



Falcon International School

Course Description First and Second Grade

Teacher: Miss Jaclyn Lyons

Duration: 2009-2010

Mathematics

The goal for this year is to give students opportunities to explore numbers, to visualize them in a variety of situations, and to relate them in ways that are not limited to traditional algorithms. This year students use a variety of strategies to solve addition, subtraction, multiplication and division facts using 2-3 digit numbers. They deepen their understanding of problem solving skills while studying plane and solid figures, measurement, fractions, money, time, graphing and place value. Students engage in hands-on activities to expand their math vocabulary, reasoning and analyzing skills and their ability to study relationships in concrete ways. They use various learning modalities via manipulatives, technology and math games.

Content

Unit 1- Numbers and Operations

Unit 2- 2-Digit Addition and Subtraction

Unit 3- Money, Time and Data

Unit 4- Geometry and Patterns

Unit 5- Measurement and Fractions

Unit 6- Exploring Greater Numbers and Operations

After successfully completing this course, the student will –

- Represent and analyze mathematical situations and structures using algebraic symbols.
- Use operations, properties and algebraic symbols to determine equivalence and solve problems.
- Understand numbers, ways of representing numbers, relationships among numbers, and number systems.
- Compute fluently and make reasonable estimates.
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- Understand meanings of operations and how they relate to one another.
- Compute fluently and make reasonable estimates.
- Collect, organize and display data using appropriate statistical and graphical methods.
- Analyze data sets to form hypotheses and make predictions.
- Develop and evaluate inferences and predictions that are based on data.
- Understand patterns, relations, and functions.
- Analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships.
- Use spatial reasoning, location and geometric relationships to solve problems.
- Apply transformations and use symmetry to analyze mathematical situations.
- Specify locations and describe spatial relationships using coordinate geometry and other representational systems.
- Understand measurable attributes of objects and the units, systems, and processes of measurement.
- Apply appropriate techniques, tools, and formulas to determine measurements.
- Understand numbers, ways of representing numbers, relationships among numbers, and number systems.

Essential questions that will guide this course include –

- How do I use numbers in my everyday life?
- Why do I use numbers in my everyday life?
- How can tables and graphs help organize information?
- Why do I need to learn to add and subtract numbers quickly and proficiently?
- How are addition and subtraction related?
- How do I count money?
- Why do I need to make change?
- Why is it important to know how to tell time?
- How can I derive information from different types of tables?
- How can I transform 2-D drawings of shapes to understand what the real 3-D shapes look like?
- Why do I use geometry everyday?
- How do patterns relate back to numbers?
- How does customary measurement and metric differ?
- How can I determine the best form of measurement?
- How are perimeter, volume and area related?
- Why can I relate what I know about smaller numbers to help me understand large numbers?
- What similar patterns do I see in numbers despite their size?
- How large is 1000?
- How is addition related to multiplication?