

Curriculum for: **Mathematics**

GRADES 5-6

The 5th grade mathematics program builds on those skills and concepts introduced in grades K-4. Fractions and decimals are given additional significance at this grade level. Mathematical reasoning and problem solving also receive increased attention.

The focus of 6th grade mathematics is to build on those skills and concepts introduced in grades K-5. Continued work in fractions, decimals and percents with respect to the operations is accomplished. Problem solving, reasoning and thinking mathematically are also a focus.

The following are the key areas of study:

Mathematical reasoning

- Problem solving

Numbers and numeration

- recognize, represent and use numbers in a variety of equivalent forms
- ratio, proportion and percent

Operation

- consistent and accurate operations with decimals and rational numbers

Modeling/multiple representation

- to provide a means of presenting, interpreting and connecting mathematical information
- graphs and tables
- geometry

Uncertainty

- probability and statistics
- estimation

Patterns/Functions

- recognize, describe and generalize patterns and functions

Measurement

- describe and compare objects and data
- understand area, volume, perimeter and circumference

GRADES 7-8

In preparation for the 8th grade New York State Mathematics Assessment, the focus is to improve the problem-solving and reasoning abilities of the students, while continuing to refine their understanding of mathematical skills and concepts. Seventh grade builds upon the foundation of many of the topics that are introduced in sixth grade. Students use scientific calculators and work on numerous real life applications. Solutions involve showing the steps they used and explaining the mathematical processes and concepts. Many topics are introduced in 7th grade and pursued in more depth at 8th grade.

The following topics are the major areas of study:

Mathematical Reasoning

- Employ problem solving strategies
- Express solutions clearly and logically using appropriate mathematical notation, terms, and language

Number and Numeration

- Recognize, represent, and use numbers in a variety of equivalent forms (integer, fraction, decimal, percent, exponential, expanded, and scientific notation)
- Understand ratio, proportion, and percent

Operations

- Consistently and accurately perform operations on integers, decimals, and rational numbers

Modeling/Multiple Representation

- To provide a means of presenting, interpreting, communicating and connecting mathematical information and relationships
- Use maps and scale drawings to represent real objects or places
- Understand graphs and tables
- Understand Geometry and measurement

Measurement

- To describe and compare objects and data
- Understand Area, Volume, Perimeter, and Circumference
- Utilize Trigonometry
- Utilize statistical information

Uncertainty

- Use ideas of uncertainty to illustrate that mathematics involves more than exactness when dealing with everyday situations
- Probability and Statistics
- Estimation

Patterns/Functions

- Recognize, describe, and generalize a wide variety of patterns and functions (number patterns, geometric patterns, and patterns that appear in graphs and tables)

ACCELERATED MATHEMATICS

A group of 8th grade students who meet certain mathematics criteria, will be chosen to start the Math I High School program.

