

MATHEMATICS SIXTH GRADE COURSE DESCRIPTION

2010 - 11 School Year

Mathematics is a language that we use to identify, describe and examine the challenges and patterns of life everyday. Through mathematics, we are able to understand the events that have already occurred and to predict/prepare for events to come. This allows us to better understand our world and to be more successful living in it.

Confronting, understanding, and solving problems are at the heart of mathematics. Mathematics is a way of approaching new challenges through investigating, reasoning, visualizing, and problem solving. The ability to connect the problem solving methods learned in mathematics with knowledge of objects and concepts from other academic disciplines is a fundamental survival skill used in every part of life.

Everyone must be able to read and write technical material in order to be competitive in the workplace. Mathematics will provide students with opportunities to grow in the ability to read, write, and talk about situations involving numbers, variables, equations, figures, and graphs.

Utilizing mathematics outside the classroom requires sharing expertise as well as applying individual knowledge and skill. Through the use of mathematics outside the classroom; students are able to share ideas, develop group approaches to problems, and share and learn from each other when they work in teams.

Mathematics provides a student the language for expressing ideas across many different disciplines. They will then see the power that mathematics brings to expressing, understanding and solving problems in diverse settings outside the classrooms.

The goals of the 6th grade mathematics program at Brooks Middle School are found below. These goals are the driving force of the 6th grade math curriculum and instructional delivery.

Our texts and materials are and will continue to be chosen to support these goals so that the 6th grade students at Brooks Middle School will be able to enhance their mathematical strengths and remediate their weaknesses. The goals of the Brooks Middle School 6th Grade Program are to speak to:

- **Number Sense** The student will be able to understand basic concepts such as factors, multiples, and prime numbers. He/she will be able to comprehend the characteristics of exponents. The representation of ratio, proportion, and percents to solve problems will be learned. Finally, the student will appreciate the ability to add, subtract, multiply, and divide with whole numbers, decimals, and fractions.
- **Measurement** The student will understand the concept of dimension. He/she will solve problems involving perimeter and area for common polygons. The student will understand the units of measure for perimeter and area.
- **Algebra** The student will be able to graph data from a table. They will be able to use multiple representations regarding tables, graphs, or rules.
- **Geometry** The student will understand the properties of lines and angles. They will define the properties of triangles. The student will understand the concept of similarity, congruency, and symmetry.
- **Data and Probability** The student will understand mean, median, and mode. He/she will be able to interpret Venn diagrams, charts, tables, and graphs. They will use data and statistics to draw conclusions and make predictions. The determination of probability will be addressed. Finally, the student will understand theoretical and experimental probabilities.

As noted, the above concepts of mathematics are the annual focus for all Brooks Middle School 6th grade math teachers. The texts, materials, and instructional delivery methods are adjusted in order to meet the needs of your child. We look forward to working with you and your student in what should be an exciting and challenging year of mathematics.