

Course Outline

Department: Bilingual Name of Subject : Mathematics Code : #13201

Teacher's name : Ms. Sirinapa Kamwongsree

Level :

Primary 3 Secondary / 1st - 2nd Semester / 2014

Subject :

Main Subject Optional Subject Development Activities for Students Others

1) Course Description

Students will learn many mathematics vocabularies those are useful for calculation and problem solving related to place value, numbers up to 10,000, 4-digit addition and subtraction, multiplication and division of a 3-digit number, decimal notation for money, scales on the axis, bar graphs, time conversions, fractions, length, mass, volume, capacity and solve addition and subtraction of length, mass, volume and capacity, plane figures, faces, edges, corners, solid shapes, point, line, line segments, ray, angles, symmetry, perpendicular and parallel lines, perimeter and areas of squares, rectangles and shapes.

2) Grade-Level Indicators (The Basic Education Core Curriculum)

1. Write and read Hindu-Arabic and Thai numerals and written forms showing quantity of objects or cardinal numbers not exceeding 100,000, and 0.
2. Compare and arrange sequence of cardinal numbers not exceeding 100,000, and 0.
3. Tell the numbers and relations in patterns of numbers that increases by 3s, 4s, 25s and 50s, and decreases by 3s, 4s, 5s, 25s and 50s and in repeated patterns.
4. Identify the forms and relations in patterns in which forms are related in two of the following respects: shape, size or colour.
5. Add, subtract and mix addition and subtraction of cardinal numbers not exceeding 100,000, and 0, as well as be aware of validity of the answers.

6. Analyze and show method of finding answers to problems and mix-problems of cardinal numbers not exceeding 100,000, and 0, as well as be aware of validity of the answers.
7. Read data from simple pictograms and bar charts.
8. Tell the time on a clock dial (period of 5 minutes); read, write and tell the time by using numerals.
9. Tell the relationship between measuring units for length, height and time.
10. Tell length in metres, centimetres and millimetres by using appropriate measuring tools, and compare length.
11. Tell weight in kilogrammes and grammes by using appropriate weighing machine, and compare weights.
12. Tell volume and capacity in litres and millilitres by using appropriate measuring tools, and compare weight and capacity by using the same units.
13. Solve problems involving measurement of length, weight, volume, money and time.
14. Identify two dimensional geometric figures that are components of an object in the form of a three dimensional geometric figure.
15. Identify two dimensional geometric figures with axis of symmetry from a given figure.
16. Write linear points, straight lines, rays, parts of straight lines, angles and symbols.
17. Identify various geometric figures in the surroundings.
18. Read and write amount of money by using numerals.

Learning Objectives (1st Semester)

Indicators of Semester	In accordance with government curriculum
1. To recognize the place value, numbers up to 10,000 in numerals and in word.	M.1.1, M.4.1
2. To find 4-digit addition and subtraction and solve up to 2-step word problems.	M.1.2
3. To be able to memorize the multiplication table and find multiplication and division of a 3-digit number by a 1-digit number and solve word problems involving multiplication and division.	M.1.2
4. To implement decimal notation for money and solve addition and subtraction of money in word problems.	M.6.1
5. To read and interpret scales on the axis and bar graphs.	M.5.1

6. To measure, add and subtract time and carry out time conversions.	M.2.1
7. To identify, compare and order various types of fractions and solve addition and subtraction of fraction.	M.2.1
8. To define and convert standard unit of length, mass, volume and capacity and solve addition and subtraction of length, mass, volume and capacity	M.2.1, M.2.2
9. To recognize plane figures, faces, edges, corners, solid shapes, point, line, line segments, ray, angles, symmetry, perpendicular and parallel lines.	M.3.1
10. To calculate perimeter and areas of squares, rectangles and shapes by using formula.	M.2.1

3) Analyze the course description to be the contents for teaching.

Contents (Strand)/ Standards	Indicators	Units of learning / Amounts of Periods	Teaching Materials	How to Evaluate		Maximum marks
				Evaluations	Tools	
1	1	Unit 1 : Numbers up to 10,000 (6 Periods) - Recognize the place values of numbers (thousands, hundreds, tens, ones) - Write numbers up to 10,000 in numerals and in word - Compare and order numbers up to 10,000 - Complete number patterns	1. Hand-out 2. Notebook 3. E-board	1. Various evaluators 2. Various assessments 3. Frequent assessments	1. Exercise checking	20
1	3 - 4	Unit 2 : Addition and Subtraction (6 Periods) - Relate 'sum' to addition and	1. Hand-out 2. Notebook 3. E-board	1. Various evaluators 2. Various	1. Exercise checking	20

		<p>'difference' to subtraction</p> <ul style="list-style-type: none"> - Add and subtract numbers up to 4 digits - Solve up to 2-step word problems involving addition and subtraction 		<p>assessments</p> <p>3. Frequent assessments</p>		
3	13 - 20	<p>Unit 5 : Graphs (5 Periods)</p> <ul style="list-style-type: none"> - Read scales on the axis - Read and interpret bar graphs 	<ol style="list-style-type: none"> 1. Hand-out 2. Notebook 3. E-board 	<ol style="list-style-type: none"> 1. Various evaluators 2. Various assessments 3. Frequent assessments 	<ol style="list-style-type: none"> 1. Exercise checking 	10
1	3 - 4	<p>Unit 6 : Time (5 Periods)</p> <ul style="list-style-type: none"> - Visualize the relative magnitudes of hour and minute, minute and second - Measure time - Carry out conversions - Add and subtract time 	<ol style="list-style-type: none"> 1. Hand-out 2. Notebook 3. E-board 	<ol style="list-style-type: none"> 1. Various evaluators 2. Various assessments 3. Frequent assessments 	<ol style="list-style-type: none"> 1. Exercise checking 	30
1	3 - 4	<p>Unit 8 : Length (6 Periods)</p> <ul style="list-style-type: none"> -Write units of length: cm, m and km 	<ol style="list-style-type: none"> 1. Hand-out 2. Notebook 3. E-board 	<ol style="list-style-type: none"> 1. Various evaluators 2. Various assessments 	<ol style="list-style-type: none"> 1. Exercise checking 	7

		<ul style="list-style-type: none"> - Do conversion of units - Do addition and subtraction of length - Solve word problems 		3. Frequent assessments		
5	21 - 23	Unit 9 : Mass (6 Periods) <ul style="list-style-type: none"> - Write units of mass: kilograms and grams - Do conversion of units - Do addition and subtraction of mass - Solve word problems 	1. Hand-out 2. Notebook 3. E-board	1. Various evaluators 2. Various assessments 3. Frequent assessments	1. Exercise checking	7
2	9 - 10	Unit 10 : Volume and Capacity (6 Periods) <ul style="list-style-type: none"> - Convert liters into milliliters - Add and subtract - Solve problems 	1. Hand-out 2. Notebook 3. E-board	1. Various evaluators 2. Various assessments 3. Frequent assessments	1. Exercise checking	6
2	7	Unit 3 : Multiplication and Division (8 Periods) <ul style="list-style-type: none"> - Multiply tables up to 10 - Relate 'product' with multiplication, and 'quotient' and 	1. Hand-out 2. Notebook 3. E-board	1. Various evaluators 2. Various assessments 3. Frequent assessments	1. Exercise checking	20

		<p>'remainder' with division</p> <ul style="list-style-type: none"> - Multiply and divide numbers, up to a 3-digit number by a 1-digit number - Solve word problems involving multiplication and division 				
2	8	<p>Unit 7 : Fractions (8 Periods)</p> <ul style="list-style-type: none"> - Recognize and name equivalent fractions - List the first 6 equivalent fractions of a given fraction with denominator not greater than 12 - Write the equivalent fraction of a fraction given the denominator / numerator - Express a fraction in its simplest form - Compare and order related and unlike fraction with denominators up to 12 - Add and subtract fraction 	<ol style="list-style-type: none"> 1. Hand-out 2. Notebook 3. E-board 	<ol style="list-style-type: none"> 1. Various evaluators 2. Various assessments 3. Frequent assessments 	<ol style="list-style-type: none"> 1. Exercise checking 	30

6	11	<p>Unit 11 : Geometry (8 Periods)</p> <ul style="list-style-type: none"> - Plane figures like rectangle, square, triangle and circle - Faces, edges and corners - Solid shapes like cubes, cuboid, cylinder and cone - Angles and naming an angle - Symmetry - Perpendicular lines and parallel lines 	<ol style="list-style-type: none"> 1. Hand-out 2. Notebook 3. E-board 	<ol style="list-style-type: none"> 1. Various evaluators 2. Various assessments 3. Frequent assessments 	<ol style="list-style-type: none"> 1. Exercise checking 	10
5	21 - 23	<p>Unit 12 : Area and Perimeter (8 Periods)</p> <ul style="list-style-type: none"> - Calculate the perimeter of squares and rectangles - Compare the area of shapes in non-standard units - Estimate the area of a square and a rectangle in standard units - Visualize the relative sizes of 1 square meter and 1 square centimeter - Use formula to calculate the area 	<ol style="list-style-type: none"> 1. Hand-out 2. Notebook 3. E-board 	<ol style="list-style-type: none"> 1. Various evaluators 2. Various assessments 3. Frequent assessments 	<ol style="list-style-type: none"> 1. Exercise checking 	20

		o a square and a rectangle				
1	1, 2, 5	Unit 4 : Money (8 Periods) - Write money using decimal notation - Add and subtract money in compound units using the decimal notation - Solve up to 2-step word problems involving money	1. Hand-out 2. Notebook 3. E-board	1. Various evaluators 2. Various assessments 3. Frequent assessments	1. Exercise checking	20

4) Contents of subjects

1st Semester

Time Duration	Subject Contents
Beginning of the session – Mid-term	<ul style="list-style-type: none"> - Numbers up to 10,000 - Addition and subtraction - Graphs
Post – Midterm – Final	<ul style="list-style-type: none"> - Time - Length - Mass - Volume and capacity

5) Evaluation

Average marks for evaluation

Authentic Assessment: Written / Practical Exam = ...60..... : ...40.....

Evaluation of Learning Objectives

Semester	Learning Objectives (Items)
1	1, 2, 5, 6, 8

6) Details of Evaluation

1st Semester/2014

Pre-test marks: 30 Marks (Authentic Assessment)

Learning Objectives (Items)	Criteria Followed for Assessment	Maximum marks
1	- Quiz (Vocabulary)	10
5	- Exercises from workbook	20

Mid-term marks: 20 Marks (Written/Practical Exam)

Learning Objectives (Items)	Criteria Followed for Assessment	Maximum marks
2	- Multiple choice test	20

Post-Test marks : 30 Marks (Authentic Assessment)

Learning Objectives (Items)	Criteria Followed for Assessment	Maximum marks
6	Quiz (time)	10

6	Exercises from workbook	20
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Final marks : 20 Marks (Written/Practical Exam)

Learning Objectives (Items)	Criteria Followed for Assessment	Maximum marks
8	Multiple choice test	20

Contents of subjects

2nd Semester

Time Duration	Subject Contents
Beginning of the session – Mid-term	<ul style="list-style-type: none"> - Multiplication and division - Fractions
Post – Midterm – Final	<ul style="list-style-type: none"> - Geometry - Area and perimeter - Money

Evaluation

Average marks for evaluation

Authentic Assessment: Written / Practical Exam = ...60..... : ...40.....

Evaluation of Learning Objectives

Semester	Learning Objectives (Items)
2	3, 4, 7, 9, 10

Details of Evaluation

2nd Semester/2014

Pre-test marks: 30 Marks (Authentic Assessment)

Learning Objectives (Items)	Criteria Followed for Assessment	Maximum marks
3	Exercises from workbook	20
7	Quiz (Vocabulary)	10

Mid-term marks: 20 Marks (Written/Practical Exam)

Learning Objectives (Items)	Criteria Followed for Assessment	Maximum marks
7	Multiple choice test	20

Post-Test marks : 30 Marks (Authentic Assessment)

Learning Objectives (Items)	Criteria Followed for Assessment	Maximum marks
9	Quiz (Vocabulary)	10
10	Exercises from workbook	20

Final marks : 20 Marks (Written/Practical Exam)

Learning Objectives (Items)	Criteria Followed for Assessment	Maximum marks
4	Multiple choice test	20