

## 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.

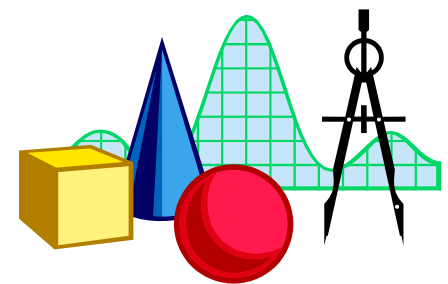
As a result of curriculum, environment and instruction, District 203 students will experience the utility, power and beauty of mathematics as they become proficient in using and applying fundamental mathematical concepts and skills including: computation, critical thinking, reasoning, and resourceful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

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



## FIFTH GRADE TRIMESTER THREE HONORS MATHEMATICS CURRICULUM



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

## AREAS OF FOCUS

### Number and Operation

- Problem Solving
- Estimation
- Properties and Order of Operations

### Algebra

- Solving Algebraic Equations
- Analyzing Patterns

### Statistics

- Probability
- Likely/Unlikely
- Fair

## RESOURCES

Navigating through Algebra in Grades 6-8

Algebraic Thinking First Experiences

Patterns of Change

Math Trailblazers

Hands On Equations

## MATERIALS

- Tiles
- Calculator
- Graph paper and various grids
- Toothpicks
- Cubes
- Spinners
- Cups
- Hands on Equations® manipulatives

## CONCEPTS AND CONTENT IN THE HONORS FIFTH GRADE CLASSROOM

### Trimester Three

Students will be able to describe, analyze and extend numeric and geometric patterns.

Students will be able to solve one-step linear equations using inverse operations.

Students will be able to solve non-routine problems using a variety of strategies and resources.

Students will be able to describe graphs. They will look at relationships within the graph, extend the graph, and create new graphs.

Students will be able to describe how data collection methods can impact the nature of the data set, and will be able to propose and justify conclusions based on data.

Students will be able to determine, interpret, and apply probabilities of an event.

Students will be able to understand what it means for events to be equally likely and for a game or process to be fair.

Students will be able to make connections between statistics and probability and life situations.

## HELP AT HOME

Parents can help their children.

- Work with your child in their acquisition of multiplication and division facts up to twelve.
- Play games that promote logical thinking such as Backgammon, Master Mind, and Stratego.
- Discuss real life scenarios where data and probability are used. For example, discuss graphs in **newspapers** to see if the data is fairly represented, analyze a game to see if it is equally likely to win, and discuss the probability of an event occurring.
- Have your child create games that are fair, to be played by your family. Discuss how the game could be altered to make it unfair.
- Have your child collect data from family and friends, interpret and graph this data. Use graphing computer programs if available.
- Build patterns with toothpicks, cups, tiles, etc. Have your child extend the patterns and express them algebraically.
- Investigate various online sites that offer virtual manipulatives and games. For example: <http://matti.usu.edu/nlvm/nav/vlibrary.html> and <http://www.coolmath4kids.com>