

Mathematics Syllabus

Grades 1 - 4

Table of Contents

Introduction	
Grade 1	
Learning and Teaching Mathematics in Grade 1	
Learning Objectives for Grade 1	
Unit 1: The natural numbers up to 9	
Unit 2: Addition and subtraction up to 9	
Unit 3: The whole numbers from 0 to 20.....	
Unit 4: Addition and subtraction up to 20	
Unit 5: Measurement using non-formal units	
Unit 6: Fractions	
Unit 7: Multiplication and division up to 20.....	
Unit 8: Lines and simple shapes	
Unit 9: The whole numbers up to 100	
Unit 10: Ethiopian currency	
Unit 11: Time	
Unit 12: Handling and pattern	
Grade 2	
Learning and Teaching Mathematics in Grade 2	
Learning Objectives for Grade 2	
Unit 1: Addition and subtraction up to 100	
Unit 2: Multiplication and division up to 100.	
Unit 3: Measurement - length, capacity, weight, time	
Unit 4: Fractions	
Unit 5: Whole numbers up to 1000.	
Unit 6: Points, lines and shapes	
Unit 7: Money	
Unit 8: Time	
Unit 9: Data handling and pattern	

Grade 3

Learning and Teaching Mathematics in Grade 3
Learning Objectives for Grade 3
Unit 1: The whole numbers up to 10,000 and their order
Unit 2: Measurement
Unit 3: Fractions
Unit 4: Addition and subtraction of whole numbers up to 10,000.....
Unit 5: Multiplication and division up to 10,000.....
Unit 6: Lines and shapes.....
Unit 7: Money
Unit 8: Time.....
Unit 9: Data handling.....

Grade 4

Learning and Teaching Mathematics in Grade 4
Learning Objectives for Grade 4
Unit 1: The whole numbers up to 1,000,000
Unit 2: The four operations on whole numbers up to 1,00,000
Unit 3: Fractions and decimals
Unit 4: Measurement
Unit 5: Shapes and solids
Unit 6: Time
Unit 7: Data handling

Introduction

Mathematics is a crucial part of our everyday life. We use it in everyday activities like buying food and clothes, keeping time, measuring and playing games. Children come to school having already experienced mathematics informally by doing everyday tasks in order, handing different objects, enjoying pattern. They may already have some idea of number and shape, sorting and sharing but they do not realize they are doing mathematics as it is merely part of their everyday lives when they dress, eat, travel or shop with their parents. It is a reasoning and creative activity which provides a method of solving problems in everyday life situations and it is taught from a base of concrete experiences so that students learn to solve problems themselves.

The Curriculum Guide for Grade One and Two Mathematics includes the main aims of teaching and learning mathematics, the Learning Objectives and Syllabus Content for Grade One and Grade Two, the period distribution for mathematics and some teaching and learning activities and resources suggestions.

It is organized in four strands which follow through from Grade 1 – Grade 4.

- Number
- Measurement including money and time
- Geometry – lines, shapes and solids
- Data handling and pattern

In Number, students develop their understanding of the concept of number and competence in using mental and written strategies for solving problems
In Measurement, students learn to identify and quantify different attributes of objects so they can be compared. They learn to use both on-standard and standard units of measure. Experience in using Ethiopian currency is included and the measure and reading of time.

In Geometry, students learn about the properties and representation of 2-dimensional shapes and 3-dimensional objects and the part they play in their everyday lives.

In Data Handling and Pattern, students develop their understanding of the use of pictures and graphs to communicate information.

The purpose of this curriculum is to ensure that students develop an appreciation of how mathematics is used, an enjoyment of the reasoning and problem solving ability that its study develops and competence in its fundamental tools. We hope that students and teachers will also enjoy their mathematics lessons

Grade 1-4: Mathematics

Curriculum guide revision team

Ato Tesfaye Ayele MoE

Ato Fikremariam Regassa..... MoE

Ato Mesfin Tefera MoE

Ato Abebe Basainew MoE

Participants from the region

Ato Bayisa Abdeta Oromia Education Bureau

Ato Gizachew Asrat Amhara Education Bureau

Ato Amsalu Abdisa B/Gumuze Education Bureau

Ato Girmay Negash Tigray Education Bureau

Ato Abdulahi Sayid Somali Education Bureau

W/o Berinesh Genet Addis Ababa Education Bureau

International Consultant

Dr. Patricia Hiddleston..... UK

**Allotment of Periods
for Units and Sub-units of Mathematics Grade 1 - 4**

Grade	Unit	Sub-unit	Number of Periods	
			Sub-unit	Total
1	Unit 1: The natural numbers up to 9	1.1. The natural numbers from 1 to 5 and their order	10	20
		1.2. The natural numbers from 6 to 9 and the order of the natural numbers up to 9	10	
	Unit 2: Addition and subtraction up to 9	2.1. Addition up to 9	9	22
		2.2. Subtraction up to 9	9	
		2.3. Addition of three add	4	
	Unit 3: The whole numbers from 0 to 20	3.1. The number 0	3	12
		3.2. The whole numbers from 0 to 20 sum not exceeding 20	6	
		3.3. Place value of units and tens	3	
	Unit 4: Addition and subtraction up to 20	4.1. Addition of whole numbers from 0 to 20 sum not exceeding 20	7	17
4.2. Subtraction of whole numbers from 0 to 20		7		
4.3. Problems using addition and subtraction		3		
Unit 5: Measurement using non-formal units	5.1. Length	3	9	
	5.2. Capacity	3		
	5.3. Weight	3		
Unit 6: Fractions	6.1. Halves	3	6	
	6.2. Quarters	3		
Unit 7: Multiplication and division up to 20	7.1. Multiplication by 2 up to 20	10	22	
	7.2. Division by 2 up to 20 (no remainder)	12		
Unit 8: Lines and simple shapes	8.1. Straight and curved lines	4	10	
	8.2. Rectangle, triangle and circles	6		
Unit 9: The whole numbers up to 100	9.1. The multiples of 10	6	18	
	9.2. The whole numbers from 21 up to 100	6		
	9.3. The elder of the whole number up to 100	3		
	9.4. Place value in units and tens	3		

Mathematics syllabus: Grade 1 - 4

Grade	Unit	Sub-unit	Number of Periods	
			Sub-unit	Total
	Unit 10: Ethiopian currency	10.1. Ethiopian coins and notes 10.2: Relationship between coins and note	2 2	4
	Unit 11: Time	11.1. Time of the day 11.2. Days of the week	3 2	5
	Unit 12: Data handling and pattern	12.1. Simple picture graphs 12.2. Simple patterns	3 2	5
2	Unit 1: Addition and Subtraction up to 100	1.1. Revision of whole numbers up to 100	4	54
		1.2. Addition and subtraction up to 20 and whole numbers up to 100	4	
		1.3. Addition and subtraction of a one digit number to (from a two-digit number with no carrying) barrowing	7	
		1.4. Addition and subtraction of one-digit number to from a two-digit number with carrying borrowing	10	
		1.5. Addition and subtraction of two-digit whole numbers with out carrying and borrowing	10	
		1.6. Addition and subtraction of two digit numbers with carrying and borrowing	15	
		1.7. Word problem involving addition and subtraction up to 100	4	
	Unit 2: Multiplication and division up to 100	2.1. Multiplication and division of whole numbers up to 100 by 2 and 10	10	40
		2.2. Multiplication of whole numbers up to 100 by 0 and 1 and division by 1	22	
		2.3. Multiplication and division of whole numbers up to 100 by 3,4,5,6,7,8 and 9 with out remainder	8	
	Unit3: Measurement-length, capacity, weight, time	3.1. Length in cm and m	2	10
		3.2. Addition and subtraction of the same unit of length	2	
		3.3. Capacity in litres	1	
		3.4. Addition and subtraction of litres	2	
		3.5. Weight in kg	1	
		3.6. Addition and subtraction of kg	2	
	Unit 4: Fractions	4.1. Revision of halves and quarters	2	6
		4.2. Thirds	2	

Mathematics syllabus: Grade 1 - 4

Grade	Unit	Sub-unit	Number of Periods	
			Sub-unit	Total
		4.3. Wholes and fractions	2	
	Unit 5: Whole numbers up to 1000	5.1. The multiples of 100	4	12
		5.2. The whole numbers 101-1000	4	
		5.3. Place value of whole numbers up to 1000	2	
		5.4. The order of whole numbers up to 1000	2	
	Unit 6: Points, lines and shapes	6.1. Points and lined	5	14
		6.2. Squares, rectangles, triangles, circles	7	
6.3. Shapes in the environment		2		
Unit 7: Money	7.1. Addition and subtraction money using Ethiopian currency	2	4	
	7.2. Role play of shopping	2		
Unit 8: Time	8.1. Time in hours-half hours and quarter hours on an analogue and a digital clock	2	4	
	8.2. Hours and minutes	2		
Unit 9: Data handling and pattern	9.1. Collecting of simple data	2	6	
	9.2. A table of simple data	2		
	9.3. Simple patterns of numbers and shapes	2		
3	Unit 1: The whole numbers up to 10,000 and their order	1.1. Revision of whole numbers up to 1000	4	27
		1.2. Calculation using whole numbers up to 100	5	
		1.3. The multiples of 100 and of 1000 up to 10,000	4	
1.4. The whole numbers up to 10,000		8		
1.5. Comparing and ordering whole numbers up to 10,000		6		
Unit 2: Measurement	2.1. Length in millimetre, centimetre, metre and kilometre	6	14	
	2.2. Weight in gram, kilogram and quintal	4		
	2.3. Capacity in ml and l	4		
Unit 3: Fraction	3.1. Revision of thirds	2	12	
	3.2. Unit fraction from $\frac{1}{2}$ to $\frac{1}{10}$	4		
	3.3. Half and quarter of whole numbers	2		
	3.4. Comparison of simple fraction	4		

Mathematics syllabus: Grade 1 - 4

Grade	Unit	Sub-unit	Number of Periods	
			Sub-unit	Total
4	Unit 4: Addition and subtraction of whole numbers up to 10,000	4.1. Addition of whole number up to 10,000 4.2. Subtraction of whole numbers up to 10,000 4.3. Word problems on addition and subtraction	12 12 4	28
	Unit 5: Multiplication and division up to 10,000	5.1. Multiplication of multiples of 100 by 1-digit number 5.2. Multiplication of multiples of 1000 by 1-digit numbers 5.3. Multiplication of whole numbers by 1-digit number (products less than 10,000) 5.4. Division of multiples of 10 and 100 up to 10,000 by 1-digit number and 10 5.5. Division of whole numbers up to 10,000 by 1-digit numbers with and without remainder	5 6 8 7 11	37
	Unit 6: Lines and shapes	6.1. Intersecting, parallel and perpendicular lines 6.2. Construction of intersecting parallel and perpendicular lines 6.3. Rectangles, squares, parallelograms and trapeziums 6.4. The circles	3 4 6 3	16
	Unit 7: Money	7.1. Conversion of units of money 7.2. Word problems using Ethiopian currency	3 2	5
	Unit 8: Time	8.1. Reading clocks 8.2. Hours and minutes 8.3. Day, weeks, months and years 8.4. Simple calendar	1 2 2 1	6
	Unit 9: Data handling	9.1. Simple picture graphs 9.2. Interpretation of simple picture graphs.	3 2	5
	Unit 1: The whole numbers up to 1,000,000	1.1. Revision of whole numbers up to 10,000 1.2. Multiples of 1000, 10,000 and 100,000 1.3. Whole numbers up to 1,000,000 1.4. Place value of 6-digit numbers 1.5. Comparing and ordering whole numbers up to 1,000,000 1.6. Approximation of numbers by rounding	3 3 4 5 5 5	25

Mathematics syllabus: Grade 1 - 4

Grade	Unit	Sub-unit	Number of Periods	
			Sub-unit	Total
	Unit 2: The four operations on whole numbers up to 1,000,000	2.1. Addition and subtraction of whole numbers up to 1,000,000	11	41
		2.2. Multiplication of whole numbers with product less than 1,000,000	15	
		2.3. Division of whole numbers up to 1,000,000 by 1-digit numbers and 10	15	
	Unit 3: Fractions and decimals	3.1. Fractions as parts of a whole	4	27
		3.2. Comparison and ordering of fractions with the same denominators	2	
		3.3. Addition and subtraction of fractions with the same denominator	3	
		3.4. Equivalent fractions	5	
3.5. Tenths, hundredths and decimals		4		
3.6. Comparison and ordering of decimals to 2 decimal places		5		
3.7. Addition and subtraction of decimals to 2 decimal places		4		
Unit 4: Measurement	4.1. Measurement of length	6	18	
	4.2. Measurement of weight	6		
	4.3. Measurement of capacity	6		
Unit 5: Shapes and solids	5.1. The right angle	3	20	
	5.2. Points, straight lines and planes	5		
	5.3. Perimeter and area of rectangle and squares	7		
	5.4. Simple solids	5		
Unit 6: Time	6.1. Hours, minutes and seconds	3	9	
	6.2. Calculations with units of time	3		
	6.3. Comparison of time measurement	3		
Unit 7: Data handling	7.1. Construction of simple bar graphs from collected data	3	10	
	7.2. Interpretation of bar graphs	3		
	7.3. Average of up to 4 numbers	4		