

Course Curriculum: Grade 6 Math

Our Grade 6 Mathematics course is designed to nurture young minds by instilling a strong understanding of mathematical concepts, fostering critical thinking, and stimulating intellectual curiosity. Our curriculum is aligned with state educational standards and ensures that students are adequately prepared for the mathematical challenges in the higher grades.

Key Learning Objectives:

1. **Numbers and Operations:** Students will dive deep into the world of numbers, mastering skills like fractions, decimals, and integers. They will also strengthen their ability to perform arithmetic operations.
2. **Algebra:** Students will be introduced to the basics of algebra, learning about variables, simple equations, and the distribution property.
3. **Geometry:** The course will explore the foundational concepts of geometry, including the properties of shapes, measurements, and the concept of area and volume.
4. **Data Analysis:** Students will learn to analyze and interpret data using measures of central tendency and create visual representations like bar graphs and pie charts.
5. **Ratio and Proportional Relationships:** Students will understand the concept of ratios and use them to solve real-world mathematical problems.
6. **Mathematical Reasoning:** The curriculum encourages problem-solving skills, logical reasoning, and the ability to make connections between various mathematical concepts.

Examples used in the course are relatable to the real-world scenarios, making learning engaging and practical. Regular assessments will be conducted to evaluate the students' understanding of the concepts, and tailored feedback will be provided to ensure their consistent progress.

At the end of this course, students will not just learn mathematical concepts, but they will also develop a love for mathematics, understand its application in the real world, and have the confidence to tackle more complex problems in the future grades.

In order to teach the skills in this subject, the course uses a variety of teaching strategies, and proper and varied evaluations. Likewise, there is an emphasis on the diverse application of these skills supported by feedback.

The table below clarifies the course content, the chapters and the main skills in each chapter:

#	Chapter	Skills
1	Chapter One: Integers	• Adding integers, • subtracting integers, • addition properties for integers, • multiplying & dividing integers, • breaking down numbers into prime factors and using exponents to express numbers,

		the perfect square and the square root, cubed numbers and the cubed root
2	Chapter Two: Fractions & Decimals	- Reading & writing decimals (to the thousandth place), - Comparing decimals and arranging them in increasing and decreasing orders, - Converting between decimals and fractions and percentages, - Comparing fractions, - Multiplying & dividing decimals, - Multiplying & dividing fractions, - Estimating decimal products and quotients, - Multiplying fractions and decimals, - Dividing fractions and decimals
3	Chapter Three: Algebra	- The coordinate plane-identifying a point on the coordinate plane-representing a point on the coordinate plane, - Variables and algebraic expressions - Calculating the numerical value of an algebraic expression with one variable, - Identifying the relationship between points on a graph, - Equivalent equations and their properties, - Converting written expressions into algebraic expressions - Converting algebraic expressions into written expressions
4	Chapter Four: Geometry	- Exploring the relationship between quadrilaterals, - Examining the sums of triangle angles, - Examining the sums of quadrilateral angles, - Examining the sums of angles around a point, - Drawing a triangle if the side lengths are known (two sides and the angle in between-two angles and the side connecting them), - Drawing a parallelogram with known side lengths (two sides and an angle- two sides and a diagonal), - Symmetry, - Using net diagrams to build figures
5	Chapter Five: Measurements	- Perimeter of a polygon, - Area of a parallelogram, - Area of a trapezoid, - Volume of a rectangular prism, - Area of a surface of a rectangular prism, - Estimating angles - Checking the estimation using a protractor, - Estimating the area of irregular polygons, - Units for measuring volume
6	Chapter Six: Statistics	- Data collection - Organizing and representing data in a frequency table,

	• The histogram • Representing data in a histogram • Gathering information from a histogram, • Representing data in a line graph, pie charts • Representing data in a pie chart
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