

Mathematics 8 Syllabus  
North St. Paul – Maplewood – Oakdale School District 622  
John Glenn Middle School

## Full Year Course

Standards met: MN Academic Standards in Mathematics – Grade 8

### Curriculum Essential Outcomes

The student will find the area and perimeter of irregular 2 dimensional shapes.

The student will construct and interpret the following: Scatter plots, Histograms, Circle graphs, Box and whisker plots, Stem and Leaf plots.

The student will compute the volume and surface area of cylinders with a given formula.

The student will compute the volume of a sphere when given the formula.

The student will create various two-dimensional diagrams of three-dimensional shapes with a given model.

The student will solve 2-step and multi-step equations with one variable.

The student will evaluate an expression containing grouping symbols and variables.

The student will combine like terms in equations.

The student will multiply and divide expressions containing like bases.

The student will solve percent problems using simple interest.

The student will solve problems that involve percent of increase or decrease.

The student will solve percent problems with affects of (0-1%) and (100+%).

The student will solve proportion problems.

The student will convert between decimal notation and scientific notation.

The student will use the Pythagorean theorem to find the third side after being given two sides of a right triangle.

The student will create a table of values and graph the line on a grid when given the equation of a line.

The student will determine the slope of a line given two points on the line.

The student will solve for a missing side of a given triangle using similar triangles.

The student will use a tree diagram to create an outcome list for a given experiment.

### Course Outline:

Students will study the topics included in Modules 1 to 7 of the Math Thematics Course 3 textbook with a few exceptions. Each module of the text is based upon a theme and includes topics from several Mathematical topics. Within the year students will include Computation with Fractions, Decimals, and Rational Numbers; Proportion and Percents; Introductory Algebra concepts; Coordinate Graphing; Area, Volume, and other Geometric topics; and Data Analysis/Probability. All topics will be taught from a Pre-Algebra perspective. Variables and methods of solving equations will be used whenever possible. Problem Solving strategies will be taught early in the year and used at various times after that.

### Course requirements:

It is a department policy that homework will be assigned most nights. Class time will focus on introduction of the topic and exploratory activities to support the student's understanding.

Students will be assigned a specific textbook and will be able to take the textbook home daily to

complete homework. Extra credit will be available in the classroom during each module. Students may raise their trimester grade one letter grade category with completed extra credit.

Corrected assessments will be returned to students and discussed in class. Students will then be allowed 24 hours to correct mistakes on most tests and quizzes in order to earn back ½ point for each point lost. After 24 hours the assessments will be collected again, corrected or not. Once that occurs corrections can only be made by appointment with the teacher.

### Grading Procedures:

Grading is determined on the basis of total points scored with tests/quizzes accounting for approximately 40% of the trimester grade. Daily assignments, notebook scores, formal homework checks, and a quarterly project will make up the remaining 60% of the trimester grade. Quizzes and tests will be announced at least one week in advance. Students will be provided with a typed assignment list for the module along with writing specific assignments into their school agenda on a weekly basis. Grade updates requiring parental signatures will be sent after each mid-module quiz and module test. More frequent work completion/grade updates may be given to students so that they can gauge their progress.

### Text and Other Resource Material:

Math Thematics Course 3 edition 1 published by McDougall Littell publishing company.

### Contact Information:

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