

## General objectives of teaching and learning mathematics at primary Level, Myanmar

- 1) To enable to learn fundamental knowledge concerning numbers system, measurements, geometric figures and the meanings represented in the figures.
- 2) To enable to suit with fundamental skills concerning solving the simple problems, four math operation and measurements.
- 3) To relate the fundamental mathematics knowledge and skills to daily life phenomenon and to utilize in necessary.
- 4) To enable to educate for thinking prospectively on the phenomena of happenings, solving problems in concentration with mathematicized justice spirit, and to become interested in mathematics.

In order to get to the goals, **primary school mathematics contents** below are given.

- 1) number concepts
- 2) various units in measurement
- 3) basic concepts of geometric figures
- 4) basic for reading pictographs and tables

### Guidance and contents in each grade

#### Grade 1

##### 1. Guidance

To take aware in teaching followings:

- (1) When teaching numbers from 0 to 20, use hands-out materials in counting, reading and writing.
- (2) Numbers should be taught just read and write, not spelling.
- (3) Paying attention especially the existence of ' 0 '.

##### 2. Contents

###### a Pre-knowledge of numbers

- setting, grouping, quantity, equality, bigger & smaller, aptitude of measurement, placement

###### b numbers and calculation

- numbers up to 10, Addition and subtraction up to 10, meaning of 0
- equations, word problems
- basic concepts before numbers
- Counting, reading, writing up to 5, Addition and subtraction
  - meaning of 0
- Counting, reading, writing from 6 to 10, Addition and subtraction

- Counting, reading, writing from 10 to 20, Addition and subtraction
- subtraction without regrouping
- Addition and subtraction in horizontally & vertically

c Myanmar Currency

- Myanmar Currency

d Quantity, measurement, figures

- length, weight, bigger & smaller, order

e Geometry, figures

- circles, triangles

f Applied symbols

- 0, numbers from 1 to 10, +, -, =

**3. Tables for time providing**

	Time taken	No of periods per week	No of hours per year
Primary maths	30 min	7	126 hours

**Table 1. Time dividing in grade 1**

chapter	content	No of periods
1	Pre-knowledge of numbers	10
2	Counting, reading, writing up to 5	8
3	Addition and subtraction up to 5	28
4	Counting, reading, writing up to 10	23
5	Addition and subtraction up to 5	28
6	Counting, reading, writing up to 20	23
7	Addition and subtraction up to 20	48
8	Addition and subtraction without carrying & regrouping	28
9	Myanmar Currency	8
10	Total practice	18
	Study Hours per year	222
	Practice & spare	30
	Total	252

**Grade 2**

**1. Guidance**

- (1) To stress to use hands-on materials in teaching carrying & regrouping in the lessons with addition and subtraction
- (2) To be careful to understand the meaning of Division and multiplication.
- (3) Because of beginning stage with measurement, need to guide carefully to be suited with basic concepts.
- (4) Because this is also first stage study with geometry, teacher has to guide very well to build habits and skills using hands in drawing.

## 2. Contents

a numbers and calculation up to 100, Addition & subtraction up to 100, Multiplication & Division, equations, word problems, multiplication table, times

- Addition & subtraction and their combination
- Counting as 2 and its times, and also 5, 10, 12
- Calculation with carrying and regrouping in Addition & subtraction
  - Taking place
  - Replacing according to orders
  - The meaning of times of a number, multiplication tables up to  $10 \times 10$
  - Finding days and dates on calendar
  - Table of 100
  - Odd, even numbers, basic of multiplication and division

b Myanmar Currency, units of Myanmar Currency, relation, shopping

- How much for this?
- How much do you have money?

d Quantity, measurement, figures

- units of length, weight, mass (Myanmar & British systems)
- time taken (minute, second, hours), days, weeks, months

e Geometry, figures

- basic geometric figures in plane
- figures, surface, straight lines, curves
- select same figures, similarity

f Applied symbols

- numbers up to 100,  $\dot{a}$  ,  $\dot{n}$  ,  $\times$  , multiplication tables

## 3. Table for time providing

	Time taken	No of periods per week	No of hours per year
--	------------	------------------------	----------------------

Primary maths	30 min	7	126 hours
---------------	--------	---	-----------

**Table 2. Time dividing in grade 2**

chapter	content	No of periods
1	Number up to 20	10
2	Counting, reading, writing up to 100	30
3	Addition up to 100	20
4	subtraction up to 100	20
5	Myanmar Currency	10
6	Multiplication	45
7	Division	40
8	Various measurement units	22
9	Geometry figures	15
10	Total practice	10
	Study Hours per year	222
	Practice & spare	30
	Total	252

### Grade 3

#### 1. Guidance

Teachers should guide the students carefully:

- (1) To enable to understand multiplication table, furthermore it has to be memorized, guide especially combination method.
- (2) Concerning measurement, to make relation to daily life introducing according to needs.
- (3) To enable to understand the fundamental concepts of geometry well and in the case of drawing figures, activity with well planned should be recommended.
- (4) To enable to understand semantic concepts of statistic figures, in order to be able to understand the meaning of bar graphs also.

#### 2. Contents

a numbers and calculation

- numbers up to 1000 and its calculation
- fraction and its addition & subtraction
- 4 operations within 1000
- addition & subtraction with carrying and regrouping, word problems
- multiplication, times with 10, 100, multiplication tables, factors, word problems

- division, divided by ones and tens, relation with multiplication
  - fraction, addition & subtraction of fraction
  - combination of 36 subtraction table
- b Myanmar currency
- units of currency
  - relation between units
  - shopping
- c Quantity, measurement, statistics figures
- lengths, weight, mass, bar graphs
  - Myanmar units with volume, capacity
  - Time , duration, relation between dates, days, years
- d Geometry, figures
- Sides, angles, right angles, drawing figures, symmetric figures, congruence
- e Used symbols
- Numbers to 1000, fraction, denominator, numerator, second, right angle, , , tables of multiplication and subtraction

**3. Table for time providing**

	Time taken	No of periods per week	No of hours per year
Primary maths	30 min	7	126 hours

**Table 3. Time dividing in grade 3**

chapter	content	No of periods
1	Number concept	7
2	Counting, reading, writing up to 10000	8
3	Addition	8
4	subtraction	18
5	basic of Geometry figures	17
6	Multiplication	23
7	Division	23
8	Fraction	17
9	Myanmar Currency	28

1 0	Weight and capacity	20
1 1	Time and duration	17
1 2	measurement in length	21
1 3	length of sides and area	10
1 4	Basic concepts of Statistics figures	5
	Study Hours per year	2 2 2
	Practice & spare	3 0
	Total	2 5 2

## Grade 4

### 1. Guidance

Teachers should guide the students carefully:

- (1) to understand distributive law and commutative law
- (2) to make introduce British system in measurement method preferentially.
- (3) To make the study practice regarding drawing inevitably.
- (4) To be able to draw the chart and the statistic figure systematically, to get knowing semantic concepts of the diagrams which is given.

### 2. Contents

#### a numbers and calculation

- numbers up to 10000 and its calculation
- fraction and its addition & subtraction
- reading and writing of numbers
- estimation
- number lines
- addition & subtraction with carrying and regrouping, word problems
- solving by deciding to add or subtract with addition & subtraction problems
- multiplication and division
- division with remainder
- common factors
- fraction, choosing bigger or smaller, addition & subtraction of fraction

#### b Myanmar currency

- making shopping list

c Quantity, measurement, statistics figures

- mass of liquid and solid
- British measurement units(length, weight, mass)
- Graph, and position
- Time and duration, word problems
- Metric system (length, weight)
- Time , duration, distance in travel
- Tally, Graphs, bar graphs

d Geometry, figures

- Areas, lengths
- Parallelogram, square, pentagon
- Equilateral triangle, isosceles triangle, special angles, sides, vertices
- Circle, radius, diameter, centre
- Length of the figures, areas

e Used symbols

- Square units, m, km, g, kg, yd, ft, in, tally, Twar, Taung, Vass, Can, Tinn, Taungg, fraction

**3. Table for time providing**

	Time taken	No of periods per week	No of hours per year
Primary maths	30 min	7	126 hours

**Table 4. Time dividing in grade 4**

chapter	content	No of periods
1	Number up to 20	10
2	Counting, reading, writing up to 100	30
3	Addition up to 100	20
4	subtraction up to 100	20
5	Myanmar Currency	10
6	Multiplication	45
7	Division	40
8	Various measurement units	22
9	Geometry figures	15
10	Statistic figures	10

	Study Hours per year	2 2 2
	Practice & spare	3 0
	Total	2 5 2

## Grade 5

### 1. Guidance

- (1) When solving the formula regarding addition and subtraction, teacher has to concentrate that student is able to get idea of the balance (to take balance) by relating it's function in real situation.
- (2) To be able to think of problem solving process deliberately, teacher should give instructing for doing step by step from given informations ( process to solve the problem: given, to find , decision, solution method and answer,etc.).
- (3) Because it is the last stage of elementary level, teacher makes sure to give student in order to be able to use measurement with necessary minimum which covers life-living. In addition, because it is the stage which enters into junior high school, it is necessary to master the basic geometry.
- (4) Lengths of the rectangular side and calculating the areas should be done in skillful. Teacher should make sure that pupils to understand the concept of volume concretely and the methods (actual counting, calculating) of finding volume.
- (5) Teacher has to guide to understand the statistics figures and it's meaning regarding to indicating with the diagrams.

### 2. Contents

#### a numbers and calculation

- numbers up to 10,000,000 and its calculation, multiplication by estimation
- fraction and its addition & subtraction, word problems
- multiplication and its nature, factors
- word problem, equations
- number lines
- decimal numbers, problem

#### b Myanmar currency

- making shopping list

#### c Quantity, measurement, statistics figures

- capacity of liquid and solid
- British measurement units



- Problems with time and duration
- Graph, and position
- Time , duration, distance in travel
- Multiplication and division with different units
- Relation between 3 measurement systems, problems
- Tally, Graphs, bar graphs

d Geometry, figures (area, length, volume, drawing)

- Length of sides of polygon
- area of square and paralelogram
- space area and volume of cube

e Used symbols

- Square units, cubic units, decimal, measurement units, horizontal, vertical

**3. Table for time providing**

	Time taken	No of periods per week	No of hours per year
Primary maths	35 min	7	147 hours

**Table 5. Time dividing in grade 5**

chapter	content	No of periods
1	Number concept	5
2	Counting, reading, writing up to 10,000,000	15
3	Addition and subtraction	20
4	Basic concept of Geometry	15
5	Multiplication	20
6	Division	20
7	Fraction and decimal numbers	30
8	Time and duration	15
9	Myanmar measurement units (weight, mass)	20
10	Myanmar Currency	15
11	Measurement with length	15
12	Length and area	12
13	Volumn, capacity	10
14	Statistic figures	10
	Study Hours per year	222

	Practice & spare	3 0
	Total	2 5 2