St. Joseph Rayong School
Course Outline

2nd Semester grade 6 AEL Curriculum - Math (2018-19)

Unit Name and Number	Week No.	Content Headings	Key Sub-Topics / Context / Vocabulary	Projects / Graded Assignments	Question Style for Exam	Justification for Exam Content: Bloom's Taxonomy	Government Objectives
Unit 3. Numbers II	1	Decimals	A.Three-place decimals B.Comparing and ordering decimals	Textbook: pages 8-10 Workbook: pages 1-4	Multiple choice (Reading, comparing and ordering decimals)	**Understand**	MA 1.1/1 Read and write deciamls (up to 3 decimal places).
		Activities: Put students in groups. Each group will create 5 different decimals compare these numbers and arrange them in ascending and descending order.	Vocabulary: decimal; tenths; hundredths; thousandths; place value; digit value; compare; ordered; ascending; descending	Spelling test (10 points for objective score)	n/a	Students will understand the steps to compare and order decimals with different decimal places.	MA1.1/2 Compare and order fraction (up to 3 decimal places).
Unit 3. Numbers II	2	Decimals	C. Converting decimals D. Rounding off decimals	Textbook: pages 22-23, 26-28 Workbook: pages 5-8	Multiple choice (Converting and rounding off decimals)	**Remember**	MA 1.1/3 Express a decimals as a fraction as a decimal.
		Activities: Answer the workbook: Test yourself pages 9-12.	Vocabulary: convert; fraction; denominator; simplest; round off; smallest; nearest tenths; nearest hundredths; nearest thousandths	Spelling test (10 points for objective score)	n/a	Students will be able to convert the decimal numbers to fractions correctly.	MA 1.3/2 Estimate decimals up to 3 decimal places.
Unit 3. Numbers II	3	Operations of Decimals	A. Adding and subtracting decimals B. Multiplying decimals C. Dividing decimals	Textbook: pages 41, 50-51, 58-59 Workbook: pages 13-24	Solve each of the following given problem. (Addition, subtraction, multiplication and division)	**Apply**	MA 1.2/1 Add, subtract, multiply and divide decimals find the answers to multi-step calculation involving addition, subtraction, multiplication and division.
		Activities: Put students into groups to discuss real-life scenarious where they would have to perform the four operation of decimals.	Vocabulary: add; subtract; multiply; divide; convert fraction; denominator; product; qoutient; divisor; dividend; reciprocal; remainders	Spelling test (10 points for objective score)	n/a	Students are able to apply this knowledge correctly to answer the four operations of decimals.	

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Unit 3. Numbers II	4	Operations of Decimals	D. Solving word problems with decimals E. Creating word problems with decimals	Textbook: pages 64, 67 Workbook: pages 25-29	Solve the following problem (Addition, subtraction, multiplication and division of decimals)	**Create**	MA 1.2/2 Analyze and solve muti-step word problems involving addition, subtraction, multiplication and division of percentages; and create word problem involving addition, subtraction, multiplication and division of whole numbers.
		Activities: Put students into groups to create word problems from the given decimal numbers and information. Groups will then exchange and solve each others word problems.	Vocabulary: total; altogether; nearer than, approximate; equal distance; create; capacity; difference; distributed	Spelling test (10 points for objective score)	n/a	Students will be able to create mathematically word problems with decimal numbers and check the validity of the word problems thay have created.	
Unit 3. Numbers II	5	Operations of Decimals	F. Mixed operations with decimals G. Solving mixed operations word problems H. Creating mixed-operation word problems	Textbook: pages 73, 77 Workbook: pages 30-35	Solve the following mixed-operation of decimals.	**Apply**	MA 1.2/2 Analyze and solve muti-step word problems involving addition, subtraction, multiplication and division of percentages; and create word problem involving addition, subtraction, multiplication and division of whole numbers.
		Activities: Answer the workbook: Test yourself pages 36-39.	Vocabulary: operation; bracket; calculate; left; validity; distance; capacity; a pair; total weight; height; weight	Spelling test (10 points for objective score)	n/a	Students will be able to apply the steps to solving mixed operation problems correctly and check the validity of the answers.	

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Unit 4. Geometry	6	Quadrilaterals **Activities: (i) Answer the workbook: Test yourself pages 45-48. (ii) Choose volunteers to create quadtrilaterals on the board and have to label the vertices and idntify sides, interior angles,and diagonal of the quadrilaterals.**	A. Properties of quadrilaterals B. Diagonals of quadrilateral C. Construction of quadrilaterals Vocabulary: quadrilateral; interior angle; adjacent; trapezoid; parallelogram; kite; rectangle; square; rhombus; dimension; intersection; diagonal; consturct; protractor	Textbook: pages 85, 92, 98Worbook: pages Spelling test (10 points for objective score)	Fill in the blanks (identify or name the following quadrilaterals of the given pictures) n/a	**Analyse** Students will be able to analyse quadrilaterals and answer the questions related to their knowledge and be able to correctly construct quadrilateral of the given dimension.	MA 3.1/2 Describe properties of diagonals of quadrilaterals.
Unit 4. Geometry	7	Area and Perimeter of Quadrilaterals **Activities: Put students into groups. Each group will choose an object in the shape of a quadrilateral in the classroom and find its area and perimeter by applying the knowledge obtained in the previous lessons creatively.**	A. Perimeter of quadrilateral B. Area of quadrilateral Vocabulary: perimeter; square; rectangle; parallelogram; rhombus; kite; trapezoid; area; base; height; calculate	Textbook: pages 104, 111 Workbook: pages 51-52 Spelling test (10 points for objective score)	Solve the following given objects. (perimeter and area) n/a	**Apply** Students will be able to correctly apply the knowledge gained to find the area and perimeter of quadrilateral from the given information.	MA 2.1/2 Find the perimeter and area of quadrilateral

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Unit 4. Geometry	8	Area and Perimeter of Quadrilaterals **Activities: (i) Answer the workbook: Test yourself pages 59-62.** **(ii) Each group will create three different quadrilaterals from the given dimensions and then exchange the quadrilaterals they have created to estimate the area of the figures and verify the estimations.**	C. Estimating the area of quadrilateras D. Solving word problems Vocabulary: estimate; dimension; diagonal; measure; area; unit; figures; verify the answer; information; sides; height	Textbook: pages 115, 120 Workbook: pages 53-58 Spelling test (10 points for objective score)	Estimate the area of each given figures and solve the given problem. n/a	**Understand** Students will be able to estimate the answer by measuring the actual dimensions of the quadrilaterals before calculating the area.	MA 2.2/1 Solve problems involving the area and the perimeter of a quadrilateral and a circle.
Midterm Exam	9	A. Decimal B. Operations od decimal C. Quadrilateral D. Area and perimeter of quadrilateral **Activities:**					
Christmas Holiday	10	**Activities:**					

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Unit 4. Geometry	11 12	Circumference and Area of Circles **Activities: (i) Answer the workbook: Test yourself pages 71-74. (ii) Put students into groups to discuss the various forms of circles that they have seen in their daily life. Groups will then analyze the given object, plan the creative ways of finding the circumference of a chosen circular object and evaluate their method.**	A. Circumference of circles B. Area of circles C. Solving word problems Vocabulary: circumference; circle; diameter; radius; area, base; height; sector; paralleogram; remaining area; formula; step; plan	Textbook: pages 124, 127, 130 Workbook: pages 63-70 Spelling test (10 points for objective score)	Find the area of each figure. Solve the given word problem. n/a	**Analyse** Students will be able to correctly analyse the given information and apply the formula to calculate the circumference of a circle and the area of a circle.	MA 2.1/3 Find the circumference and the area of a circle. MA 2.2/1 Solve problems involving the area and the perimeter of a quadrilateral and a circle.
Unit 4. Geometry	13	Three-dimensional Figures **Activities: (i) Provide each group a paper and a ping pong ball. Assign them to create a net that makes up a shape that can fir a ping-pong ball inside perfectly. (ii) Draw a three-dimensional figure that you get from the given net.**	A. Identifying three-dimensional figures B. Understanding nets Vocabulary: sphere; radius; center; hemisphere; cone; vertex; curved surface; cylinder; prisms; quadrilateral prism; cuboid; cube; lateral faces; pentagonal prism; hexagonal prism; pyramids; net	Textbook: pages 138, 146 Workbook: pages 75-76 Spelling test (10 points for objective score)	Identify the following three-dimensional figures formed by each of the given nets. n/a	**Create** Students will be able to identify and create different nets of the given three-dimensional figures.	MA 2.2/2 Solve problems involving the volume/capacity of a cuboid. MA 3.1/1 Identify two-dimensional geometric shapes in three-dimensional geometric shapes.

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Unit 4. Geometry	14	Three-dimensional Figures	C. Volume and capacity of cubes and cuboids D. Solving word problems related to volume and capacity of cuboids	Textbook: pages 150, 153 Workbook: pages 77-81	(i) Find the volume and capacity. (cube and cuboid) (ii) Solve the given word problem.	**Understand**	MA 3.2/1 Make cuboids, cones, prisms and pyramids from nets or two-dimensional geometric shapes.
		Activities: (i) Answer the workbook: Test yourself pages 82-85. (ii) Choose volunteers to create a cuboid of the given volume by using cubes to build the blocks on the board.	Vocabulary: volume; capacity; cubic unit; cubic centimeter; width; length; height; distributed; symbol; different	Spelling test (10 points for objective score)	n/a	Students will be able to correctly count the number of cubes and caculate the volume and capacity of cuboids by applying the formula for volume and capacity.	
Unit 5. Percentages, Statistics and Patterns	15	Percentages	A. Problem solving of percentages B. Percentage word problems related to singular trading	Textbook: pages 163, 176-177 Workbook: pages 87-101	Solve the following word problem. (using percentage)	**Apply**	MA 1.2/2 Analyze and solve muti-step word problems involving addition, subtraction, multiplication and division of percentages; and create word problem involving addition, subtraction, multiplication and division of whole numbers.
		Activities: Put students into groups. Each group will then brainstorm ideas on real-life situations where they may apply the rule of three on the method of converting percentage to fraction to find percentage values.	Vocabulary: percentage; represent; shaded part; fraction; per week; profit; loss; discount; selling price; cost price	Spelling test (10 points for objective score)	n/a	Students will be able to solve the related questions by applying their knowledge of percentages.	

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Unit 5. Percentages, Statistics and Patterns	16	Percentages **Activities: (i) Answer the workbook: Test yourself pages 110-112. (ii) Let all students create questions about percenatge word problems related to multiple trading that found in daily life. And solve problems and expalin the method to the class.**	C. Percentage word problems related to multiple trading D. Word problems related to interest Vocabulary: profit; principal; interest; interest rate; total amount; discount; accumulation	Textbook: pages 180, 184 Workbook: pages 102-109 n/a	Solve the following word problem. (using percentage)	**Create** Students will be able to create word problems related to multiple trading.	MA 1.2/2 Analyze and solve muti-step word problems involving addition, subtraction, multiplication and division of percentages; and create word problem involving addition, subtraction, multiplication and division of whole numbers.
Unit 5. Percentages, Statistics and Patterns	17	Statistics **Activities: (i) Answer the workbook: pages 123-128.** **(ii) Put students into groups to gather data on real-life situations. And suitable table and create a bar graph represent the information, present and explain the solutions to the class.**	A. Reading comparative data graphs. B. Drawing comparative data graphs C. Probability Vocabulary: bar graphs; horizontal clustered bar; reduced scale; line graph; pie charts; average; probability; most probable; least probable; possible; impossible; certain; definite	Textbook: pages 194-198; 203; 206 Workbook: pages 113-122 Spelling test (10 points for objective score)	i. Study the bar graph carefully and answer the questions. ii. State the correct type of events of the given statements.	**Apply** Students will be able to apply the steps and create a complete bar chart with reduce scale, an appropriate tittle, and the labels to represent the given data.	MA 5.1/1 Read line graphs and pie charts ; and make comparative bar charts and line graphs. MA 5.2/1 Describe events using the words that have the same meaning as the following terms: certain, possible, impossible.

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Unit 5. Percentages, Statistics and Patterns	18	Patterns **Activities: (i) Answer the workbook: Test yourself pages 134 - 137. (ii) In a group, they will make their own pattern and exchange with each group and complete the pattern and present to the class.**	A. Number patterns B. Other patterns Vocabulary: number pattern; repeated; geometric; odd numbers; figures	Textbook: pages 212, 215 Workboo: pages 129-133 Spelling test (10 points for objective score)	i.Complete the number pattern of each of the following. ii. Read the information and create the figure required. n/a	**Analyse** Students' should analyse the series of numbers carefully before identifying the number pattern in order to solve the question.	MA 4.1/1 Solve problems involving patterns.
Review and Final exam	19	A. Circumference and area of circles B. Three-dimensional figures C. Percentages D. Statistics E. Patterns **Activities:**					
	20	**Activities:**					