

Course Outline

Department : Bilingual

Name of Subject : Mathematics

.Code : A 15201

Teacher's name : Miss Pichcha Sakonthawat

Level ;

☒ Primary 5

☐ Secondary /

1st - 2nd Semester / 2014

Subject :

☐ Main Subject

☒ Optional Subject

☐ Development Activities for Students

☐ Others

1) Course Description

Practice and learn mathematical method, enhance skill in mathematics and develop the concepts to solve real problems. Understand the concept of

Learn, Know and understand to

addition, subtraction, multiplication, division, fractions, decimals, percentages, angles, area, perimeter, volume, surface area, probability, statistics, etc. (addition, subtraction, multiplication, division, fractions, decimals, percentages, angles, area, perimeter, volume, surface area, probability, statistics, etc.)

Study the contents of each topic related to daily life. Estimate and measure the area, volume and capacity of objects in the real world situation. Be able to apply the knowledge, develop critical thinking skill and good positive impression in mathematics.

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

- 1) To be able to read and write numbers up to 10 million.
- 2) To be able to tell the place values of numbers
- 3) Round off numbers to the nearest 1,100.
- 4) Multiply and divide and solve up to 3-step word problems.
- 5) To be able to find the area of rectangles and squares by multiplying and dividing numbers.
- 6) Identify, compare and order various types of fractions, the decimal and solve addition and subtraction involving fractions and decimals.
- 7) To be able to find the total amount given the average and the number of items.
- 8) Calculate average, rate and part of a whole as percentages.
- 9) Change fractions and decimal to percentages and vice versa.
- 10) To be able to use the property of angles to find the angles on straight line add up to 180° and the angles at a point add up to 360° .
- 11) Calculate perimeter and areas of triangles by using formula.
- 12) State and find unknown angle using the properties of a parallelogram, a rhombus and a trapezium.
- 13) To be able to read and interpret line graph.
- 14) To find the volume/capacity of cuboids and to solve problems involving similar solids/capacity.









15) Learning Objectives (1st Semester)


Indicators of Semester	In accordance with government curriculum
1. To be able to read and write numbers up to 10 million	ด.1.1
2. To be able to tell the place values of numbers	ด.1.4



3. Read and write numbers up to the hundred thousands.	ค.1.3
4. Multiply and divide and solve up to 2-step word problems.	ค.1.2 and ค.6.1
5. Find the factors and multiples of numbers.	ค.1.1 and ค.1.4
6. Identify, compare and order various types of fractions, the decimal and the percentage.	ค.1.2 and ค.6.1
7. Find the total given the average and the number of items.	ค.1.1 and ค.1.2
8. Calculate average, rate and percent of a whole or percentage.	ค.1.2 and ค.6.1

16) Analyze the course description to be the contents for teaching. (1st Semester)

Contents (Strand)/ Standards	Indicators	Units of learning / Amounts of Periods	Teaching Materials	How to Evaluate		Maximum marks
				Evaluations	Tools	
ม.1 / ค.1.1	1. To be able to read and write numbers up to 10 million	Unit 1 : Whole Numbers 1 (5 periods) - Read and write numbers up to 10 million. - Recognize the place values of numbers (ones, tens, hundreds, thousands, ten thousands,	1. video 2. textbook 3. worksheet 4. game 5. test	1. do exercise 2. do the test 3. answering	1. worksheet 2. practical test 3. questions	10
ม.1 / ค.1.4	2. Read and write numbers up to 10 million.		1. video 2. textbook 3. worksheet	1. do exercise 2. do the test 3. answering	1. worksheet 2. practical test	10

		<p>hundred thousands, and millions)</p> <ul style="list-style-type: none"> - Round off numbers to the nearest 1,000. 	<p>4. game</p> <p>5. test</p>		<p>3. questions</p>	
ม.1 / ค.1.3	<p>3. </p>  		<p>1. video</p> <p>2. textbook</p> <p>3. worksheet</p> <p>4. game</p> <p>5. test</p>	<p>1. do exercise</p> <p>2. do the test</p> <p>3. answering</p>	<p>1 worksheet</p> <p>2. practical test</p> <p>3. questions</p>	10
ม.1 / ค.1.2 ม.6 / ค.6.1	<p>4. </p>   	<p>Unit 2 : Whole Numbers 2</p> <p>(5 periods)</p> <ul style="list-style-type: none"> - Multiply by 10, 100 and 1,000 - Divide by 10, 100 and 1,000 - Multiply, divide and solve up to 3-step word problems. <p>(DMAS)</p>	<p>1. video</p> <p>2. textbook</p> <p>3. worksheet</p> <p>4. game</p> <p>5. test</p>	<p>1. do exercise</p> <p>2. do the test</p> <p>3. answering</p>	<p>1. exam</p>	10
ม.1 / ค.1.1 ค.1.4	<p>5. To be able to find Common Factor and Common Multiples of 2 given numbers.</p>	<p>Unit 3 : Factors and multiples</p> <p>(5 periods)</p> <ul style="list-style-type: none"> - Recognize the Prime factors. - Find Common Factors and Common multiples of two numbers. 	<p>1. video</p> <p>2. textbook</p> <p>3. worksheet</p> <p>4. game</p> <p>5. test</p>	<p>1. do exercise</p> <p>2. do the test</p> <p>3. answering</p>	<p>1. worksheet</p> <p>2. practical test</p> <p>3. questions</p>	10

ม.1 / ค.1.2 ม.6 / ค.6.1	6. 	Unit 4 : Fractions (5 periods) <ul style="list-style-type: none"> - Identity the equivalent fractions. - Compare and order unlike fractions. - Find the fractions into the simplest form. - Convert Mixed numbers into an improper fraction. 	1. video 2. textbook 3. worksheet 4. game 5. test	1. do exercise 2. do the test 3. answering	1. exam	10
		Unit 5 : Decimals (5 periods) <ul style="list-style-type: none"> - Identity the decimals place and the value of the digits. - Compare and order decimals. - Convert between decimals and fractions. - Multiply and divide decimals up to 3 decimal places by tens, hundreds and thousands. - Multiply and divide decimals up to 2 decimal places by 2 digit whole number. 				10

ม.1 / ค.1.1 ค.1.2		Unit 6 : Average (5 periods) <ul style="list-style-type: none"> - Interpret average as “Total amount \div number of items”. - Calculate average. - Find the total amount given the average and the number of items. Solve up to 3-step word problems.	1. video 2. textbook 3. worksheet 4. game 5. test	1. do exercise 2. do the test 3. answering	1. worksheet 2. practical test 3. questions	10
ม.1 / ค.1.2 ม.6 / ค.6.1	8. 	Unit 7 : Rate (5 periods) <ul style="list-style-type: none"> - Calculate Rate. Solve up to 3-step word problems.	1. video 2. textbook 3. worksheet 4. game 5. test	1. do exercise 2. do the test 3. answering	1. exam	20

17) Contents of subjects

1st Semester

Time Duration	Subject Contents
Beginning of the session – Midterm	Unit 1-2 : Whole number 1 and Whole number 2 Unit 3 : Factors and Multiples Unit 4 : Fractions
Post Midterm – Final	Unit 5 : Decimals Unit 6 : Average

	Unit 7 : Rate
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18) Evaluation

Average marks for evaluation

Authentic Assessment: Written / Practical Exam = ...60..... : ...40.....
(Depend on each Subject)

Evaluation of Learning Objectives

Semester	Learning Objectives (Items)
1	1 , 2 , 3 , 4, 5, 6, 7, and 8

19) Details of Evaluation

1st Semester/2014

Pre-test marks: 30 Marks (Authentic Assessment)

Learning Objectives (Items)	Criteria Followed for Assessment	Maximum marks
1	- Practical exercise	10
2	- do the test	10
3	- Worksheet about whole number	10

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

Learning Objectives (Items)	Criteria Followed for Assessment	Maximum marks
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4	- Test about Algebra, speed, H.C.F and L.C.M.	10
5	- Test about Whole number	10

Post-Test marks : 30 Marks (Authentic Assessment)

Learning Objectives (Items)	Criteria Followed for Assessment	Maximum marks
6	- Practical exercise - Worksheet	20
7	- do the test	10

Portfolio : - Marks

Learning Objectives (Items)	Criteria Followed for Assessment	Maximum marks
-	-	-

Final marks : 20 Marks (Written/Practical Exam)

Learning Objectives (Items)	Criteria Followed for Assessment	Maximum marks
8	- Test about ratio and direct proportion and percentage	20

2nd Semester/2014

Learning Objectives (2nd Semester)

Indicators of Semester	In accordance with government curriculum
9. To be able to find the percentage of the whole.	ค.1.2
10. To be able to use the property of angles to find the angles on straight line add up to 180° and the angles at a point add up to 360° .	ค.3.1 and ค.3.2
11. To be able to solve the area of triangles by using formula.	ค.2.2
12. To be able to solve a angle using the properties of a parallelogram, a rhombus and a trapezium.	ค.3.2
13. To be able to read and interpret the graph.	ค.5.1
14. To find the value/percentage of whole and to solve problem involving whole value/percentage.	ค.2.3

Analyze the course description to be the contents for teaching. (2nd Semester)

Contents (Strand)/ Standards	Indicators	Units of learning / Amounts of Periods	Teaching Materials	How to Evaluate		Maximum marks
				Evaluations	Tools	
ผ.1 / ค.1.2	To be able to find the percentage of the whole.	Unit 9 : Percentages (10 periods) <ul style="list-style-type: none"> - Change fraction and decimals to percentages, and vice versa. - Recognize the equivalence between percentage and The whole. 	1. video 2. textbook 3. worksheet 4. game 5. test	1. do exercise 2. do the test 3. answering	1. worksheet 2. practical test 3. exam	20

		<ul style="list-style-type: none"> - Calculate part of a whole given the percentage and the whole. - Solve up to 3-step word problems. 				
ม.3 / ค.3.1 and ค.3.2	10. To be able to use the property of angles to find the angles on straight line add up to 180° and the angles at a point add up to 360° .	Unit 10 : Angles and Triangles (10 periods) <ul style="list-style-type: none"> - Identity and name - Recognize that angles on a straight line add up to 180° - Recognize that angles at a point add up to 360° - Recognize that vertically opposite angles are equal. - Find unknown angles. - Recognize and use the property that the angle sum of a triangle is 180° - Recognize that exterior angle of a triangle is equal to the sum of the interior opposite angles. - Use formulae to find the area of a triangle 	1. video 2. textbook 3. worksheet 4. game 5. test	1. do exercise 2. do the test 3. answering	1. worksheet 2. practical test 3. exam	10
ม.2 / ค.2.2	11. To be able to use the property of angles to find the angles on straight line add up to 180° and the angles at a point add up to 360° . 12. To be able to use the property of angles to find the angles on straight line add up to 180° and the angles at a point add up to 360° . 13. To be able to use the property of angles to find the angles on straight line add up to 180° and the angles at a point add up to 360° . 14. To be able to use the property of angles to find the angles on straight line add up to 180° and the angles at a point add up to 360° .					20

ม.3 / ค.3.2	<p>1. State and find unknown angles using the properties of.</p> <ul style="list-style-type: none"> - A parallelogram - A Rhombus - A Trapezium 	<p>Unit 11 : Quadrilaterals (8 periods)</p>	<ol style="list-style-type: none"> 1. video 2. textbook 3. worksheet 4. game 5. test 	<ol style="list-style-type: none"> 1. present (group activity) 2. do the test 3. answering 	<ol style="list-style-type: none"> 1. VDO presentation on Face book (group activity) 2. practical test 3. exam 	<p>10</p> <p>10</p>
ม.5 / ค.5.1	<p>1. Read and interpret line graphs.</p> <p>2. Solve problems using information presented in line graphs</p>	<p>Unit 12 : Line Graphs (4 periods)</p>	<ol style="list-style-type: none"> 1. video 2. textbook 3. worksheet 4. game 5. test 	<ol style="list-style-type: none"> 1. do exercise 2. do the test 3. answering 	<ol style="list-style-type: none"> 1. exercise 2. questions 	<p>10</p>
ม.2 / ค.2.3	<p>1. Find one dimension of cuboids given its volume and the other dimensions.</p> <p>2. Find the edge of a cube given its volume.</p> <p>3. Solve up to 2-step word problems.</p>	<p>Unit 13 : Volume (8 periods)</p>	<ol style="list-style-type: none"> 1. video 2. textbook 3. worksheet 4. game 5. test 	<ol style="list-style-type: none"> 1. do exercise 2. answering 	<ol style="list-style-type: none"> 1. exam 	<p>20</p>

Contents of subjects

2nd Semester

Time Duration	Subject Contents
Beginning of the session – Midterm	Unit 8 : Percentage Unit 9-10 : Angles and Triangles
Post Midterm - Final	Unit 11 : Quadrilaterals Unit 12 : Line Graphs Unit 13 : Volume

Evaluation

Average marks for evaluation

Authentic Assessment: Written / Practical Exam = ...**60**..... : ...**40**.....
(Depend on each Subject)

Evaluation of Learning Objectives

Semester	Learning Objectives (Items)
2	9 , 10 , 11, 12, 13 and 14

Details of Evaluation

Pre-test marks: 30 Marks (Authentic Assessment)

Learning Objectives (Items)	Criteria Followed for Assessment	Maximum marks
9	- Practical exercise	20
10	- worksheet	10

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

Learning Objectives (Items)	Criteria Followed for Assessment	Maximum marks
11	- Test about Percentage and Angles and Triangles	20

Post-Test marks : 30 Marks (Authentic Assessment)

Learning Objectives (Items)	Criteria Followed for Assessment	Maximum marks
12	- Practical exercise	10
	- VDO Presentation on Face book (Group activity)	10
13	- Practical exercise	10

Portfolio : - Marks

Learning Objectives (Items)	Criteria Followed for Assessment	Maximum marks
-	-	-

Final marks : 20 Marks (Written/Practical Exam)

Learning Objectives (Items)	Criteria Followed for Assessment	Maximum marks
14	- Test about Quadrilaterals, Line graph and Volume	20