



# MATHS

Curriculum for Grade VI



## Overview

The Grade 6 Mathematics curriculum aims to develop students' logical reasoning, problem-solving, and critical thinking skills while building a strong foundation in mathematical concepts. It emphasizes the interconnectedness of mathematical ideas and their application to real-world situations.

## Goals

- Develop proficiency in basic arithmetic operations and algebraic thinking.
- Foster geometric understanding through exploration and construction.
- Enhance data handling and interpretation skills.
- Cultivate a sense of number theory and its applications.
- Promote problem-solving, reasoning, and communication through mathematical language.

## Content

### Unit 1: Patterns in Mathematics

- Introduction to patterns in numbers and shapes.
- Exploring sequences and their properties.
- Discovering relationships and generalizations.

### Unit 2: Lines and Angles

- Fundamental concepts of points, lines, line segments, rays, and angles.
- Measurement and classification of angles.
- Exploring different types of angles and their properties.

### Unit 3: Number Play

- Mathematical games, puzzles, and challenges.
- Developing problem-solving strategies and logical reasoning.
- Exploring number patterns and relationships.

### Unit 4: Data Handling

- Collecting, organizing, and representing data.
- Interpreting data through graphs and charts.
- Drawing conclusions and making predictions based on data.



### **Unit 5: Prime Time**

- Introduction to prime and composite numbers.
- Prime factorization and divisibility rules.
- Exploring number theory concepts and patterns.

### **Unit 6: Perimeter and Area**

- Calculating perimeters of various shapes.
- Finding areas of squares, rectangles, and triangles.
- Solving real-world problems involving perimeter and area.

### **Unit 7: Fractions**

- Understanding the concept of fractions as parts of a whole.
- Representing fractions on a number line.
- Comparing, adding, and subtracting fractions.

### **Unit 8: Playing with Constructions**

- Geometric constructions using a compass and ruler.
- Drawing basic shapes and patterns.
- Exploring symmetry and congruence.

### **Unit 9: Symmetry**

- Identifying lines of symmetry in shapes.
- Creating symmetrical patterns and designs.
- Understanding the concept of rotational symmetry.

### **Unit 10: The Other Side of Zero**

- Introduction to negative numbers.
- Representing negative numbers on a number line.
- Addition and subtraction of integers.



## **Pedagogical Approach**

- **Inquiry-based learning:** Encourage students to explore mathematical concepts through questioning and experimentation.
- **Real-world connections:** Relate mathematical concepts to real-life situations to enhance understanding.
- **Collaborative learning:** Foster teamwork and communication through group activities and discussions.
- **Technology integration:** Utilize technology tools to enhance learning and visualization.
- **Assessment:** Employ a variety of assessment methods to monitor student progress and understanding.

## **Assessment**

- Formative assessment through observations, questioning, and informal checks.
- Summative assessment through tests, projects, and assignments.
- Portfolio assessment to document student growth and learning.

By the end of Grade 6, students will have developed a strong foundation in mathematics, critical thinking skills, and a positive attitude towards the subject.