Course Description

Subject: Mathematics 6 Code: MA16101 4 Periods/Week 4.0 Credits

Class: Primary 6A-B Semester 1-2/2014 Instructors: Mr. Michiel / Ms. Panitapat

Unit	Standard	Indicators
1. Numbers patterns 1.1 Picture patterns 1.2 Number patterns	M 4.1 M 6.1	P.6/1 Solve Problems involving pattern P.6/4 Accurately use mathematical language and symbols for communication of concepts and presentation
2. Whole Number 2.1. Ordering and Rounding (ASEAN) 2.2. Multiplication and Division 2.3. Order of operations and word problem	M 1.2 M 1.3 M 6.1	P.6/2 Analyze and show method of finding answers to problems and mix-problems of cardinal number P.6/1 Make approximate estimates of various integers of 10,000 100,00 1,000,000 cardinal number P.6/1 Apply diverse methods for problem-solving. P.6/2 Appropriately apply mathematical knowledge, skills and processes for problem-solving in various situations. P.6/3 Suitably provide reasoning for decision-making and appropriately present the conclusions reached.
3. Factors 3.1 Prime and common factors 3.2 H.C.F. 3.3 L.C.M.	M 4.1 M 6.1	P.6/2 Find highest common factor (H.C.F.) and lowest common multiples (L.C.M.) of cardinal numbers P.6/1 Apply diverse methods for problem-solving. P.6/2 Appropriately apply mathematical knowledge, skills and processes for problem-solving in various situations. P.6/3 Suitably provide reasoning for decision-making and appropriately present the conclusions reached.

Unit	Standard	Indicators
4. Equations 4.1 Substitution 4.2 Solving equations 4.3 Multiplying out brackets	M 1.4 M 4.2 M 6.1	P.6/ 1 Use communicative, associative and distributive properties in calculation P. 6/1 Write an equation based on a situation or problem, solve the equation and check the answer. P. 6/1 Apply diverse methods for problem-solving. P. 6/2 Appropriately apply mathematical knowledge, skills and processes for problem-solving in various situations. P. 6/3 Suitably provide reasoning for decision-making and appropriately present the conclusions reached.
5. Fractions 5.1 Addition and Subtraction 5.2 Multiplication and division 5.3 Word problems 5.4 Revision fractions	M 1.1 M 1.2 M 6.1	P.6/2 Compare and arrange sequence of fractions P. 6/1 Add, subtract and mix addition and subtraction, multiplication and division of fractions, mixed numbers P. 6/2 Analyses and show method of finding answers to problems and mix-problems of cardinal numbers, fractions mixed numbers P. 6/1 Apply diverse methods for problem solving. P. 6/2 Appropriately applies mathematical knowledge, skills and processes for problem solving in various situations. P. 6/3 Suitably provide reasoning for decision-making and appropriately present the conclusions reached.

Unit	Standard	Indicators
6. Decimals 6.1 Rounding and Ordering 6.2 Addition and Subtraction Multiplication and Division 6.3 Word problems	M 1.1 M 1.2 M 6.1	P. 6/1 Write and read decimal with not more than 3 places P. 6/2 Compare and arrange sequence of decimals with not more than 3 places P. 6/3 Write decimals in the form of fractions P. 6/1 Add, subtract and mix addition and subtraction, multiplication and division of decimals P. 6/2 Analyses and show method of finding answers to mix-problems of decimals P. 6/1 Apply diverse methods for problem-solving. P. 6/2 Appropriately applies mathematical knowledge, skills, and processes for problem solving in various situations. P.6/3 Suitably provide reasoning for decision-making and appropriately present the conclusions reached.
Semester 2/2013		
7. Direction 7.1 Scale, Compass and Directions (BOTANY)	M 2.1 M 2.2 M 6.1	P.6/1 Explain a route or indicate positions of various objects by specifying direction and real distance from pictures, maps and diagrams. P. 6/3 Draw diagrams showing positions of various objects and diagrams showing travel routes. P.6/2 Appropriately apply mathematical knowledge, skills and processes for problem-solving in various situations. P.6/5 Link various bodies of mathematical knowledge, and link mathematics with other disciplines P.6/6 Attain ability for creative thinking

Unit	Standard	Indicators
8. Graphs 8.1 Drawing bar and Line graphs (ASEAN), (BOTANY) 8.2 Pie charts (ASEAN),(BOTANY)	M 5.1 M 6.1	P. 6/1 Read data from Line graphs and Pie charts. P. 6/2 Draw comparative bar charts and Line graphs P.6/2 Appropriately apply mathematical knowledge, skills and processes for problem-solving in various situations. P.6/4 Accurately use mathematical language and symbols for communication of concepts and presentation P.6/5 Link various bodies of mathematical knowledge, and link mathematics with other disciplines
9. Probability 9.1 Interpreting information	M 5.2 M 6.1	P.6/1 Explain events by using terms with similar meaning to: -will definitely happen - may or may not happen -will definitely not happen P.6/2 Appropriately apply mathematical knowledge, skills and processes for problem-solving in various situations. P.6/3 Suitably provide reasoning for decision-making and appropriately present the conclusions reached. P.6/4 Accurately use mathematical language and symbols for communication of concepts and presentation P.6/6 Attain ability for creative thinking
10. Parallel Lines 10.1 Testing and Drawing Parallel lines	M 3.1 M 6.1	P.6/3 Identify which pair of straight lines is parallel P.6/1 Apply diverse methods for problem-solving. P.6/2 Appropriately apply mathematical knowledge, skills and processes for problem-solving in various situations.

Unit	Standard	Indicators
11. Percentages 11.1 Conversion 11.2 Word problems (ASEAN)	M 1.2 M 6.1	P. 6/2 Analyses and show method of finding answers to problems and mix-problems of percentages P.6/3 Suitably provide reasoning for decision-making and appropriately present the conclusions reached. P.6/5 Link various bodies of mathematical Knowledge, and link mathematics with other disciplines P.6/6 Attain ability for creative thinking
12. Quadrilaterals 12.1 Perimeter 12.2 Area 12.3 Angles 12.4 Word problems	M 2.1 M 2.2 M 3.1 M 3.2 M 6.1	P. 6/2 Find the area of quadrilateral P. 6/1 Solve problems involving area and perimeter of quadrilaterals P. 6/2 Identify characteristics of diagonals in various kinds of quadrilaterals P. 6/2 Construct various kinds of quadrilaterals P.6/1 Apply diverse methods for problem-solving. P.6/3 Suitably provide reasoning for decision-making and appropriately present the conclusions reached. P.6/5 Link various bodies of mathematical knowledge, and link mathematics with other disciplines P.6/6 Attain ability for creative thinking
13. Circles 13.1 Circumference 13.2 Area 13.3 Word Problems	M 2.1 M 2.2 M 6.1	P. 6/3 Find the circumference and area of circles P. 6/1 Solve problems involving area and perimeter of circles P.6/2 Appropriately apply mathematical knowledge, skills and processes for problem-solving in various situations. P.6/3 Suitably provide reasoning for decision-making and appropriately present the conclusions reached. P.6/4 Accurately use mathematical language and symbols for communication of concepts and presentation P.6/6 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 2.1 P.6/1 M 2.2 P. 6/3 M 5.1 P.6/1-2 M 5.2 P. 6/1 M 3.1 P. 6/3 M 1.2 P. 6/2 M 6.1 P.6/1-6
2. Midterm	Examination	Test paper	20	M 2.1 P.6/1 M 2.2 P. 6/3 M 5.1 P.6/1-2 M 5.2 P. 6/1 M 3.1 P. 6/3 M 1.2 P. 6/2 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.6/2-3, M. 2.2 P. 6/1-2 M. 3.1 P. 6/1-2 M. 3.2 P. 6/1-2 M 6.1 P. 6/1-6
4. Final	Examination	Test paper	20	M 2.1 P.6/2-3, M. 2.2 P. 6/1-2 M. 3.1 P. 6/1-2 M. 3.2 P. 6/1-2 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	1. Observation	10	

	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			
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		

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	Unit 7 M 2.1 P.6/1 M 2.2 P. 6/3 M 6.1 P.6/2 ,6/5,6/6 Unit 8 M 5.1 P.6/1-2 M 6.1 P.6/2 ,6/5,6/6 Unit 9 M 5.2 P. 6/1 M 6.1 P.6/2-3,P6/4-5
2. Midterm	Examination	Test paper	20	Unit 7-8-9 Unit 10 M. 3.1 P. 6/1-2 M 6.1 P.6/1-2
3. Post-Midterm	1. Quiz 2. Course book 3. Participation	1. Mark/score 2. Checking Exercises 3. Observation sheet	25	Unit 11 M 1.1 P.6/2-3 M 6.1 P.6/5 -6 Unit 12 M 2.1 P.6/2 M 2.2 P.6/1 M. 3.1 P. 6/2 M. 3.2 P. 6/2 M 6.1 P.6/1 -3,P6/5-6
4. Final	Examination	Test paper	20	Unit 11 -12 Unit 13 M 2.1 P.6/3 M. 2.2 P. 6/1 M. 6.1 P. 6/2-4, P. 6/6

Measurement and Evaluation	Evaluation Method	Assessment Tools	Marks	Standard/ Indicators
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. 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. ความสามรถในการใช้ทักษะชีวิต
5. ความสามรถในการใช้เทคโนโลยี