



**MINISTRY OF EDUCATION,
TECHNOLOGICAL & VOCATIONAL TRAINING**

**PRIMARY MATHEMATICS SYLLABUS (REVISED)
SPECIAL EDITION**

SEPTEMBER 2021

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RATIONALE

The Covid-19 pandemic has greatly affected our educational landscape over the past year. Teachers and students were thrust into a relatively new online learning environment. This paradigm shift impacted the teaching learning experiences of all our children, especially in Mathematics. Teachers and students had to learn how to navigate different learning platforms and this was particularly difficult in Mathematics instruction. As a result, the effective teaching of Mathematics has been hampered. To address this unfortunate situation, the Ministry of Education, Technological and Vocational Training has taken the policy decision to amend the content in the Mathematics syllabuses in Classes 1 through 4. Amendments to the syllabuses were made in consultation with teachers from both public and private schools.

In these amended syllabuses, some learning objectives have been deleted, while others were shifted to a different class level, and some were modified. It is expected that teachers will, wherever possible, integrate the topics being taught.

It is hoped that the teaching and learning experiences will continue to be mathematically stimulating and that students will continue to develop a solid foundation in Mathematics which will position them for further success in this important subject.

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CLASS 1

CONTENT/OBJECTIVES (Using numbers up to 999)

NUMBER CONCEPTS:

- a) Read and write numbers
- b) Write the place value and value of any digit in numbers
- c) Write numbers in expanded form
- d) Identify odd and even numbers
- e) Compare and order numbers using the signs $>$, $=$, $<$
- f) Read, write and use ordinal numbers up to the 31st
- g) Complete object patterns and number sequences
- h) Write numbers in ascending and descending order
- i) Round off whole numbers to the nearest 10

NUMBER PROPERTIES:

- a) Recognise and use the identity property of zero under addition and subtraction
- b) Demonstrate the commutative property under addition and multiplication
- c) Demonstrate the associative property under addition and multiplication
- d) Recognise and use the property of zero under multiplication
- e) Recognise and use the property of one under multiplication

CONTENT/OBJECTIVES (Using numbers up to 999)

NUMBER OPERATIONS:

- a) Add numbers with and without regrouping
- b) Subtract numbers with and without regrouping
- c) Find missing addends
- d) Build and use the multiplication tables 2, 3, 4, 5 and 10
- e) Multiply 2-digit numbers by a 1-digit number (2, 3, 4 and 5) with and without regrouping
- f) Divide numbers up to 99 by 2, 3, 4, and 5 with and without remainders
- g) Solve worded problems involving all operations
- h) Use vocabulary associated with four operations

FRACTIONS:

- a) Define a fraction
- b) Identify numerator and denominator
- c) Read and write fractions
- d) Illustrate given fractions of a whole
- e) Identify and compare fractional parts (halves, thirds, fourths, fifths etc.)
- f) Combine and match fractional parts to make a whole
- g) Order unit fractions
- h) Add fractions with the same denominator
- i) Subtract fractions with the same denominator

CONTENT/ OBJECTIVES

MEASUREMENT:

Linear

- a) Define length
- b) Estimate, measure and compare lengths of different objects using non - standard units
- c) Identify standard units for measuring length (mm, cm)
- d) Choose the appropriate unit to measure length
- e) Estimate, measure and compare lengths of different objects using standard units
- f) Determine the perimeter of a given shape using standard units

Time

- a) Name the days of the week and the months of the year
- b) Read the date from a calendar (day, month & year)
- c) Solve problems using the calendar
- d) Use a.m. and p.m. to distinguish between time in the morning and afternoon
- e) Identify the units of time (minutes and hours)
- f) Tell time by the hour, half hour, quarter past and quarter to the hour

Money

- a) Identify all local coins and bills
- b) Represent amounts up to \$10 using coins and bills
- c) Calculate the amount of money spent when purchasing two items.
- d) Determine the change to be received for amounts up to \$10.

CONTENT/ OBJECTIVES

GEOMETRY:

- a) Identify a line, line segment, point and ray
- b) Identify and distinguish between horizontal and vertical lines
- c) Identify two - dimensional shapes (circle, rectangle, square, triangle)
- d) Classify two - dimensional shapes according to attributes
- e) Identify three - dimensional shapes (cube, cuboid, sphere, cylinder, cone)
- f) Classify three - dimensional shapes according to attributes

DATA HANDLING:

- a) Collect data on areas of interest
- b) Represent data collected using a pictograph
- c) Read and interpret information on a pictograph

CLASS 2

CONTENT/OBJECTIVES (Using numbers up to 9 999)

NUMBER CONCEPTS:

- a) Read and write numbers
- b) Write the place value and value of any digit in numbers
- c) Write numbers in expanded form
- d) Identify odd and even numbers
- e) Compare and order numbers using the signs $>$, $=$, $<$
- f) Read, write and use ordinal numbers beyond the 31st
- g) Complete object patterns and number sequences
- h) Write numbers in ascending and descending order
- i) Round off whole numbers to the nearest 10 and 100
- j) Distinguish between factors and multiples.
- k) Identify factors and multiples of whole numbers

NUMBER PROPERTIES:

- a) Recognise and use the identity property of zero under addition and subtraction
- b) Demonstrate the commutative property under addition and multiplication
- c) Demonstrate the associative property under addition and multiplication
- d) Recognise and use the property of zero under multiplication
- e) Recognise and use the property of one under multiplication

CONTENT/OBJECTIVES (Using numbers up to 9 999)

NUMBER OPERATIONS:

- a) Add numbers with and without regrouping
- b) Subtract numbers with and without regrouping
- c) Find missing addends
- d) Build and use the multiplication tables up to 10
- e) Multiply 3-digit numbers by numbers up to 10 with and without regrouping
- f) Divide numbers up to 999 by one- digit numbers with and without remainders
- g) Solve worded problems involving all operations
- h) Use vocabulary associated with four operations

FRACTIONS:

- a) Find a fraction of a set of objects
- b) Identify and compare fractions with the same and different denominators
- c) Order fractions with the same and different denominators
- d) Find equivalent fractions using fraction families
- e) Express fractions in their lowest terms
- f) Add fractions with the same and different denominators (fraction families)
- g) Subtract fractions with the same and different denominators (fraction families)

CONTENT/OBJECTIVES

MEASUREMENT:

Linear

- a) Estimate, measure and compare lengths of different objects using non - standard units
- b) Identify standard units for measuring length (mm, cm, m)
- c) Choose the appropriate unit to measure length
- d) Convert between units (mm and cm; cm and m)
- e) Estimate, measure and compare lengths of different objects using standard units
- f) Determine the perimeter of regular shapes using standard units
- g) Determine the area of regular shapes by counting squares

Mass

- a) Define mass
- b) Estimate, determine and compare the mass of different objects using non - standard units
- c) Identify standard units for measuring mass (g, kg)
- d) Choose the appropriate unit to measure mass of different objects
- e) Estimate, measure and compare mass of different objects using standard units
- f) Solve problems involving mass

Capacity

- a) Define capacity
- b) Estimate, measure and compare the capacity of different containers using non - standard units
- c) Identify standard units for measuring capacity (ml, l)
- d) Choose the appropriate unit to measure capacity of different containers
- e) Estimate, measure and compare the capacity of different containers using standard units
- f) Solve problems involving capacity

CONTENT/ OBJECTIVES

MEASUREMENT:

Time

- a) Interpret information given in a calendar
- b) Tell time by the hour, half hour and quarter past and quarter to the hour
- c) Tell time in minutes past and minutes to the hour using five-minute intervals
- d) State the relationship between sub-units of time (seconds, minutes, hours)
- e) Solve problems involving time (elapsed time)

Money

- a) Identify all local coins and bills
- b) Represent amounts up to \$20 using coins and bills
- c) Calculate the amount of money spent when purchasing three items
- d) Determine the change to be received from a given sum of money used to purchase items

CONTENT/ OBJECTIVES

GEOMETRY:

- a) Identify a line, line segment, point and ray
- b) Identify and draw lines (horizontal, vertical, parallel and intersecting)
- c) Identify lines of symmetry of given shapes
- d) Identify and list the properties of two dimensional shapes
- e) Identify and list the properties of three dimensional shapes

DATA HANDLING:

- a) Collect data on areas of interest
- b) Construct tally charts for given data
- c) Construct pictographs for given data
- d) Read and interpret information on a pictograph

CLASS 3

CONTENT/OBJECTIVES (Using numbers up to 99 999)

NUMBER CONCEPTS:

- a) Read and write numbers
- b) Write the place value and value of any digit in numbers
- c) Write numbers in expanded form
- d) Compare and order numbers
- e) Complete patterns and number sequences
- f) Round off whole numbers to the nearest 10, 100 and 1000
- g) Identify prime and composite numbers up to 100
- h) Identify factors and multiples of whole number
- i) Determine prime factors of given numbers
- j) Find the Lowest Common Multiple (LCM) and Highest Common Factor (HCF)

NUMBER PROPERTIES:

- a) Recognise and use the identity property of zero under addition and subtraction
- b) Demonstrate the commutative property under addition and multiplication
- c) Demonstrate the associative property under addition and multiplication
- d) Recognise and use the property of zero under multiplication
- e) Recognise and use the property of one under multiplication
- f) Demonstrate the distributive property of multiplication

CONTENT/OBJECTIVES (Using numbers up to 99 999)

NUMBER OPERATIONS:

- a) Add numbers with and without regrouping
- b) Subtract numbers with and without regrouping
- c) Multiply 3-digit numbers by a 1-digit and 2-digit number with and without regrouping
- d) Divide 3 and 4-digit numbers by divisors up to 12 with and without remainders
- e) Solve worded problems involving all operations using problem solving strategies
- f) Solve worded problems involving unitary method and unequal sharing

FRACTIONS:

- a) Identify types of fractions (proper, improper and mixed numbers)
- b) Change mixed numbers to improper fractions and vice versa
- c) Find a fraction of a set of objects and numbers
- d) Identify and compare fractions with the same and different denominators
- e) Order fractions with the same and different denominators
- f) Find equivalent fractions
- g) Express fractions in their lowest terms
- h) Add and subtract fractions with the same and different denominators
- i) Add and subtract fractions to and from whole numbers
- j) Add and subtract mixed numbers
- k) Multiply a fraction by a whole number and a proper fraction
- l) Divide a fraction by a whole number and a proper fraction
- m) Solve worded problems involving fractions

CONTENT/OBJECTIVES

DECIMALS:

- a) Define a decimal
- b) Identify decimal fractions up to thousandths
- c) Read and write decimal fractions up to thousandths
- d) Write the place value and value of digits in decimals up to thousandths
- e) Compare and order decimal fractions up to thousandths
- f) Express a fraction as a decimal and vice versa
- g) Add and subtract decimals up to thousandths
- h) Multiply a decimal by a whole number
- i) Multiply a decimal by a decimal up to 2 decimal places

RATIO AND PROPORTION:

- a) Define a ratio
- b) Read and write ratios
- c) Express ratios as fractions
- d) Express ratios in their lowest forms
- e) Use ratio to solve problems

CONTENT/ OBJECTIVES

MEASUREMENT:

Linear

- a) Identify standard units for measuring length (mm, cm, m, km)
- b) Choose the appropriate unit to measure length
- c) Convert between units (mm and cm; cm and m; m and km)
- d) Estimate, measure and compare lengths of different objects using standard units
- e) Determine the perimeter of regular shapes
- f) Determine the area of the squares, rectangles and triangles by formula
- g) Solve problems involving perimeter and area

Mass

- g) Identify standard units for measuring mass (g, kg)
- h) Choose the appropriate unit to measure mass of different objects
- i) Convert between g and kg
- j) Estimate, measure and compare mass of different objects using standard units
- k) Solve problems involving mass

Capacity

- a) Identify standard units for measuring capacity (ml, l)
- b) Choose the appropriate unit to measure capacity of different containers
- c) Convert between ml and l
- d) Estimate, measure and compare the capacity of different containers using standard units
- e) Solve problems involving capacity

CONTENT/ OBJECTIVES

MEASUREMENT:

Time

- a) Solve problems involving the calendar
- b) Read and record time in hours and minutes
- c) State the relationship between sub-units of time (seconds, minute, hour)
- d) Convert one unit of time to another
- e) Add and subtract units of time
- f) Determine the time between events
- g) Solve problems involving time

Money

- a) Combine coins and bills to make up a given sum of money.
- b) Calculate the amount of money spent when purchasing a number of items
- c) Determine the change to be received from a given sum of money used to purchase items
- a) Solve problems involving profit and loss.

CONTENT/ OBJECTIVES

GEOMETRY:

- a) Identify and draw lines (horizontal, vertical, parallel, intersecting and perpendicular)
- b) Identify lines of symmetry of given shapes
- c) Classify two dimensional shapes according to their attributes
- d) Identify triangles (equilateral, isosceles, scalene, right-angled)
- e) Classify three dimensional shapes according to their attributes
- f) Classify angles as acute, obtuse, right, straight or reflex.
- g) Calculate missing angles

DATA HANDLING:

- a) Construct tally charts for given data
- b) Construct pictographs and bar graphs
- c) Read and interpret information on a pictograph and a bar graph
- d) Find the mean, median and mode of a given set of data

CLASS 4

CONTENT/OBJECTIVES (Using numbers up to 999 999)

NUMBER CONCEPTS:

- a) Read and write numbers
- b) Write the place value and value of any digit in numbers
- c) Write numbers in expanded form
- d) Compare and order numbers
- e) Complete patterns and number sequences
- f) Round off whole numbers to the nearest 10, 100 and 1000
- g) Identify prime and composite numbers up to 100
- h) Identify factors and multiples of whole number
- i) Determine prime factors of given numbers
- j) Find the Lowest Common Multiple (LCM) and Highest Common Factor (HCF)
- k) Identify squares and square roots of numbers up to the number 15

NUMBER OPERATIONS:

- a) Add numbers with and without regrouping
- b) Subtract numbers with and without regrouping
- c) Multiply numbers by one and two digit numbers with and without regrouping
- d) Divide numbers by divisors up to 12 with and without remainders
- e) Solve worded problems involving all operations using problem solving strategies
- f) Solve worded problems involving unitary method and unequal sharing

CONTENT/OBJECTIVES

FRACTIONS:

- a) Identify types of fractions (proper, improper and mixed numbers)
- b) Change mixed numbers to improper fractions and vice versa
- c) Find a fraction of a set of objects and numbers
- d) Identify and compare fractions with the same and different denominators
- e) Order fractions with the same and different denominators
- f) Find equivalent fractions
- g) Express fractions in their lowest terms
- h) Add and subtract fractions with the same and different denominators
- i) Add and subtract fractions to and from whole numbers
- j) Add and subtract mixed numbers
- k) Multiply a fraction by a whole number and a proper fraction
- l) Divide a fraction by a whole number and a proper fraction
- m) Divide a mixed numbers by mixed numbers
- n) Find the whole when given a fraction
- o) Solve worded problems involving fractions

CONTENT/OBJECTIVES

DECIMALS:

- a) Identify decimal fractions up to thousandths
- b) Read and write decimals up to thousandths
- c) Write the place value and value of digits in decimals up to thousandths
- d) Compare and order decimal fractions up to thousandths
- e) Express a fraction as a decimal and vice versa
- f) Add and subtract decimals up to thousandths
- g) Multiply a decimal by a whole number
- h) Multiply a decimal by a decimal up to 2 decimal places
- i) Divide a decimal by a whole number

PERCENTAGES:

- a) Define a percentage
- b) Express percentages as fractions and vice versa
- c) Express percentages as decimals and vice versa
- d) Determine percentages of a given quantity
- e) Solve problems with percentages excluding VAT, Simple Interest and Hire Purchase

RATIO:

- a) Read and write ratios
- b) Express ratios as fractions
- c) Express ratios in their lowest forms
- d) Use ratio to solve problems
- e) Solve problems involving ratios

CONTENT/OBJECTIVES

MEASUREMENT:

Linear

- a) Determine the lengths of different objects using standard units
- b) Convert between standard units of length
- c) Determine the perimeter of regular shapes
- d) Determine the area of the squares, rectangles and triangles by formulae
- e) Solve problems involving perimeter and area

Mass

- a) Determine mass of a given object using standard units
- b) Convert between standard units of mass
- c) Solve problems involving mass

Capacity

- a) Determine capacity of different containers using standard units
- b) Convert between standard units of capacity
- c) Solve problems involving capacity

CONTENT/ OBJECTIVES

MEASUREMENT:

Time

- a) Solve problems involving the calendar
- b) Read and record time in hours and minutes
- c) State the relationship between sub-units of time (seconds, minute, hour)
- d) Convert between standard units of time
- e) Add and subtract units of time
- f) Determine the time between events
- g) Solve problems involving time

Money

- a) Combine coins and bills to make up a given sum of money.
- b) Calculate the amount of money spent when purchasing a number of items
- c) Determine the change to be received from a given sum of money used to purchase items
- b) Solve problems involving profit and loss and discounts

CONTENT/ OBJECTIVES

GEOMETRY:

- a) Identify and draw lines (horizontal, vertical, parallel, intersecting and perpendicular)
- b) Identify lines of symmetry of given shapes
- c) Classify two dimensional shapes according to their attributes
- d) Identify triangles (equilateral, isosceles, scalene, right-angled)
- e) Classify quadrilaterals- square rectangle, parallelogram
- f) Identify the parts of a circle (circumference, chord, diameter, radius, center)
- g) Calculate the radius of a circle given the diameter and vice versa
- h) Classify three dimensional shapes according to their attributes
- i) Classify angles as acute, obtuse, right, straight or reflex
- j) Calculate missing angles

DATA HANDLING:

- a) Construct tally charts for given data
- b) Construct pictographs and bar graphs
- c) Read and interpret information on a pictograph and a bar graph
- d) Find the mean, median and mode of a given set of data
- e) Solve worded problems related to averages

LINKS TO ONLINE MANIPULATIVES

1. <https://www.didax.com/>
2. <https://www.coolmath4kids.com/manipulatives/pattern-blocks>
3. <http://nlvm.usu.edu/en/nav/vlibrary.html>
4. <https://www.mathplayground.com/>
5. <https://www.mathlearningcenter.org/apps>