

Course Outline

Department: Bilingual Name of Subject : Mathematics Code : A14201

Teacher's name : Ms. Sirinapa Kamwongsree

Level ;

☒ Primary 4/8

☐ 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 the place values, numbers greater than 100,000, multiplication, division, horizontal and vertical lines, perpendicular and parallel lines, angles, fractions, decimals, tables and line graphs, rectangle, square, symmetry, area, perimeter and volume

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

1. Write and read Hindu-Arabic and Thai numerals and written forms showing cardinal numbers, 0, fractions, and one-place decimals.
2. Compare and arrange sequence of cardinal numbers and 0, fractions, and one-place decimals.
3. Add, subtract and mix addition, subtraction, multiplication and division of cardinal numbers and 0, as well as be aware of validity of the answers.
4. Analyze and show method of finding answers to problems and mix-problems of cardinal numbers and 0, as well as be aware of validity of the answers, and be able to construct problems
5. Add and subtract fractions with same denominator.
6. Tell the relationship between measuring units for length, weight, volume or capacity and time.
7. Find area of rectangle.
8. Tell the time on a clock dial; read and write the time by using numerals; and tell length of time.
9. Estimate length, weight and volume or capacity.

10. Solve problems involving measurement of length, weight, volume, money and time.
11. Read and keep record of income and expenditure.
12. Read and keep record of activities or events, specifying the time.
13. Identify kind, name and components of angles and write symbols.
14. Can identify which pair of straight lines or parts of straight lines form a parallel, as well as use symbols to indicate kind of parallel.
15. Identify components of a circle.
16. Can identify which figure or which part of an object has the form of a rectangle, and can identify whether it is a square or a rectangle.
17. Can identify which two dimensional geometric figures have axes of symmetry, and identify the number of axes.
18. Use geometric figures to create various designs.
19. Tell the numbers and relations in patterns of number which increases or decreases in equal amount each time.
20. Identify the forms and relations in patterns of a given form.
21. Collect and categorize data.
22. Read data from pictograms, bar charts and tables.
23. Draw pictograms and bar charts
24. Accurately use mathematical language and symbols for communication, communication of concepts and presentation.

Learning Objectives (1st Semester)

Indicators of Semester	In accordance with government curriculum
1. To recognize the place values of numbers and compare, order and write numbers greater than 100,000 in numerals and in word and patterns of number.	M.1.1, M.4.1
2. To do addition and subtraction involving up to three multiple-digit numbers and solve word problems.	M.1.2
3. To identify types of angles and quadrilateral, diagonals, parallel lines, components of a circle, symmetrical figures, the number of axes, the forms and relations in patterns of a given form	M.3.1
4. To do multiplication and division involving up to three multiple-digit numbers and solve word	M.1.2

problems.	
5. To collect and categorize data, read data from pictograms, bar charts and tables and draw pictograms and bar charts	M.5.1
6. To testimate length, mass and volume or capacity, tell the relationship between measuring units for length, mass, volume or capacity and solve problems involving measurement of length, mass and volume.	M.2.1, M.2.2
7. To find the areas of shapes drawn on square units and the areas of rectangles and solve problems dealing with area	M.2.1
8. To solve problems involving money and read and keep record of incomes and expenses	M.6.1
9. To read and write a picture with some of the parts shaded as a fraction of the whole picture, write and read fractions, compare and arrange sequence of fractions and add and subtract fractions with the same denominator	M.1.2
10. To tell the time on a clock dial; read and write the time by using numbers; and tell the length of time, read and keep record of activities or events, specifying the time, tell the relationship between measuring units for time and solve problems involving measurement of time	M.2.1
11. To write a decimal to represent the shaded part of a diagram that is divided into 10 equal parts and to name the decimal, compare	M.1.1
12. To find the answers to combined operations problems, use combined operations to solve problems and create problems and word problems involving combined operations based on given situations	M.1.1, M.4.1, M.6.1

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 Greater than 100,000 (7 Periods) - Reading and writing	1. Hand-out 2. Notebook 3. E-board	1. Various evaluators	1. Exercise checking	20

		numbers greater than 100,000 - Place value, digit value and using zero as a placeholder - Writing numbers in the expanded form - Comparing numbers - Ordering numbers - Number patterns		2. Various assessments 3. Frequent assessments		
1	3 - 4	Unit : 2 Addition and Subtraction(7 Periods) - Addition - Subtraction - Combined operations	1. Hand-out 2. Notebook 3. E-board	1. Various evaluators 2. Various assessments 3. Frequent assessments	1. Exercise checking 2. Exam paper	20
3	13 - 20	Unit : 13 Geometry (7 Periods) - Identify types of angles and quadrilaterals - Identify diagonals and parallel lines - Identify components of a circle - Identify symmetrical figures and the number of axes	1. Hand-out 2. Notebook 3. E-board	1. Various evaluators 2. Various assessments 3. Frequent assessments	1. Exercise checking 2. Quiz	10
1	3 - 4	Unit : 3 Multiplication (7 Periods) - Properties of multiplication - Multiplication of 1-digit numbers by multiple-digit	1. Hand-out 2. Notebook 3. E-board	1. Various evaluators 2. Various assessments	1. Exercise checking	20

		numbers - Multiplication of 2-digit numbers by 3-digit numbers - Multiplication of 3-digit numbers by 3-digit numbers - Multiplication of multiple-digit numbers - Using multiplication to solve word problems		3. Frequent assessments		
1	3 - 4	Unit : 4 Division (6 Periods) - Short division - Division by 2-digit divisors - Division by 3-digit divisors - Using division to solve word problems - Means	1. Hand-out 2. Notebook 3. E-board	1. Various evaluators 2. Various assessments 3. Frequent assessments	1. Exercise checking	20
5	21 - 23	Unit : 7 Statistics (6 Periods) - Collecting and organizing data - Pictograms and bar charts - Constructing pictograms and bar charts - Tables	1. Hand-out 2. Notebook 3. E-board	1. Various evaluators 2. Various assessments 3. Frequent assessments	1. Exercise checking	10

2	9 - 10	Unit : 5 Measurements (6 Periods) - Length - Mass - Volume	1. Hand-out 2. Notebook 3. E-board	1. Various evaluators 2. Various assessments 3. Frequent assessments	1. Exercise checking	20
2	7	Unit : 6 Area (6 Periods) - Measuring area - Measuring the area of a rectangle - Solving word problems involving area	1. Hand-out 2. Notebook 3. E-board	1. Various evaluators 2. Various assessments 3. Frequent assessments	1. Exercise checking 2. Quiz	10
6	11	Unit : 9 Money (6 Periods) - Solving word problems involving money Statement of incomes and expenses	1. Hand-out 2. Notebook 3. E-board	1. Various evaluators 2. Various assessments 3. Frequent assessments	1. Exercise checking 2. Exam paper	20

1	1, 2, 5	Unit : 11 Fractions (6 Periods) - Understanding fractions - Reading and writing fractions - Comparing fractions - Ordering fractions - Equivalent fractions - Operations involving fractions - Solving word problems involving fractions	1. Hand-out 2. Notebook 3. E-board	1. Various evaluators 2. Various assessments 3. Frequent assessments	1. Exercise checking 2. Quiz	10
2	8	Unit : 8 Time (6 Periods) - Time - Duration of time - Schedule (Timetable) - Schedule (Program) - Calendar - Relationships between units of time - Solving word problems involving time	1. Hand-out 2. Notebook 3. E-board	1. Various evaluators 2. Various assessments 3. Frequent assessments	1. Exercise checking	20
1	1, 2, 5	Unit : 12 Decimals (6 Periods) - Writing and naming decimals - Place values and digit values in decimals - Comparing and ordering decimals	1. Hand-out 2. Notebook 3. E-board	1. Various evaluators 2. Various assessments 3. Frequent assessments	1. Exercise checking 2. Exam paper	10

5	21 - 23	Unit : 10 Combined Operations (5 Periods) - Combined operations - Using combined operations to solve word problems	1. Hand-out 2. Notebook 3. E-board	1. Various evaluators 2. Various assessments 3. Frequent assessments	1. Exercise checking 2. Exam paper	10
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4) Contents of subjects

1st Semester

Time Duration	Subject Contents
Beginning of the session – Mid-term	- Numbers Greater than 100,000 - Addition and Subtraction - Geometry
Post – Midterm – Final	- Multiplication - Division - Statistics

5) Evaluation

Average marks for evaluation

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

Evaluation of Learning Objectives

Semester	Learning Objectives (Items)
1	1, 2, 3, 4, 5, 6

6) Details of Evaluation

1st Semester/2014

Pre-test marks: 30 Marks (Authentic Assessment)

Learning Objectives (Items)	Criteria Followed for Assessment	Maximum marks
1	- Assignment	20
3	- Quiz	10

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
4	- Assignment	20
5	- Quiz	10

Final marks : 20 Marks (Written/Practical Exam)

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

Contents of subjects

2nd Semester

Time Duration	Subject Contents
Beginning of the session – Mid-term	- Measurements - Area - Money
Post – Midterm – Final	- Fractions - Time - Decimals - Combined Operations

Evaluation

Average marks for evaluation

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

Evaluation of Learning Objectives

Semester	Learning Objectives (Items)
2	6, 7, 8, 9, 10, 11, 12

Details of Evaluation

2nd Semester/2014

Pre-test marks: 30 Marks (Authentic Assessment)

Learning Objectives (Items)	Criteria Followed for Assessment	Maximum marks
6	- Assignment	20
7	- Quiz	10

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

Learning Objectives (Items)	Criteria Followed for Assessment	Maximum marks
8	- Multiple choice test	10

Post-Test marks : 30 Marks (Authentic Assessment)

Learning Objectives (Items)	Criteria Followed for Assessment	Maximum marks
9	- Quiz	10
10	- Assignment	20

Final marks : 20 Marks (Written/Practical Exam)

Learning Objectives (Items)	Criteria Followed for Assessment	Maximum marks
11	- Multiple choice test	10
12	- Multiple choice test	10