Sacred Heart School

Course Syllabus

Class Subject: Grade 7 Mathematics

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Course Description: Mathematics is important in school and throughout life. The ability to use math skills in the process of high-level thinking and problem solving situations is critical for students in their future. Through the study of number operations, data analysis, measurement, geometry, and algebra students will be able to apply these abilities in a way to benefit our community and the world.

General Course Objectives:

Number Operations: Students will:

- Use appropriate terms for associative, distributive, commutative properties
- Relate fractions to decimals
- Multiply and Divide decimals, fractions, and mixed numbers
- Order and compare fractions and decimals
- Determine rule and identify missing numbers in a pattern
- Determine patterns and relationships with fractions and decimals
- Investigate patterns formed by powers of ten using exponents and expanded forms
- Make reasonable answers for statement involving money
- Round fractions and estimate sums and differences
- Round and adjust answer to compute mentally

Data Analysis: Students will:

- Use more than one strategy to solve a problem
- Determine what information is needed to solve a problem
- Identify steps that will lead to a solution
- Use Guess and Check strategy to solve problems
- Work backwards to solve problems
- Read, interpret, use tables to identify patterns and draw conclusions
- Calculate and expel relationships among mean, median, mode, and range
- Construct tree diagram

- Read and construct tables, graphs, and charts

Measurement: Students will:

- Identify appropriate units/tools for measuring specific objects
- Estimate and measure in Customary and Metric units
- Measure and calculate perimeter and area of various objects

Geometry: Students will:

- Relate acute, obtuse, and right triangles
- Identify arcs, chords, sectors, radius, diameter, and circumference
- Draw circles with a given radius or diameter
- Calculate radius, diameter, circumference, and area of a circle

Algebra: Students will:

- Use less than, greater than, equal to, or not equal for comparing numbers
- Graph ordered pairs
- Use the distributive property in calculations
- Construct tables to describe a problem situation
- Use parentheses to group numbers for operations
- Apply formulas to problem solving situations

Instructional Strategies: Include but are not limited to the following. Lecture, Discussions/Questioning, Viewing/Listening/Answering, Problem Finding/Solving, Data Collection, Collaborative Learning Groups, Independent Learning, Computer Applications

Assessments: Class Discussions, Teacher Observation, Class Work, Homework, Tests/Quizzes, Projects/Oral Presentations

Materials: Mathematics Course 2. Prentice Hall, Boston, 2010. (With All-InOne Practice book) Supplemental Materials, Teacher Generated Materials, Interactive white board