Surface Area
- Volume

## RESOURCES

### Math Trailblazers

### Middle Grades Mathematics Project Spatial Visualization

### Middle Grades Mathematics Project Mouse and Elephant: Measuring Growth

## MATERIALS

- Cubes
- Calculator
- Graph paper and various grids
- Dot paper
- Rulers and Metersticks
- Color Tiles
- Pattern Blocks
- Protractors
- Base Ten Blocks

## CONCEPTS AND CONTENT IN THE HONORS FOURTH GRADE CLASSROOM Trimester Three

Students will be able to demonstrate an understanding of spatial sense.

Students will be able to navigate and plot points on a coordinate grid to find landmarks and measurements.

Students will be able to use concrete materials and computer based technology to solve geometric patterns.

Students will be able to visualize, sketch, and construct three-dimensional shapes and two-dimensional views.

Students will be able to draw a figure with a given number of lines of symmetry.

Students will be able to visualize and draw an object with a given set of attributes.

Students will be able to describe a motion or a series of motions using the transformation vocabulary.

## HELP AT HOME

Parents can help their children.

- Work with your child in their acquisition of multiplication and division facts.
- Construction sets are a wonderful way for children to learn geometry. If your child has a construction set, cubes, or other building materials, encourage him/her to build models. Ask your child to describe what he/she has built.
- When traveling, ask your child to locate destinations using coordinates found on the edges of a map.
- Play with puzzles that encourage visual spatial thinking such as Snafooz, Cubra, Rhombo or jigsaw puzzles.
- Sketch 3-D objects on graph paper or dot paper.
- Use boxes to analyze three-dimensional objects and learn about volume. By cutting boxes into rectangles, children learn how two-dimensional figures come together to make three-dimensional objects.