

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, including calculators, 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 - - as a whole class, individually, in pairs, and in small groups.

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.

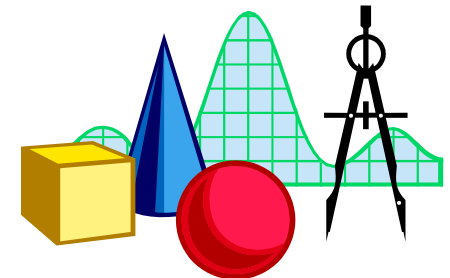
Instruction in every mathematics classroom will provide a rich variety of cognitively appropriate strategies and resources so that all students have opportunities to experience both success and challenge.

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.

NAPERVILLE COMMUNITY UNIT SCHOOL DISTRICT 203



FIRST GRADE TRIMESTER ONE MATHEMATICS CURRICULUM



Web Site: www.naperville203.org

Property of Naperville Community
Unit School District 203
Fall 2003

AREAS OF FOCUS

Number and Operation

- Developing strategies for comparing two quantities.
- Developing strategies for organizing collections of objects so that they are easy to count and combine.
- Representing solutions to mathematics problems with pictures, numbers, and words.
- Categorizing data in ways that communicate clearly to others.
- Making sense of survey results and presenting them to others.

RESOURCES

Mathematical Thinking at Grade One

Introduction

Building Number Sense

The Number System

The Problem Solver

Problem Solving

How Deep Is the Water?

MATERIALS

- Math Manipulatives (i.e. interlocking cubes, pattern blocks, geoblocks, counters, number cubes, dice)
- Number cards (similar to playing cards)
- Paper, pencils, crayons, and markers

CONCEPTS AND CONTENT IN THE FIRST GRADE CLASSROOM

Trimester One

During the first trimester, your first grade student will be introduced to some of the mathematical materials and processes they will be using this year as they explore counting, comparing, and combining. Students will use mathematical tools and materials as they count, combine numbers, play mathematical games, solve problems, and represent the results of surveys they take. They will also be engaged in critical mathematical processes such as sharing and explaining their strategies; using pictures, numbers, and words to show their work; and working with peers.

Students will discover ways that numbers can be made from other numbers; that is 12 can be made from 6 and 6, from 10 and 2, or from 6,4, and 2. Being able to take numbers apart and put them back together flexibly is the basis for developing good number sense and an understanding of the operations.

Students will learn about numbers in lots of ways. Students will also use their growing number sense to develop strategies for solving story problems, finding their own way to solve the problems and record their thinking.

HELP AT HOME

Parents can help their children.

- Children work out number problems by using real objects. At home, try to provide a collection of small objects for counting, such as beans, buttons, or pennies. These will help your child work out solutions to problems.
- Your child will bring home some number games. Play the games frequently with your child. Find a safe place to store the number cards and game directions, perhaps in an empty folder or manila envelope.
- When working on problems at home, your child may use pictures, numbers, words, or a combination of these to keep track of the work. All are important ways of showing mathematical thinking. Let your child find his or her own ways to solve problems and record the work.
- Encourage your child to ask questions, solve problems, and to explain his/her thinking.
- ◆ Before story time, find specific page numbers in the book. Look for books that involve numbers.