Course Outline

Department : Bilingual **Name of Subject :** Mathematics **.Code :** ค 16201

Teacher's name : Miss Pichcha Sakonthawat

Level ;

☑ Primary 6 ☐ 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

simplify algebraic expression, find the distance time and speed it's relationship, find unknown angles in geometric figures using the properties of angles and straight line, angle at a point and vertically opposite angles, visualize a prism and a pyramid from drawing, identify nets of a cube, cuboids, prism pyramid and cylinder, express one value as a fraction of another given their ratio and vine versa, find the whole given a part and the percentage, express one quantity as a percentage of another, identity and name the different parts of a circle, find the area and perimeter of a circle, semicircle quadrant and 4 sides figure, read and interpret pie charts, find volume of a solid to make up of cubes/cuboids, identity the prime factor, find H.C.F. and L.C.M. of two-three digit numbers.

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)

[illegible]

8) Find H.C.F. and L.C.M. of two-three digit numbers.
9) Express one value as a fraction of another given their ratio and vine versa.
10) Express one quantity as a percentage of another.
11) Find the whole given a part and the percentage.
12) To find unknown angles in geometric figures using the properties of angles and straight lines, angle at a point and vertically opposite angles.
13) To identify and name, radius, chord, diameter and circumference.
14) To identify and name the different parts of a circle.
15) Find the area and perimeter of a circle, and triangle, quadrant and related figures.
16) Draw and interpret pie charts.
17) Find values of a variable in an inequality.

13) Learning Objectives (1st Semester)

Indicators of Semester	In accordance with government curriculum
1. Simplify algebraic expression.	ค.4.2
2. Find the distance time and speed its relationship.	ค.2.3
3. Find H.C.F. and L.C.M. of two-three digit numbers.	ค.1.4
4. Express one value as a fraction of another given their ratio and vine versa.	ค.1.1 and ค.6.1
5. Express one quantity as a percentage of another.	ค.1.1
6. Find the whole given a part and the percentage.	ค.1.2 and ค.6.1

14) 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. 4 / ค.4.2	1. Simplify algebraic expression.	**Unit 1 : Algebra** **(6 periods)** - Use a letter to represent an unknown number. - Write a simple algebraic expression. - Simplify algebraic expression.	1. video 2. textbook 3. worksheet 4. game 5. test	1. do VDO Times table 2. do the test 3. answering	1. VDO Times table 2. practical test 3. questions	10 10
ม. 2 / ค.2.3	2. Find the distance time and speed its relationship.	**Unit 2 : Speed** **(6 periods)** - About the distance, time and speed and its relationship.	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	3. Find H.C.F. and L.C.M. of two-three digit numbers.	**Unit 3 : Factors and Multiples** **(8 periods)** - Identify the prime number. - Find H.C.F. and L.C.M. of two-three digit numbers.	1. video 2. textbook 3. worksheet 4. game 5. test	1. do exercise 2. do the test 3. answering	1. exam	20
ม. 1 / ค.1.1 and ม. 6 / ค.6.1	4. Express one value as a fraction of	**Unit 4 : Ratio and Direct Proportion** **(12 periods)**	1. video 2. textbook 3. worksheet	1. do exercise 2. do the test 3. answering	1 worksheet 2. practical test	20

	another given their ratio and vine versa.	- Express one value as a fraction of another given their ratio, and vice versa. - Find how many times one value is as large as another given their ratio, and vice versa. - Recognize that two quantities in direct proportion. - Solve word problems on ratio and direct proportion	4. game 5. test		3. questions	
ม. 1 / ค.1.1	5. Express one quantity as a percentage of another.	**Unit 5 : Percentage (8 periods)** - Express one quantity as a percentage of another. - Find the whole given a part and the percentage	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 and ม. 6 / ค.6.1	6. Find the whole given a part and the percentage.		1. video 2. textbook 3. worksheet 4. game 5. test	1. do exercise 2. do the test 3. answering	1. exam	20

15) Contents of subjects

1st Semester

Time Duration	Subject Contents
Beginning of the session – Mid-term	Unit 1 : Algebra Unit 2 : Speed Unit 3 : Factors and Multiples:
Post – Midterm – Final	Unit 4 : Ratio and Direct Proportion Unit 5 : Percentage

16) 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 and 6

17) 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	20
2	- VDO Times table (Group activity)	10

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

Learning Objectives (Items)	Criteria Followed for Assessment	Maximum marks
3	- Test about Algebra, speed, H.C.F and L.C.M.	20

Post-Test marks : 30 Marks (Authentic Assessment)

Learning Objectives (Items)	Criteria Followed for Assessment	Maximum marks
4	- Practical exercise	20
5	- Worksheet	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
6	- Test about ratio and direct proportion and percentage	20

2nd Semester/2014

Learning Objectives (2nd Semester)

Indicators of Semester	In accordance with government curriculum
7. To find unknown angles in geometric figures using the properties of angles and straight line, angle at a point and vertically opposite angles.	ค.2.1
8. To identify nets of a cube, cuboids, prism pyramid and cylinder.	ค.3.1 and ค.3.2
9. To identity and name the different parts of a circle.	ค.2.1
10. Find the area and perimeter of a circle, semicircle quadrant and 4 sides figure.	ค.3.1
11. Read and interpret pie charts.	ค.5.1
12. Find volume of a solid made up of cubes/cuboids.	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	
ม. 2 / ค.2.1	7. To find unknown angles in geometric figures using the properties of angles and straight line,	**Unit 6 : Angles in geometric figures** **(10 periods)** - Find unknown angles in geometric figures using the properties of angles on a straight line, angles at a	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	20

	angle at a point and vertically opposite angles.	point and vertically opposite angles. - Triangle: right-angle triangle, isosceles and equilateral triangle. - Four-sided figures: square, rectangle, parallelogram, rhombus, trapezium. - Find the fractions into the simplest form.				
ม. 3 / ค.3.1 and ค.3.2	8.To identify nets of a cube, cuboids, prism pyramid and cylinder.	**Unit 7 : Solid Figures and Nets (5 periods)** - Identity nets of a cube a cuboids, prism, pyramid and cylinder. - Identity the solid which can be formed by a net.	1. video 2. textbook 3. worksheet 4. game 5. test	1. present 2. do the test 3. answering	1. VDO presentation on Face book 2. practical test	10
ม. 2 / ค.2.1	9.To identity and name the different parts of a circle.	**Unit 8 : Circle (5 periods)** - Identify and name the different parts of a circle. - Use the formulae to find the circumference and area of a circle, semicircle and quadrant. - Find the Area and perimeter of a circle, semicircle and	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. 3 / ค.3.1	10. Find the area and perimeter of a circle,		1. video 2. textbook 3. worksheet 4. game	1. do exercise 2. answering	1. exercise 2. exam	10

	semicircle quadrant and 4 sides figure	quadrant and 4 sided figures.	5. test			
ม. 5 / ค.5.1	11. Read and interpret pie charts.	**Unit 9 : Pie Charts** **(5 periods)** - Read and interpret pie charts. - Solve 1-step problems using data in pie charts.	1. video 2. textbook 3. worksheet 4. game 5. test	1. do exercise 2. do the test 3. present about pie chart (Group activity)	1. exercise 2. questions 3.Presentation pie chart	20 10
ม. 2 / ค.2.3	12. Find volume of a solid made up of cubes/ cuboids	**Unit 10 : Volume** **(5 periods)** - Find volume of a solid made up of cubes/cuboids. - Find volume of liquid.	1. video 2. textbook 3. worksheet 4. game 5. test	1. do exercise 2. answering	1. exam	20

Contents of subjects

2nd Semester

Time Duration	Subject Contents
Beginning of the session – Mid-term	Unit 6 : Angles in Geometric Figures Unit 7 : Solid Figure and Nets Unit 8: Circle

Post – Midterm – Final	Unit 9 : Pie Charts Unit 10 : 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	7 , 8 , 9 , 10 , 11 and 12

Details of Evaluation

Pre-test marks: 30 Marks (Authentic Assessment)

Learning Objectives (Items)	Criteria Followed for Assessment	Maximum marks
7	- Practical exercise	20
8	- VDO presentation on Face book (Group activity)	10

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

Learning Objectives (Items)	Criteria Followed for Assessment	Maximum marks
9	- Test about Angles in geometric figures; visualize a prism and a pyramid from drawing sand circle	10
10		10

Post-Test marks : 30 Marks (Authentic Assessment)

Learning Objectives (Items)	Criteria Followed for Assessment	Maximum marks
11	- Presentation about pie chart (Group activity)	10
	- Practical exercise	20

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
12	- Test about Pie chart and volume	20