Course Description

Subject: Mathematics 5   **Code: MA15101**   **4   Periods / Week   4.0   Cerdits**

Class: Primary 5A-B   **Semester 1-2/2014**   **Instructors: Mr. Michiel / Ms. Panitapat**

Unit	Standard	Indicators
1. Numbers patterns 1.1 Picture and number patterns	M 4.1 M 6.1	P. 5/1 Tell the numbers and relations in patterns P. 5/4 Accurately use mathematical language and symbols for communication of concepts and presentation
2. Whole Number 2.1 Ordering 2.2 Rounding (ASEAN) 2.3 Multiplication 2.4 Division 2.5 Order of operations 2.6 Word problems	M 1.2 M 1.3 M 6.1	P. 5/3 Solve problems related to cardinal numbers P. 5/1 Make approximate estimates of integers (ASEAN) P. 5/1 Apply diverse methods for problem-solving. P. 5/5 Link various bodies of mathematical knowledge, and link mathematics with other disciplines P. 5/6 Attain ability for creative thinking
3. Angles 3.1 Measuring angles 3.2 Constructing angles	M 3.2 M 2.1 M 6.1	P. 5/4 Measure the size of an angle P. 5/1 Construct angles by using a protractor P. 5/1 Apply diverse methods for problem-solving. P. 5/3 Suitably provide reasoning for decision-making and appropriately present the conclusions reached. P. 5/4 Accurately use mathematical language and symbols for communication of concepts and presentation

Unit	Standard	Indicators
4. Fractions 4.1. Reading / writing 4.2. Conversion 4.3. Comparing 4.4. Four operations 4.5. Word problems	M 1.1 M 1.2 M 6.1	P. 5/ 1 Reading / writing of fraction P. 5/ 2 Comparing and ordering fractions P. 5/1 Add and subtract fractions P. 5/3 Problem solving P. 5/1 Apply diverse methods for problem-solving. P. 5/2 Appropriately apply mathematical knowledge, skills and processes for problem-solving in various situations. P. 5/6 Attain ability for creative thinking.
5. Parallel lines 5.1. Drawing parallel lines 5.2. Checking if lines are parallel	M 3.1 M 6.1	P. 5/3 Create parallel lines with a set square P. 5/5 Link various bodies of mathematical knowledge, and link mathematics with other disciplines P. 5/6 Attain ability for creative thinking
6. Decimals 6.1. Reading and writing 6.2. Ordering 6.3. Addition and subtraction 6.4. Rounding 6.5. Word Problems	M 1.1 M 1.2 M 6.1	P. 5/1 Write and read decimal (not more than two places) P. 5/2 Compare and arrange decimals P. 5/2 Addition and Subtraction P. 5/3 Approximation of decimal (not more than three places) P. 5/1 Apply diverse methods for problem-solving. P. 5/5 Link various bodies of mathematical knowledge, and link mathematics with other disciplines P. 5/6 Attain ability for creative thinking
7. Graphs 7.1. Drawing bar graphs and pie charts (Botany) 7.2. Reading bar graphs and pie charts (Local)	M 5.1 M 6.1	P. 5/1 Draw bar chart with shortening of line to represent numbers P. 5/2 Read data from comparative bar charts P. 5/3 Suitably provide reasoning for decision-making and appropriately present the conclusions reached. P. 5/5 Link various bodies of mathematical knowledge, and link mathematics with other disciplines P. 5/6 Attain ability for creative thinking

Unit	Standard	Indicators
8. Rectangles, parallelograms, trapeziums 8.1.Perimeter 8.2. Area 8.3. Word problems 8.4. Drawing	M 2.1 M 2.2 M 6.1	P. 5/2 Find the perimeter of quadrilaterals Use to (Local) P. 5/3 Find the area of quadrilaterals P. 5/ 1 Solve problems involving area and perimeter of quadrilaterals P. 5/1 Apply diverse methods for problem-solving. P. 5/5 Link various bodies of mathematical knowledge, and link mathematics with other disciplines P. 5/6 Attain ability for creative thinking

9. Percentage
 	
 9.1. Conversion
 	
 9.2. Word problems
 	
   (ASEAN)
	M 1.1
	
	M 1.2
	
	M 6.1
		P. 5/1 Apply diverse methods for problem-solving.
		
		P. 5/3 Write percentages in the forms of fractions and decimals
		
		P. 5/3 Find answers to problems of percentage
		
		P. 5/5 Link various bodies of mathematical
		   knowledge, and link mathematics with other disciplines
		
		P. 5/6 Attain ability for creative thinking

10. Probability
 	
10.1. Calculating probability in
    dice experiments
 	
10.2. Calculating probability in
    coin experiments
 	
10.3. Solving problems related to probability
	M 5.2
	
	M 6.1
		P. 5/1 Can tell whether a described situation:
		
		- will definitely happen
		
		- may or may not happen
		
		- will definitely not happen
		
		P. 5/2 Appropriately apply mathematical knowledge, skills and processes for problem-solving in various situations.
		
		P. 5/3 Suitably provide reasoning for decision-making and appropriately present the conclusions reached.
		
		 P. 5/6 Attain ability for creative thinking

Unit	Standard	Indicators
11. Triangles 11.1. Perimeter 11.2. Area 11.3. Drawing	M 2.1 M 2.2 M 3.1 M 6.1	P. 5/2 Find the perimeter P. 5/3 Find the area P. 5/1 Solve problems involving perimeter and area P. 5/3 Identify characteristics, components, relationships and differentiate between various kinds of triangles. P. 5/1 Apply diverse methods for problem-solving. P. 5/5 Link various bodies of mathematical knowledge, and link mathematics with other disciplines P. 5/6 Attain ability for creative thinking
12. Circles 12.1. Perimeter 12.2. Area 12.3. Word Problems	M 3.2 M 6.1	P. 5/1 Apply diverse methods for problem-solving. P. 5/2 Create circles P. 5/5 Link various bodies of mathematical knowledge, and link mathematics with other disciplines P. 5/6 Attain ability for creative thinking
13. Volume 13.1. Solids 13.2. Liquids 13.3. Word problems	M 2.1 M 3.1 M 6.1	P. 5/1 Tell the relationship between units for volume P. 5/5 Identify 3-dimensional figures P. 5/1 Identify characteristics and difference between various kinds of three-dimensional geometric figures. P. 5/1 Apply diverse methods for problem-solving. P. 5/3 Suitably provide reasoning for decision-making and appropriately present the conclusions reached. P. 5/5 Link various bodies of mathematical knowledge, and link mathematics with other disciplines P. 5/6 Attain ability for creative thinking

Measurement and Evaluation 1/2014

Total 100 Marks（**Assessment** 60 Marks: Midterm test /Final test 40 Marks）

Measurement and Evaluation	Evaluation Method	Assessment Tools	Marks	Standard/ Indicators
1. Pre-Midterm	1. Quiz 2. Course book 3. Participation	1. Mark/score 2. Checking Exercises 3. Observation sheet	25	M 4.1 P.5/1 M 1.3 P. 5/1 M 1.2 P.5/1-3 M 2.1 P. 5/4 M 3.2 P. 5/1 M 1.1 P. 5/1-2 M 6.1 P.5/1-4
2. Midterm	Examination	Test paper	20	M 4.1 P.5/1 M 1.3 P. 5/1 M 1.2 P.5/1-3 M 2.1 P. 5/4 M 3.2 P. 5/1 M 1.1 P. 5/1-2 M 5.1 P. 5/1-2 M 6.1 P. 5/1-4
3. Post-Midterm	1. Quiz 2. Course book 3. Participation	1. Mark/score 2. Checking Exercises 3. Observation sheet	25	M 3.1 P.5/3 M 1.2 P.5/2-3 M 1.1 P. 5/1-2 M 5.1 P. 5/1-2 M 6.1 P.5/1-4
4. Final	Examination	Test paper	20	M 3.1 P.5/3 M 1.2 P.5/2-3 M 1.1 P. 5/1-2 M 5.1 P. 5/1-2 M 6.1 P.5/1-4
5. Desirable Characteristics	1. Love of nation, religion and king 2. Honesty and integrity 3. Self-discipline 4. Avidity for learning 5. Observance of principles of sufficiency economy philosophy in one's way of life 6. Dedication and commitment to work 7. Cherishing Thai-ness 8. Public-mindedness 9. positive attitude towards Mathematics 10. Awareness of drugs and vices	1. Observation	10	
6. Competencies	1. Communication capacity 2. Thinking capacity 3. Problem solving capacity 4. Capacity for applying life skills 5. Capacity for technological application	1. Observation 2. Asking and answering question		
7. Analytical reading and writing	Solving word problems	Worksheet / Exercise		

Measurement and Evaluation 2/2014

Total 100 Marks （**Assessment** 60 Marks: Midterm test /Final test 40 Marks）

Measurement and Evaluation	Evaluation Method	Assessment Tools	Marks	Standard/ Indicators
1. Pre-Midterm	1. Quiz 2. Course book 3. Participation	1. Mark/score 2. Checking Exercises 3. Observation sheet	25	M 2.1 P.6/2-3 M 2.2 P. 6/1 M 1.1 P.6/3 M 1.2 P. 6/3 M 5.2 P. 6/1 M 6.1 P.6/1-6
2. Midterm	Examination	Test Paper	20	M 2.1 P.6/2-3 M 2.2 P. 6/1 M 1.1 P.6/3 M 1.2 P. 6/3 M 5.2 P. 6/1 M 6.1 P.6/1-6
3. Post-Midterm	1. Quiz 2. Course book 3. Participation	1. Mark/score 2. Checking Exercises 3. Observation sheet	25	M 2.1 P.6/1-3,5 M. 2.2 P. 6/1 M. 3.2 P. 6/2 M. 3.1 P. 6/1,3 M 6.1 P. 6/1-6
4. Final	Examination	Test Paper	20	M 2.1 P.6/1-3,5 M. 2.2 P. 6/1 M. 3.2 P. 6/2 M. 3.1 P. 6/1,3 M 6.1 P. 6/1-6
5. Desirable Characteristics	1. Love of nation, religion and king 2. Honesty and integrity 3. Self-discipline 4. Avidity for learning 5. Observance of principles of sufficiency economy philosophy in one's way of life 6. Dedication and commitment to work 7. Cherishing Thai-ness 8. Public-mindedness	1. Observation	10	

	9. positive attitude towards Mathematics 10. Awareness of drugs and vices			
6. Competencies	1. Communication capacity 2. Thinking capacity 3. Problem solving capacity 4. Capacity for applying life skills 5. Capacity for technological application	1. Observation 2. Asking and answering question		
7. Reading, Analytical thinking, writing	Solving word problems	Worksheet / Exercise		

คุณลักษณะอันพึงประสงค์ 10 ข้อ

1. รักชาติ ศาสน์ กษัตริย์   2. ซื่อสัตย์สุจริต
3. มีวินัย   4. ใฝ่เรียนรู้
5. อยู่อย่างพอเพียง   6. มุ่งมั่นในการทำงาน
7. รักความเป็นไทย   8. มีจิตสาธารณะ
9. ปลอดสิ่งเสพติดและอบายมุข   10. มีความเป็นผู้นำและกล้าแสดงออก

สมรรถนะ 5 ข้อ

1. ความสามารถในการสื่อสาร   2. ความสามารถในการคิด
3. ความสามรถในการแก้ปัญหา   4. ความสามารถในการใช้ทักษะชีวิต
5. ความสามรถในการใช้เทคโนโลยี