

Wah Yan College Kowloon
F.1 Mathematics Scheme of Work (2017-2018)

Textbook	1. New Progress in Junior Mathematics 1A (Second Edition) (with Skills Drilling Exercises and Bridging for Learning Junior Mathematics) 2. New Progress in Junior Mathematics 1B (Second Edition) (with Skills Drilling Exercises, 2 nd)
Other Resources	

◆ **Repertoire of Self-directed Learning Skills:**

1. reading to learn, 2. notes-taking, 3. looking up words in the dictionary, 4. pre-lesson preparation, 5. group discussion, 6. group presentation, 7. initiative to ask questions, 8. setting learning objectives and doing reflection, 9. eLearning platform with instant feedback, 10. flipped classroom, 11. peer assessment, 12. searching for information on the internet, 13. project learning, 14. training of higher-order thinking skills, etc.

SL: Scheduled number of lessons

AL: Actual number of lessons

School Term	Weeks	Topics/ Extended Parts*	Learning Objectives/ Teaching Focus	SL/AL	Teaching and Learning Activities	Consolidation and Assessment	Self-directed Learning Skills◆	Values [#]	Basic Law Education
First Term (3/9/2017- 30/12/2017, Weeks 1-17)	1	Chapter 0 Fundamental Mathematics <ul style="list-style-type: none"> • Review the concepts of numbers, fractions and basic arithmetic operations • Understand the use of brackets • Find H.C.F. and L.C.M. by the product of prime factors 	0.1 Basic Arithmetic Knowledge (pp.0.2 – 0.6) <ul style="list-style-type: none"> • Teachers should introduce some basic terms that students encountered at the primary level. • Students should review the four 	1 period /1 period	Demonstrating some examples and giving some classwork	<ul style="list-style-type: none"> • Workbook 0.1 • Test Bank 0.1 			

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		<ul style="list-style-type: none"> Review the concepts of measuring units Understand the use of protractors 	basic arithmetic operations (addition, subtraction, multiplication and division) and be able to use brackets.						
			<p>0.2 Factors and Multiples (pp.0.6 – 0.14)</p> <ul style="list-style-type: none"> Teachers should introduce prime numbers, composite numbers and index notation. Students should be able to express a composite number into a product of prime factors. Apart from finding H.C.F. and L.C.M. by listing 	1 period /1 period	Demonstrating some examples and giving some classwork	<ul style="list-style-type: none"> Workbook 0.2 Test Bank 0.2 			

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			the common factors and common multiples respectively, teachers should also introduce using factorization and short division to find the H.C.F. and L.C.M.						
			<p>0.3 Fractions (pp.0.14 – 0.23)</p> <ul style="list-style-type: none"> Students should review the operations of fractions. Teachers should emphasis on the addition and subtraction of fractions with different denominators by using the concept 	1 period /1 period	Demonstrating some examples and giving some classwork	<ul style="list-style-type: none"> Workbook 0.3 Test Bank 0.3 			

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			of equivalent fractions.						
			0.4 Basic Units (pp.0.24 – 0.32) <ul style="list-style-type: none"> Students should review the conversion between the units of length, area, mass (weight) and time. 	1 period /1 period	Demonstrating some examples and giving some classwork	<ul style="list-style-type: none"> Workbook 0.4 Test Bank 0.4 			
			0.5 Angles (pp.0.33 – 0.36) <ul style="list-style-type: none"> Teachers should introduce the use of a protractor to measure and construct angles. 	1 period /1 period	Demonstrating some examples and giving some classwork	<ul style="list-style-type: none"> Workbook 0.5 Test Bank 0.5 			
	2-4	Chapter 1 Directed Numbers <ul style="list-style-type: none"> Understand and accept intuitively the concept and uses negative numbers 	Let's Warm Up (p.1.4) <ul style="list-style-type: none"> Teachers can ask students to review the ordering of numbers and the 	0.5 period /0.5 period	Demonstrating some examples and giving some classwork	<ul style="list-style-type: none"> Warm-up Worksheet 1 Test Bank 1.0 			

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		<ul style="list-style-type: none"> Recognize the concept of ordering on the number line Manipulate directed numbers 	basic arithmetic operations.						
			<p>1.1 Introduction to Directed Numbers (pp.1.4 – 1.14)</p> <ul style="list-style-type: none"> Teachers should introduce positive and negative numbers by using real-life situations. Students should learn the concept of opposite numbers (and magnitude of directed numbers). Students should learn the use of the number line to compare the values of directed 	2 periods /2 periods	Demonstrating some examples and giving some classwork	<ul style="list-style-type: none"> Worksheet 1.1 Workbook 1.1 Ongoing Assessment Package: Quiz 1.1 Test Bank 1.1 			

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			numbers.						
			<p>1.2 Addition and Subtraction of Directed Numbers (pp.1.14 – 1.29)</p> <ul style="list-style-type: none"> Students should be able to use the number line to perform the addition and subtraction of directed numbers. Besides using the number line, students should learn the rules for removing brackets to perform the addition and subtraction of directed numbers. 	4 periods /4 periods	Demonstrating some examples and giving some classwork	<ul style="list-style-type: none"> Worksheet 1.2 Workbook 1.2 Ongoing Assessment Package: Quiz 1.2 Test Bank 1.2 			
		Remarks: Throughout Book 1A and	1.3 Multiplication and Division of	5 periods	Demonstrating some	<ul style="list-style-type: none"> Worksheet 1.3 			

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		<p>Book 1B, the use of index notation will be restricted to the calculation of given numbers (area of square = 5^2, volume of cube = 2^3, etc.).</p> <p>The index notation will be introduced again in the chapter ‘Manipulations and Factorization of Polynomials’ (Chapter 1 of Book 2A).</p>	<p>Directed Numbers (pp.1.30 – 1.38)</p> <ul style="list-style-type: none"> Teachers should emphasize on the rules for multiplication and division. Students should learn the use of index notation for directed numbers such as $(-3)^2$. Students should learn to perform the mixed operations of directed numbers. 		examples and giving some classwork	<ul style="list-style-type: none"> Workbook 1.3 Ongoing Assessment Package: Quiz 1.3 Test Bank 1.3 			
			<p>Chapter Summary</p> <p>Assess Your Progress</p> <p>Revision Exercise</p> <p>Enrichment</p> <p>Mathematics – Game of Directed Numbers</p>	<p>0.5 period</p> <p>/0.5 period</p>	Demonstrating some examples and giving some	<ul style="list-style-type: none"> Workbook TSA Supplement 			

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			<p>(p.1.46)</p> <ul style="list-style-type: none"> This game provides practice to students for the operations of directed numbers. 		classwork	<ul style="list-style-type: none"> ary Exercises Intensive Practice Ongoing Assessment Package: Formative Assessment 1 Test Bank (Multiple-choice Questions) 			
	5-7	<p>Chapter 2</p> <p>Using Algebra to Solve Problems</p> <ul style="list-style-type: none"> Appreciate the use of letters to represent numbers Understand the language of algebra including translating word phrases into algebraic 	<p>Let's Warm Up (p.2.4)</p> <ul style="list-style-type: none"> Teachers can ask students to represent simple situations using expressions and equations. 	0.5 period /0.5 period	Demonstrating some examples and giving some classwork	<ul style="list-style-type: none"> Warm-up Worksheet 2 Test Bank 2.0 			

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		<p>expressions or writing descriptive statements for algebraic expressions</p> <ul style="list-style-type: none"> Note the differences between the language of arithmetic and the language of algebra Recognize some common and simple formulas and be able to substitute values Formulate simple algebraic equations to solve problems <p>Enrichment:</p> <ul style="list-style-type: none"> Solve literal equations 							
			<p>2.1 Introduction to Algebra (pp.2.5 – 2.13)</p> <ul style="list-style-type: none"> Students should learn expressing a word sentence in an algebraic expression, and 	<p>2.5 periods /2.5 periods</p>	<p>Demonstrating some examples and giving some classwork</p>	<ul style="list-style-type: none"> Worksheet 2.1 Workbook 2.1 Ongoing Assessment Package: 			

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			vice versa. <ul style="list-style-type: none"> Students should learn grouping and combining like terms in simple algebraic expressions. 			Quiz 2.1 <ul style="list-style-type: none"> Test Bank 2.1 			
			2.2 Formulas and Method of Substitution (pp.2.13 – 2.19) <ul style="list-style-type: none"> Students should recognize some common formulas in geometry. Students should be able to find the value of an unknown by substituting the known values in a formula. 	2 periods /2 periods	Demonstrating some examples and giving some classwork	<ul style="list-style-type: none"> Worksheet 2.2 Workbook 2.2 Ongoing Assessment Package: Quiz 2.2 Test Bank 2.2 			
			2.3 Solving Equations in	1 period /1 period	Demonstrating some	<ul style="list-style-type: none"> Worksheet 2.3 			

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			<p>One Unknown (pp.2.19 – 2.25)</p> <ul style="list-style-type: none"> Working through Inspiring Task 2.2, students should consolidate their basic concepts in solving equations in one unknown. (They learnt solving equations with no more than two steps at the primary level.) 		examples and giving some classwork	<ul style="list-style-type: none"> Workbook 2.3 Ongoing Assessment Package: Quiz 2.3 Test Bank 2.3 			
			<p>2.4 More about Solving Equations in One Unknown (pp.2.26 – 2.32)</p> <ul style="list-style-type: none"> Teachers should introduce the techniques of solving equations involving like 	2.5 periods /2.5 periods	Demonstrating some examples and giving some classwork	<ul style="list-style-type: none"> Worksheet 2.4 Workbook 2.4 Ongoing Assessment Package: Quiz 2.4 Test Bank 2.4 			

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			<p>terms, brackets and fractions. (These techniques are also called grouping like terms, removing brackets and simplifying fractions.)</p> <ul style="list-style-type: none"> Teachers may use Worksheet 2.4A, 2.4B and 2.4C to help students simplifying expressions before solving equations. 						
			<p>2.5 Applications of Equations in One Unknown (pp.2.33 – 2.39)</p> <ul style="list-style-type: none"> Teachers should point out the importance of the working steps for solving a problem. 	<p>3 periods /3 periods</p>	<p>Demonstrating some examples and giving some classwork</p>	<ul style="list-style-type: none"> Worksheet 2.5 Workbook 2.5 Ongoing Assessment Package: Quiz 2.5 Test Bank 			

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						2.5			
			<p>Chapter Summary Assess Your Progress Revision Exercise Enrichment Mathematics – How to Solve Literal Equations? (p.2.49)</p> <ul style="list-style-type: none"> Teachers can ask students to compare the working steps of solving an algebraic equation and a literal equation. 	0.5 period /0.5 period	Demonstrating some examples and giving some classwork	<ul style="list-style-type: none"> Workbook TSA Supplement ary Exercises Intensive Practice Ongoing Assessment Package: Formative Assessment 2 Test Bank (Multiple-choice Questions) 			
	8-10	Chapter 3 Percentages	Let's Warm Up	0.5 period	Demonstrating	<ul style="list-style-type: none"> Warm-up 			

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		<ul style="list-style-type: none"> Understand the meaning of percentages and percentage changes Apply percentage changes to solve simple selling problems 	<p>(p.3.4)</p> <ul style="list-style-type: none"> Students should review the conversion between percentages and fractions/decimal. 	/0.5 period	some examples and giving some classwork	Worksheet 3 <ul style="list-style-type: none"> Test Bank 3.0 			
			<p>3.1 Simple Applications of Percentages (pp.3.5 – 3.13)</p> <ul style="list-style-type: none"> Teachers should emphasis on the relationship between a part and the whole. Teachers should also emphasis on the importance of setting up equations to solve simple problems involving percentages. 	2.5 periods /2.5 periods	Demonstrating some examples and giving some classwork	<ul style="list-style-type: none"> Worksheet 3.1 Workbook 3.1 Ongoing Assessment Package: Quiz 3.1 Test Bank 3.1 			
			<p>3.2 Percentage Change</p>	2.5 periods /3.5 periods	Demonstrating some	<ul style="list-style-type: none"> Worksheet 3.2 			

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			<p>(pp.3.13 – 3.26)</p> <ul style="list-style-type: none"> Working through Inspiring Task 3.1, students should be able to make conclusions by using percentages to show the increase of a value. Students should understand the concepts of percentage decrease and percentage change more easily once they learnt the concept of percentage increase. 		examples and giving some classwork	<ul style="list-style-type: none"> Workbook 3.2 Ongoing Assessment Package: Quiz 3.2 Test Bank 3.2 			
			<p>3.3 Profit and Loss (pp.3.26 – 3.35)</p> <ul style="list-style-type: none"> Teachers may ask students to carry out a role-play to 	2.5 periods /2.5 periods	Demonstrating some examples and giving some classwork	<ul style="list-style-type: none"> Worksheet 3.3 Workbook 3.3 Ongoing 			

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			<p>explore the profit or loss in a trade.</p> <ul style="list-style-type: none"> Teachers can use the concept of percentage increase and decrease to introduce profit percentage and loss percentage respectively. 			<p>Assessment Package: Quiz 3.3</p> <ul style="list-style-type: none"> Test Bank 3.3 			
			<p>3.4 Discount (pp.3.35 – 3.41)</p> <ul style="list-style-type: none"> Students may get confused with the terms ‘cost’, ‘marked price’, ‘selling price’ and ‘discount’. Teachers should give more examples to explain these terms. Teachers may introduce the 	<p>1.5 periods /1.5 periods</p>	<p>Demonstrating some examples and giving some classwork</p>	<ul style="list-style-type: none"> Worksheet 3.4 Workbook 3.4 Ongoing Assessment Package: Quiz 3.4 Test Bank 3.4 			

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			concepts of discount and discount percentage by using the Case Study at the beginning of the chapter.						
			<p>Chapter Summary</p> <p>Assess Your Progress</p> <p>Revision Exercise</p> <p>Enrichment</p> <p>Mathematics – Is a 100% Increase Always Greater Than a 10% Increase? (p.3.53)</p> <ul style="list-style-type: none"> This enrichment mathematics helps students explore the use of percentages to present changes of values. 	0.5 period /0.5 period	Demonstrating some examples and giving some classwork	<ul style="list-style-type: none"> Workbook TSA Supplementary Exercises Intensive Practice Ongoing Assessment Package: Formative Assessment <p>3</p>			

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						<ul style="list-style-type: none"> Test Bank (Multiple-choice Questions) 			
	11-12	Chapter 4 Estimation in Numbers and Measurement <ul style="list-style-type: none"> Recognize the need to use estimation strategies Determine whether to use estimate values or exact values Select an appropriate estimation strategy and justify the result Choose an appropriate means for calculation such as mental computation, calculators or paper and pencil Recognize the approximate nature of measurement Choose an appropriate 	Let's Warm Up (p.4.4) <ul style="list-style-type: none"> Teachers can ask students to review the meaning of the place values of the digits in a number, and the method of rounding off a number. 	0.5 period /0.5 period	Demonstrating some examples and giving some classwork	<ul style="list-style-type: none"> Warm-up Worksheet 4 Test Bank 4.0 			

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		<p>measuring tool, technique, unit and degree of accuracy for a particular purpose</p> <ul style="list-style-type: none"> Estimate, measure and calculate various kinds of quantities Appreciate the past attempts to approximate the value of π 							
			<p>4.1 Concepts of Estimation (pp.4.4 – 4.7)</p> <ul style="list-style-type: none"> Teachers should introduce the concept of estimation and explain the use of estimation in real-life situations. 	<p>1 period /1 period</p>	<p>Demonstrating some examples and giving some classwork</p>	<ul style="list-style-type: none"> Worksheet 4.1 Workbook 4.1 			
			<p>4.2 Estimation Strategies (pp.4.7 – 4.19)</p> <ul style="list-style-type: none"> Teachers can 	<p>4 periods /4 periods</p>	<p>Demonstrating some examples and giving some</p>	<ul style="list-style-type: none"> Worksheet 4.2 Workbook 4.2 			

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			<p>introduce different estimation strategies such as</p> <ul style="list-style-type: none"> - reformulation strategy, <ul style="list-style-type: none"> (a) rounding off (b) using compatible numbers (c) using a clustered value - compensation strategy, - translation strategy, and - round up and round down strategies. <ul style="list-style-type: none"> • Students should be able to choose an appropriate estimation strategy for an expression. • Students should 		classwork	<ul style="list-style-type: none"> • Ongoing Assessment Package: Quiz 4.2 • Test Bank 4.2 			

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			recognize that there are different means for calculation.						
			4.3 Concepts of Measurement (pp.4.20 – 4.27) <ul style="list-style-type: none"> Working through Inspiring Task 4.4, students may recognize the approximate nature of measurement. Students should be able to choose appropriate measuring tools, units and degrees of accuracy for measurement. 	1.5 periods /1.5 periods	Demonstrating some examples and giving some classwork	<ul style="list-style-type: none"> Worksheet 4.3 Workbook 4.3 Ongoing Assessment Package: Quiz 4.3 Test Bank 4.3 			
			4.4 Estimation Strategies in Measurement (pp.4.27 – 4.37) <ul style="list-style-type: none"> Teachers should 	3.5 periods /3.5 periods	Demonstrating some examples and giving some classwork	<ul style="list-style-type: none"> Worksheet 4.4 Workbook 4.4 Ongoing 			

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			introduce different estimation strategies in measurement such as benchmark strategy and decomposition-recomposition strategy, and introduce the methods for reducing errors.			Assessment Package: Quiz 4.4 • Test Bank 4.4			
			Chapter Summary Assess Your Progress Revision Exercise Enrichment Mathematics – How to Estimate π? (p.4.47) <ul style="list-style-type: none"> This enrichment provides some historic information about the past attempts of 	0.5 period /0.5 period	Demonstrating some examples and giving some classwork	<ul style="list-style-type: none"> Workbook TSA Supplement ary Exercises Intensive Practice Ongoing Assessment 			

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			approximating the value of π .			Package: Formative Assessment 4 • Test Bank (Multiple-choice Questions)			
	12-13	Chapter 5 Introduction to Geometry <ul style="list-style-type: none"> Recognize the common terms and notations in geometry such as line segments, angles, regular polygons, cubes and regular polyhedra (Platonic solids) Identify types of angles and polygons Sketch the 2-D representation of simple solids Sketch the cross-sections 	Let's Warm Up (pp.5.4 – 5.5) <ul style="list-style-type: none"> Teachers can ask students to review the types of lines, angles, plane figures and solid figures. 	0.5 period /0.5 period	Demonstrating some examples and giving some classwork	<ul style="list-style-type: none"> Warm-up Worksheet 5 Test Bank 5.0 			

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		<p>of the solids</p> <ul style="list-style-type: none"> Overview tools of geometry and explore ways of using them to construct polygons, circles, parallel and perpendicular lines <p>Enrichment:</p> <ul style="list-style-type: none"> Recognize some semi-regular polyhedra (Archimedean solids) 							
			<p>5.1 The Basic Knowledge of Geometry (pp.5.5 – 5.17)</p> <ul style="list-style-type: none"> Teachers should introduce the concepts of <ul style="list-style-type: none"> points, lines, surfaces, angles, and lines on a plane. Students should learn to identify 	<p>2 periods /2 periods</p>	<p>Demonstrating some examples and giving some classwork</p>	<ul style="list-style-type: none"> Worksheet 5.1 Workbook 5.1 Ongoing Assessment Package: Quiz 5.1 Test Bank 5.1 			

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			<p>different types of angles.</p> <ul style="list-style-type: none"> • Students should learn to use a protractor to measure and construct angles. • Teachers should introduce parallel lines and perpendicular lines by using real-life situations. 						
			<p>5.2 Plane Figures (pp.5.17 – 5.28)</p> <ul style="list-style-type: none"> • Students should recognize the common terms in circles, triangles and polygons. • Students should learn to classify triangles according to the sizes of their 	<p>2.5 periods /2.5 periods</p>	<p>Demonstrating some examples and giving some classwork</p>	<ul style="list-style-type: none"> • Worksheet 5.2 • Workbook 5.2 • Ongoing Assessment Package: Quiz 5.2 • Test Bank 5.2 			

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			interior angles or their side lengths. <ul style="list-style-type: none"> Working through Inspiring Task 5.1, students should understand the sum of the interior angles of a triangle equals 180°. Students should learn to classify polygons by different methods. 						
			5.3 Solid Figures (pp.5.28 – 5.38) <ul style="list-style-type: none"> Teachers should introduce some common solid figures. Students should recognize some common terms in polyhedra. Students should 	3 periods /3 periods	Demonstrating some examples and giving some classwork	<ul style="list-style-type: none"> Worksheet 5.3 Workbook 5.3 Ongoing Assessment Package: Quiz 5.3 Test Bank 5.3 			

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			<p>learn to sketch the 2-D representation of simple solids by using isometric-grid paper and oblique-grid paper.</p> <ul style="list-style-type: none"> Students should learn to identify and sketch cross-sections of solids. 						
			<p>5.4 The Construction of Geometric Figures (pp.5.38 – 5.47)</p> <ul style="list-style-type: none"> Teachers should introduce some common drawing tools for drawing geometric figures, including rulers, protractors, 	<p>3.5 periods /3.5 periods</p>	<p>Demonstrating some examples and giving some classwork</p>	<ul style="list-style-type: none"> Worksheet 5.4 Workbook 5.4 Ongoing Assessment Package: Quiz 55.4 Test Bank.4 			

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			<p>compasses and set squares.</p> <ul style="list-style-type: none"> This section provides practice to students for constructing parallel lines, perpendicular lines, circles and triangles. 						
			<p>Chapter Summary Assess Your Progress Revision Exercise Enrichment Mathematics – What Are the Archimedean Solids? (p.5.59)</p> <ul style="list-style-type: none"> This enrichment introduces the Archimedean solids. 	<p>0.5 period /0.5 period</p>	<p>Demonstrating some examples and giving some classwork</p>	<ul style="list-style-type: none"> Workbook TSA Supplementary Exercises Intensive Practice Ongoing Assessment Package: 			

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						Formative Assessment 5 • Test Bank (Multiple-choice Questions)			
Second Term (31/12/2017-18/7/2018, Weeks 18-46)	18-20	Chapter 6 Introduction to Statistics <ul style="list-style-type: none"> Recognize the various stages involved in statistics Use simple methods to collect data for analysis Recognize discrete and continuous data Understand the criteria for organizing data, and discuss different ways of organizing the same set of data Construct and interpret simple diagrams including broken line 	Let's Warm Up (p.6.4) <ul style="list-style-type: none"> Teachers can ask students to review the construction of frequency tables and bar charts. Teachers can ask students to review the construction and interpretation of various statistical diagrams learnt at the primary level. Teachers can ask 	0.5 period /0.5 period	Demonstrating some examples and giving some classwork	<ul style="list-style-type: none"> Warm-up Worksheet 6 Test Bank 6.0 			

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		graphs, pie charts, stem-and-leaf diagrams, scatter diagrams <ul style="list-style-type: none"> Compare the presentations of the same set of data by using various graphs or the same type of graph with different scales Choose appropriate diagrams/graphs to represent data 	students to review the concepts of simple applications of percentages.						
			6.1 Various Stages Involved in Statistics (pp.6.5 – 6.7) <ul style="list-style-type: none"> Teachers should introduce the four stages involved in statistics. 	1 period /1 period	Demonstrating some examples and giving some classwork	<ul style="list-style-type: none"> Worksheet 6.1 Workbook 6.1 			
			6.2 Collection and Classification of Data (pp.6.7 – 6.12)	1 period /1 period	Demonstrating some examples and giving some	<ul style="list-style-type: none"> Worksheet 6.2 Workbook 6.2 			

School Term	Weeks	Topics/ Extended Parts*	Learning Objectives/ Teaching Focus	SL/AL	Teaching and Learning Activities	Consolidation and Assessment	Self-directed Learning Skills [♦]	Values [#]	Basic Law Education
			<ul style="list-style-type: none"> Teachers should ask students the methods used in collecting data. Teachers should give enough examples to point out the difference between discrete data and continuous data. 		classwork	<ul style="list-style-type: none"> Ongoing Assessment Package: Quiz 6.2 Test Bank 6.2 			
			<p>6.3 Organization of Data (pp.6.12 – 6.21)</p> <ul style="list-style-type: none"> Working through Inspiring Task 6.1, students should know how to use a spreadsheet to organize data. 	2 periods /2 periods	Demonstrating some examples and giving some classwork	<ul style="list-style-type: none"> Worksheet 6.3 Workbook 6.3 Ongoing Assessment Package: Quiz 6.3 Test Bank 6.3 			
			<p>6.4 Broken Line Graphs and Pie Charts (pp.6.22 –</p>	4 periods /4 periods	Demonstrating some examples and	<ul style="list-style-type: none"> Worksheet 6.4 Workbook 			

School Term	Weeks	Topics/ Extended Parts*	Learning Objectives/ Teaching Focus	SL/AL	Teaching and Learning Activities	Consolidation and Assessment	Self-directed Learning Skills [♦]	Values [#]	Basic Law Education
			<p>6.35)</p> <ul style="list-style-type: none"> Working through Inspiring Task 6.2, students should know how to use paper and pencil and spreadsheet to construct broken line graphs. Teachers should introduce the construction and interpretation of pie charts. Teachers should demonstrate relevant calculation, such as finding the angle at the centre from frequencies. 		giving some classwork	<p>6.4</p> <ul style="list-style-type: none"> Ongoing Assessment Package: Quiz 6.4 Test Bank 6.4 			
			<p>6.5 Stem-and-leaf Diagrams (pp.6.36 – 6.46)</p>	<p>4 periods /4 periods</p>	Demonstrating some examples and	<ul style="list-style-type: none"> Worksheet 6.5 Workbook 			

School Term	Weeks	Topics/ Extended Parts*	Learning Objectives/ Teaching Focus	SL/AL	Teaching and Learning Activities	Consolidation and Assessment	Self-directed Learning Skills [♦]	Values [#]	Basic Law Education
			<ul style="list-style-type: none"> • Teachers should introduce the construction and interpretation of stem-and-leaf diagrams and also the back-to-back stem-and-leaf diagrams. • Working through Inspiring Task 6.3, students should know how to use Winstats to construct stem-and-leaf diagrams. • Working through Inspiring Task 6.4, students should know how to use Winstats to construct back-to-back stem-and-leaf 		giving some classwork	6.5 <ul style="list-style-type: none"> • Ongoing Assessment Package: Quiz 6.5 • Test Bank 6.5 			

School Term	Weeks	Topics/ Extended Parts*	Learning Objectives/ Teaching Focus	SL/AL	Teaching and Learning Activities	Consolidation and Assessment	Self-directed Learning Skills [♦]	Values [#]	Basic Law Education
			diagrams.						
			6.6 Scatter Diagrams (pp.6.47 – 6.54) <ul style="list-style-type: none"> Teachers should introduce the construction and interpretation of scatter diagrams. Teachers should point out that the two types of data may not have an obvious relation. 	2 periods /2 periods	Demonstrating some examples and giving some classwork	<ul style="list-style-type: none"> Worksheet 6.6 Workbook 6.6 Ongoing Assessment Package: Quiz 6.6 Test Bank 6.6 			
			6.7 Choosing Appropriate Diagrams and Graphs (pp.6.54 – 6.61) <ul style="list-style-type: none"> Teachers should introduce the functions of each kind of diagrams/graphs. 	2 periods /2 periods	Demonstrating some examples and giving some classwork	<ul style="list-style-type: none"> Worksheet 6.7 Workbook 6.7 Ongoing Assessment Package: Quiz 6.7 Test Bank 			

School Term	Weeks	Topics/ Extended Parts*	Learning Objectives/ Teaching Focus	SL/AL	Teaching and Learning Activities	Consolidation and Assessment	Self-directed Learning Skills [♦]	Values [#]	Basic Law Education
						6.7			
			Chapter Summary Assess Your Progress Revision Exercise Enrichment Mathematics – Do You Know the Uses of Statistics? (p.6.77) <ul style="list-style-type: none"> This enrichment mathematics introduces the application of statistics in the arrangement of the keys on a keyboard. 	0.5 period /0.5 period	Demonstrating some examples and giving some classwork	<ul style="list-style-type: none"> Workbook TSA Supplement ary Exercises Intensive Practice Ongoing Assessment Package: Formative Assessment 6 Test Bank (Multiple-choice Questions) 			
	21-23	Chapter 7 Introduction to	Let's Warm Up	0.5 period	Demonstrating	<ul style="list-style-type: none"> Warm-up 			

School Term	Weeks	Topics/ Extended Parts*	Learning Objectives/ Teaching Focus	SL/AL	Teaching and Learning Activities	Consolidation and Assessment	Self-directed Learning Skills [♦]	Values [#]	Basic Law Education
		Coordinate Geometry <ul style="list-style-type: none"> Understand and use the rectangular and polar coordinate systems to describe positions of points in a plane Use an ordered pair in the rectangular coordinate system to locate a point in a plane Calculate areas of polygons in coordinate planes 	(p.7.4) <ul style="list-style-type: none"> Teachers can ask students to review the number lines and the operations of directed numbers. Teachers can ask students to review the areas of plane figures. 	/0.5 period	some examples and giving some classwork	Worksheet 7 <ul style="list-style-type: none"> Test Bank 7.0 			
			7.1 Introduction to Rectangular Coordinate System (pp.7.5 – 7.14) <ul style="list-style-type: none"> Working through Inspiring Task 7.1, students can have the basic idea of coordinate system. Teachers should 	3 periods /3 periods	Demonstrating some examples and giving some classwork	<ul style="list-style-type: none"> Worksheet 7.1 Workbook 7.1 Ongoing Assessment Package: Quiz 7.1 Test Bank 7.1 			

School Term	Weeks	Topics/ Extended Parts*	Learning Objectives/ Teaching Focus	SL/AL	Teaching and Learning Activities	Consolidation and Assessment	Self-directed Learning Skills [♦]	Values [#]	Basic Law Education
			<p>introduce the terminologies of rectangular coordinate system.</p> <ul style="list-style-type: none"> • Students should be able to identify and plot points on a rectangular coordinate plane. • Teachers should remind students the positions of some points with special coordinates such as $(a, 0)$ and $(0, b)$. 						
			<p>7.2 Distance between Two Points (pp.7.14 – 7.23)</p> <ul style="list-style-type: none"> • Working through Inspiring Task 7.2, students can have the basic idea of finding the distance 	<p>2 periods /2 periods</p>	<p>Demonstrating some examples and giving some classwork</p>	<ul style="list-style-type: none"> • Worksheet 7.2 • Workbook 7.2 • Ongoing Assessment Package: Quiz 7.2 • Test Bank 			

School Term	Weeks	Topics/ Extended Parts*	Learning Objectives/ Teaching Focus	SL/AL	Teaching and Learning Activities	Consolidation and Assessment	Self-directed Learning Skills [♦]	Values [#]	Basic Law Education
			<p>between two points by performing subtraction of directed numbers.</p> <ul style="list-style-type: none"> Students should be able to find the distance between two points on the same horizontal or vertical line, and the unknown coordinates of a point when the corresponding distance is given. Teachers may point out the opposite sides of a rectangle are equal in length. (Students should have this idea in Book 1A Ch 5.) 			7.2			
			7.3 Areas of Plane Figures	3 periods /3 periods	Demonstrating some	• Worksheet 7.3			

School Term	Weeks	Topics/ Extended Parts*	Learning Objectives/ Teaching Focus	SL/AL	Teaching and Learning Activities	Consolidation and Assessment	Self-directed Learning Skills [♦]	Values [#]	Basic Law Education
			<p>(pp.7.23 – 7.32)</p> <ul style="list-style-type: none"> Teachers should demonstrate the way of finding the bases and the heights of simple figures (triangles, parallelograms, trapeziums, etc.). Students should be able to find the areas of planes figures by the area-dissecting algorithm or the area-filling algorithm. 		examples and giving some classwork	<ul style="list-style-type: none"> Workbook 7.3 Ongoing Assessment Package: Quiz 7.3 Test Bank 7.3 			
			<p>7.4 Polar Coordinate System (pp.7.32 – 7.37)</p> <ul style="list-style-type: none"> Teachers should introduce the terminologies of 	2 periods /2 periods	Demonstrating some examples and giving some classwork	<ul style="list-style-type: none"> Worksheet 7.4 Workbook 7.4 Ongoing Assessment Package: 			

School Term	Weeks	Topics/ Extended Parts*	Learning Objectives/ Teaching Focus	SL/AL	Teaching and Learning Activities	Consolidation and Assessment	Self-directed Learning Skills [♦]	Values [#]	Basic Law Education
			<p>polar coordinate system.</p> <ul style="list-style-type: none"> Students should be able to identify and plot points on a polar coordinate plane. Students should be able to solve problems related to polar coordinate system, including finding the angles between two lines, the lengths of line segments and the areas of plane figures. 			<p>Quiz 7.4</p> <ul style="list-style-type: none"> Test Bank 7.4 			
			<p>Chapter Summary Assess Your Progress Revision Exercise Enrichment Mathematics – How Can We Relate</p>	<p>0.5 period /0.5 period</p>	<p>Demonstrating some examples and</p>	<ul style="list-style-type: none"> Workbook TSA Supplement 			

School Term	Weeks	Topics/ Extended Parts*	Learning Objectives/ Teaching Focus	SL/AL	Teaching and Learning Activities	Consolidation and Assessment	Self-directed Learning Skills [♦]	Values [#]	Basic Law Education
			<p>Touch Screen Technology to Coordinate System? (p.7.49)</p> <ul style="list-style-type: none"> This enrichment introduces the use of coordinate system in touch screen technology and graphical software. 		giving some classwork	<p>ary Exercises</p> <ul style="list-style-type: none"> Intensive Practice Ongoing Assessment Package: Formative Assessment 7 Test Bank (Multiple-choice Questions) 			
	26-28	<p>Chapter 8 Symmetry and Transformation</p> <ul style="list-style-type: none"> Recognize reflectional and rotational symmetries in plane figures Recognize the effect on plane figures after reflection, rotation, 	<p>Let's Warm Up (p.8.4)</p> <ul style="list-style-type: none"> Teachers can ask students to review the concept of symmetry. 	0.5 period /0.5 period	Demonstrating some examples and giving some classwork	<ul style="list-style-type: none"> Warm-up Worksheet 8 Test Bank 8.0 			

School Term	Weeks	Topics/ Extended Parts*	Learning Objectives/ Teaching Focus	SL/AL	Teaching and Learning Activities	Consolidation and Assessment	Self-directed Learning Skills [♦]	Values [#]	Basic Law Education
		translation, enlargement/reduction <ul style="list-style-type: none"> • Appreciate the symmetrical shapes around and transformations on shapes used in daily life • Describe intuitively the effects of transformation such as translation, reflection with respect to lines parallel to x-axis, y-axis and rotation about the origin through multiples of 90° on points in coordinate planes 							
			8.1 Symmetry (pp.8.5 – 8.16) <ul style="list-style-type: none"> • Teachers can help students review the concept of reflectional symmetry by using 	3 periods /3 periods	Demonstrating some examples and giving some classwork	<ul style="list-style-type: none"> • Worksheet 8.1 • Workbook 8.1 • Ongoing Assessment Package: 			

School Term	Weeks	Topics/ Extended Parts*	Learning Objectives/ Teaching Focus	SL/AL	Teaching and Learning Activities	Consolidation and Assessment	Self-directed Learning Skills [♦]	Values [#]	Basic Law Education
			<p>real-life examples.</p> <ul style="list-style-type: none"> Teachers should introduce the concept of rotational symmetry. Students should be able to solve problems related to symmetry. Working through Inspiring Task 8.1, students should understand the symmetry of regular polygons. 			<p>Quiz 8.1</p> <ul style="list-style-type: none"> Test Bank 8.1 			
			<p>8.2 Transformation (pp.8.16 – 8.34)</p> <ul style="list-style-type: none"> Teachers should introduce the four types of transformations (translation, rotation, reflection, 	<p>4 periods /4 periods</p>	<p>Demonstrating some examples and giving some classwork</p>	<ul style="list-style-type: none"> Worksheet 8.2 Workbook 8.2 Ongoing Assessment Package: Quiz 8.2 			

School Term	Weeks	Topics/ Extended Parts*	Learning Objectives/ Teaching Focus	SL/AL	Teaching and Learning Activities	Consolidation and Assessment	Self-directed Learning Skills [♦]	Values [#]	Basic Law Education
			<p>enlargement/reduction) by using daily life examples.</p> <ul style="list-style-type: none"> Students should be able to draw the image after transformations and describe transformations. Working through Inspiring Task 8.2, students should understand the scale factor of transformation can relate the perimeter of a figure and that of its image. 			<ul style="list-style-type: none"> Test Bank 8.2 			
			<p>8.3 Transformations on the Rectangular Coordinate System (pp.8.34 – 8.49)</p>	<p>4 periods /4 periods</p>	<p>Demonstrating some examples and giving some classwork</p>	<ul style="list-style-type: none"> Worksheet 8.3 Workbook 8.3 Ongoing Assessment 			

School Term	Weeks	Topics/ Extended Parts*	Learning Objectives/ Teaching Focus	SL/AL	Teaching and Learning Activities	Consolidation and Assessment	Self-directed Learning Skills [♦]	Values [#]	Basic Law Education
			<ul style="list-style-type: none"> • Working through Inspiring Tasks 8.3 – 8.5, students should be able to obtain expressions relating the coordinates of a point and its image under translation, reflection and rotation about the origin on the rectangular coordinate plane. • Students should be able to solve problems of transformations on the rectangular coordinate plane, including the transformation of points and plane figures. 			Package: Quiz 8.3 <ul style="list-style-type: none"> • Test Bank 8.3 			

School Term	Weeks	Topics/ Extended Parts*	Learning Objectives/ Teaching Focus	SL/AL	Teaching and Learning Activities	Consolidation and Assessment	Self-directed Learning Skills [♦]	Values [#]	Basic Law Education
			Chapter Summary Assess Your Progress Revision Exercise Enrichment Mathematics – How Are Tile Patterns Designed? (p.8.63) <ul style="list-style-type: none"> This enrichment introduces some simple ways of designing tile patterns using different types of transformations. 	0.5 period /0.5 period	Demonstrating some examples and giving some classwork	<ul style="list-style-type: none"> Workbook TSA Supplementary Exercises Intensive Practice Ongoing Assessment Package: Formative Assessment 8 Test Bank (Multiple-choice Questions) 			
	32-33	Chapter 9 Congruence and Similarity	Let's Warm Up (p.9.4)	0.5 period /0.5 period	Demonstrating some	<ul style="list-style-type: none"> Warm-up Worksheet 9 			

School Term	Weeks	Topics/ Extended Parts*	Learning Objectives/ Teaching Focus	SL/AL	Teaching and Learning Activities	Consolidation and Assessment	Self-directed Learning Skills [♦]	Values [#]	Basic Law Education
		<ul style="list-style-type: none"> Recognize the properties for congruent and similar triangles Extend the ideas of transformation and symmetry to explore the conditions for congruent and similar triangles Recognize the minimal conditions in fixing a triangle Identify whether 2 triangles are congruent /similar with simple reasons <p>Ⓜ Explore and justify the methods to construct angle bisectors, perpendicular bisectors and special angles by compasses and straightedges</p>	<ul style="list-style-type: none"> Teachers can ask students to review the concepts of different types of transformation. 		examples and giving some classwork	<ul style="list-style-type: none"> Test Bank 9.0 			
			9.1 Introduction to Congruence	2.5 periods /2.5 periods	Demonstrating some	<ul style="list-style-type: none"> Worksheet 9.1 			

School Term	Weeks	Topics/ Extended Parts*	Learning Objectives/ Teaching Focus	SL/AL	Teaching and Learning Activities	Consolidation and Assessment	Self-directed Learning Skills [♦]	Values [#]	Basic Law Education
			<p>(pp.9.5 – 9.13)</p> <ul style="list-style-type: none"> • Working through Inspiring Task 9.1, students should recognize that translation, reflection and rotation have very similar properties. • Teachers should point out that a figure after reflection is also congruent under the definition. • Working through Inspiring Task 9.2, students should have the basic idea of the properties of congruent triangles: <ul style="list-style-type: none"> - the size of their corresponding angles are equal, 		examples and giving some classwork	<ul style="list-style-type: none"> • Workbook 9.1 • Ongoing Assessment Package: Quiz 9.1 • Test Bank 9.1 			

School Term	Weeks	Topics/ Extended Parts*	Learning Objectives/ Teaching Focus	SL/AL	Teaching and Learning Activities	Consolidation and Assessment	Self-directed Learning Skills [♦]	Values [#]	Basic Law Education
			<ul style="list-style-type: none"> - the lengths of their corresponding sides are equal. • Students should be able to find the unknowns in a pair of congruent triangles. • Teachers should remind students the angle sum of a triangle. 						
			<p>9.2 Conditions for Congruent Triangles (pp.9.13 – 9.29)</p> <ul style="list-style-type: none"> • Working through Inspiring Tasks 9.3 – 9.7, students should recognize that the conditions for congruent triangles are ‘SSS’, 	4.5 periods /4.5 periods	Demonstrating some examples and giving some classwork	<ul style="list-style-type: none"> • Worksheet 9.2 • Workbook 9.2 • Ongoing Assessment Package: Quiz 9.2 • Test Bank 9.2 			

School Term	Weeks	Topics/ Extended Parts*	Learning Objectives/ Teaching Focus	SL/AL	Teaching and Learning Activities	Consolidation and Assessment	Self-directed Learning Skills [♦]	Values [#]	Basic Law Education
			<p>'ASA' (or 'AAS'), 'SAS' and 'RHS', whereas 'SSA' is not a condition for congruence.</p> <ul style="list-style-type: none"> • Students should be able to identify a pair of congruent triangles and give the reason. • Teachers should remind students the difference between 'ASA' and 'AAS' by working through Example 5. • Teachers should remind students the use 'RHS' or 'SAS' by working through Example 7. 						
			<p>9.3 Introduction to Similarity (pp.9.29 – 9.36)</p>	<p>2.5 periods /2.5 periods</p>	<p>Demonstrating some examples and</p>	<ul style="list-style-type: none"> • Worksheet 9.3 • Workbook 			

School Term	Weeks	Topics/ Extended Parts*	Learning Objectives/ Teaching Focus	SL/AL	Teaching and Learning Activities	Consolidation and Assessment	Self-directed Learning Skills [♦]	Values [#]	Basic Law Education
			<ul style="list-style-type: none"> • Teachers may point out that at the beginning of this chapter (and Inspiring Task 9.1), the figure after enlargement /reduction is not congruent. The size is changed. However, the shape remains unchanged. • Working through Inspiring Task 9.8, students should recognize the two conclusions: <ul style="list-style-type: none"> - the corresponding angles are equal, - the corresponding sides are proportional. • Teachers should demonstrate the 		giving some classwork	9.3 <ul style="list-style-type: none"> • Ongoing Assessment Package: Quiz 9.3 • Test Bank 9.3 			

School Term	Weeks	Topics/ Extended Parts*	Learning Objectives/ Teaching Focus	SL/AL	Teaching and Learning Activities	Consolidation and Assessment	Self-directed Learning Skills [♦]	Values [#]	Basic Law Education
			technique of finding an unknown by considering two pairs of corresponding sides (such as cross-multiplication), especially when the unknown is not in the numerator of the L.H.S. (Please refer to Examples 9 and 10.)						
			<p>9.4 Conditions for Similar Triangles (pp.9.36 – 9.46)</p> <ul style="list-style-type: none"> Working through Inspiring Tasks 9.9 – 9.11, students should recognize that the conditions for similar triangles 	4.5 periods /4.5 periods	Demonstrating some examples and giving some classwork	<ul style="list-style-type: none"> Worksheet 9.4 Workbook 9.4 Ongoing Assessment Package: Quiz 9.4 Test Bank 9.4 			

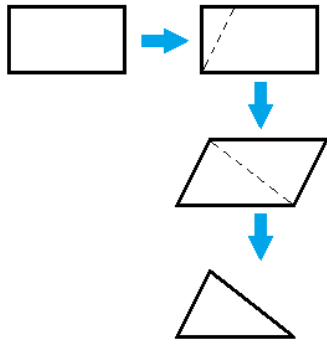
School Term	Weeks	Topics/ Extended Parts*	Learning Objectives/ Teaching Focus	SL/AL	Teaching and Learning Activities	Consolidation and Assessment	Self-directed Learning Skills [♦]	Values [#]	Basic Law Education
			<p>are 'AAA', '3 sides proportional' and 'ratio of 2 sides, inc. \angle'.</p> <ul style="list-style-type: none"> Teachers should demonstrate the steps required so as to identify a pair of similar triangles and give the reason. (Please refer to Examples 11, 12 and 13.) 						
			<p>Non-foundation</p> <p>9.5 More about the Construction of Geometric Figures (pp.9.47 – 9.51)</p> <p>MF Students should learn the construction of angle bisectors,</p>	<p>2 periods</p> <p>/2 periods</p>	<p>Demonstrating some examples and giving some classwork</p>	<p>MF Worksheet 9.5</p> <p>MF Workbook 9.5</p> <p>MF Ongoing Assessment Package: Quiz 9.5</p> <p>MF Test Bank</p>			

School Term	Weeks	Topics/ Extended Parts*	Learning Objectives/ Teaching Focus	SL/AL	Teaching and Learning Activities	Consolidation and Assessment	Self-directed Learning Skills [♦]	Values [#]	Basic Law Education
			<p>perpendicular bisectors and special angles, including 90°, 45°, 60° and 30°.</p> <p>Ⓜ Teachers may explain why the construction is valid.</p>			9.5			
			<p>Chapter Summary</p> <p>Assess Your Progress</p> <p>Revision Exercise</p> <p>Enrichment</p> <p>Mathematics – What Is Fractal Geometry? (p.9.61)</p> <ul style="list-style-type: none"> This enrichment introduces a simple way of constructing fractal figures. 	<p>0.5 period</p> <p>/0.5 period</p>	<p>Demonstrating some examples and giving some classwork</p>	<ul style="list-style-type: none"> Workbook TSA Supplementary Exercises Intensive Practice Ongoing Assessment Package: Formative 			

School Term	Weeks	Topics/ Extended Parts*	Learning Objectives/ Teaching Focus	SL/AL	Teaching and Learning Activities	Consolidation and Assessment	Self-directed Learning Skills [♦]	Values [#]	Basic Law Education
						Assessment 9 • Test Bank (Multiple-choice Questions)			
	34-35	Chapter 10 Area and Volume (I) <ul style="list-style-type: none"> Find areas of simple polygons Understand and use the formulas for surface areas and volumes of cubes, cuboids, and prisms 	Let's Warm Up (p.10.4) <ul style="list-style-type: none"> Teachers can ask students to review the areas of simple figures and the volumes of cubes and cuboids. Teachers can ask students to review the units conversion. 	0.5 period /0.5 period	Demonstrating some examples and giving some classwork	<ul style="list-style-type: none"> Warm-up Worksheet 10 Test Bank 10.0 			
			10.1 Areas of Polygons (pp.10.5 – 10.16) <ul style="list-style-type: none"> Students should be able to use the 	4 periods /4 periods	Demonstrating some examples and giving some classwork	<ul style="list-style-type: none"> Worksheet 10.1 Workbook 10.1 			

School Term	Weeks	Topics/ Extended Parts*	Learning Objectives/ Teaching Focus	SL/AL	Teaching and Learning Activities	Consolidation and Assessment	Self-directed Learning Skills [♦]	Values [#]	Basic Law Education
			<p>area-dissecting algorithm and area-filling algorithm to find the areas of polygons.</p> <ul style="list-style-type: none"> • Teachers should demonstrate how to set up an equation to find an unknown through Example 2. • Teachers may remind students to beware of the units conversion through Example 3. • Working through Inspiring Task 10.1, students should recognize the way of finding the area of a kite and thus that of a rhombus. 			<ul style="list-style-type: none"> • Ongoing Assessment Package: Quiz 10.1 • Test Bank 10.1 			

School Term	Weeks	Topics/ Extended Parts*	Learning Objectives/ Teaching Focus	SL/AL	Teaching and Learning Activities	Consolidation and Assessment	Self-directed Learning Skills [♦]	Values [#]	Basic Law Education
			<ul style="list-style-type: none"> Teachers should discuss some other problems related to areas of polygons through Example 6. 						
		<p>Remarks:</p> <p>Although we only stack up prisms using cubes, the formula for the volume of a prism is valid for other prisms. Teachers may first remind students the way of deducing the formulas for areas of simple figures. For example, the formula for the area of a triangle can be deduced as shown below:</p>	<p>10.2 Volumes and Total Surface Areas of Prisms (pp.10.17 – 10.30)</p> <ul style="list-style-type: none"> Working through Inspiring Task 10.2, students should recognize the way of finding the volume of a prism. Students should be able to find the volumes of simple prisms. Students should be able to use the area-dissecting 	<p>4 periods</p> <p>/4 periods</p>	<p>Demonstrating some examples and giving some classwork</p>	<ul style="list-style-type: none"> Worksheet 10.2 Workbook 10.2 Ongoing Assessment Package: Quiz 10.2 Test Bank 10.2 			

School Term	Weeks	Topics/ Extended Parts*	Learning Objectives/ Teaching Focus	SL/AL	Teaching and Learning Activities	Consolidation and Assessment	Self-directed Learning Skills [♦]	Values [#]	Basic Law Education
		 <p>Then we can extend this idea to prisms. Starting with a rectangular prism, we can obtain other prisms with parallelograms, triangles and trapeziums as bases.</p>	<p>algorithm and area-filling algorithm to find the volumes of prisms.</p> <ul style="list-style-type: none"> Teachers should discuss some problems related to number of objects, water level, etc. (Please refer to Examples 10 and 11.) Teachers should introduce the concept of total surface areas of prisms. Students should be able to find the total surface areas of prisms. Teachers may introduce the 						

School Term	Weeks	Topics/ Extended Parts*	Learning Objectives/ Teaching Focus	SL/AL	Teaching and Learning Activities	Consolidation and Assessment	Self-directed Learning Skills [♦]	Values [#]	Basic Law Education
			concept of the perimeter of the base of a prism as an alternative method of finding the total area of the lateral faces. (Please refer to the bottom part of p.10.23.)						
			Chapter Summary Assess Your Progress Revision Exercise Enrichment Mathematics – What Is the Maximized Capacity of a Container? (p.10.39) <ul style="list-style-type: none"> This enrichment helps students to find the maximum capacity of a container by cutting squares from the 4 	0.5 period /0.5 period	Demonstrating some examples and giving some classwork	<ul style="list-style-type: none"> Workbook TSA Supplement ary Exercises Intensive Practice Ongoing Assessment Package: Formative 			

School Term	Weeks	Topics/ Extended Parts*	Learning Objectives/ Teaching Focus	SL/AL	Teaching and Learning Activities	Consolidation and Assessment	Self-directed Learning Skills [♦]	Values [#]	Basic Law Education
			corners of a sheet of A4 paper.			Assessment 10 • Test Bank (Multiple-choice Questions)			
	36-38	Chapter 11 Angles Related to Lines • Recognize different types of angles • Explore and use the angle properties associated with intersecting lines and parallel lines	Let's Warm Up (p.11.4) • Teachers can ask students to review the classification of angles. • Teachers can ask students to review the concept of parallel lines. • Teachers can ask students to review the angle sum of a triangle.	0.5 period /0.5 period	Demonstrating some examples and giving some classwork	• Warm-up Worksheet 11 • Test Bank 11.0			
			11.1 Angles Related to Intersecting Lines (pp.11.5 –	4 periods /4 periods	Demonstrating some examples and	• Worksheet 11.1			

School Term	Weeks	Topics/ Extended Parts*	Learning Objectives/ Teaching Focus	SL/AL	Teaching and Learning Activities	Consolidation and Assessment	Self-directed Learning Skills [♦]	Values [#]	Basic Law Education
			<p>11.17)</p> <ul style="list-style-type: none"> Teachers should remind students the sizes of a straight angle and a round angle. Teachers should demonstrate how to set up an equation to find an unknown. Working through Inspiring Task 11.1, students should recognize that vertically opposite angles are equal. Students should be able to solve problems related to intersecting lines. 		giving some classwork	<ul style="list-style-type: none"> Workbook 11.1 Ongoing Assessment Package: Quiz 11.1 Test Bank 11.1 			
			11.2 Angles Related to Parallel Lines	4.5 periods /4.5 periods	Demonstrating some	<ul style="list-style-type: none"> Worksheet 11.2 			

School Term	Weeks	Topics/ Extended Parts*	Learning Objectives/ Teaching Focus	SL/AL	Teaching and Learning Activities	Consolidation and Assessment	Self-directed Learning Skills [♦]	Values [#]	Basic Law Education
			<p>(pp.11.18 – 11.28)</p> <ul style="list-style-type: none"> • Teachers should introduce the concepts of transversal, corresponding angles, alternate angles and interior angles on the same side of the transversal. • Working through Inspiring Task 11.2, students should recognize that some angles are equal and some angles are supplementary. • Students should be able to solve problems related to parallel lines. 		<p>examples and giving some classwork</p>	<ul style="list-style-type: none"> • Workbook 11.2 • Ongoing Assessment Package: Quiz 11.2 • Test Bank 11.2 			

School Term	Weeks	Topics/ Extended Parts*	Learning Objectives/ Teaching Focus	SL/AL	Teaching and Learning Activities	Consolidation and Assessment	Self-directed Learning Skills [♦]	Values [#]	Basic Law Education
			<ul style="list-style-type: none"> Teachers should demonstrate the way of adding a line in solving a problem. Teachers should remind students the angle sum of a triangle. 						
			<p>11.3 Methods in Determining Parallel Lines (pp.11.29 – 11.33)</p> <ul style="list-style-type: none"> Working through Inspiring Task 11.3, students should understand the given lines are parallel under some conditions. Teachers should point out that we cannot assume the 	2.5 periods /2.5 periods	Demonstrating some examples and giving some classwork	<ul style="list-style-type: none"> Worksheet 11.3 Workbook 11.3 Ongoing Assessment Package: Quiz 11.3 Test Bank 11.3 			

School Term	Weeks	Topics/ Extended Parts*	Learning Objectives/ Teaching Focus	SL/AL	Teaching and Learning Activities	Consolidation and Assessment	Self-directed Learning Skills [♦]	Values [#]	Basic Law Education
			lines are parallel in finding unknowns. (Please refer to Examples 14 and 15.)						
			<p>Chapter Summary</p> <p>Assess Your Progress</p> <p>Revision Exercise</p> <p>Enrichment</p> <p>Mathematics – Do You Know Who the Father of Geometry is? (p.11.45)</p> <ul style="list-style-type: none"> This enrichment provides some historic information about geometry and introduces Euclid who was given the name of ‘The father of geometry’. 	0.5 period /0.5 period	Demonstrating some examples and giving some classwork	<ul style="list-style-type: none"> Workbook TSA Supplementary Exercises Intensive Practice Ongoing Assessment Package: Formative Assessment 11 Test Bank (Multiple- 			

School Term	Weeks	Topics/ Extended Parts*	Learning Objectives/ Teaching Focus	SL/AL	Teaching and Learning Activities	Consolidation and Assessment	Self-directed Learning Skills [♦]	Values [#]	Basic Law Education
						choice Questions)			
	38-39	Chapter 12 Rate and Ratios <ul style="list-style-type: none"> Understand the meaning of rate and ratio Recognize the notation of $a : b, a : b : c$ Use rate and ratio to solve real-life problems including mensuration problems 	Let's Warm Up (p.12.4) <ul style="list-style-type: none"> Teachers can ask students to review the concept of speed. Teachers can ask students to review the relationship between the corresponding sides of similar triangles. 	0.5 period /0.5 period	Demonstrating some examples and giving some classwork	<ul style="list-style-type: none"> Warm-up Worksheet 12 Test Bank 12.0 			
			12.1 Rate (pp.12.5 – 12.15) <ul style="list-style-type: none"> Working through Inspiring Task 12.1, students should be able to find the prices per unit in a real-life situation. 	2.5 periods /2.5 periods	Demonstrating some examples and giving some classwork	<ul style="list-style-type: none"> Worksheet 12.1 Workbook 12.1 Ongoing Assessment Package: Quiz 12.1 			

School Term	Weeks	Topics/ Extended Parts*	Learning Objectives/ Teaching Focus	SL/AL	Teaching and Learning Activities	Consolidation and Assessment	Self-directed Learning Skills [♦]	Values [#]	Basic Law Education
			<ul style="list-style-type: none"> Students should be able to solve simple problems related to rate. Teachers may explain that two quantities can be compared by several ways. (Please refer to p.12.7 and p.12.8 for details.) 			<ul style="list-style-type: none"> Test Bank 12.1 			
			<p>12.2 Ratio (pp.12.15 – 12.24)</p> <ul style="list-style-type: none"> Teachers should introduce the concept of ratios (two-term ratios) and point out the ways of expressing ratio. Students should be able to <ul style="list-style-type: none"> - simplify ratios, 	2.5 periods /2.5 periods	Demonstrating some examples and giving some classwork	<ul style="list-style-type: none"> Worksheet 12.2 Workbook 12.2 Ongoing Assessment Package: Quiz 12.2 Test Bank 12.2 			

School Term	Weeks	Topics/ Extended Parts*	Learning Objectives/ Teaching Focus	SL/AL	Teaching and Learning Activities	Consolidation and Assessment	Self-directed Learning Skills [♦]	Values [#]	Basic Law Education
			<ul style="list-style-type: none"> - find ratios from given relations, - find unknowns from ratios, and - solve daily life problems. • Teachers may remind students to use the concept of fractions to solve problems like Example 9. 						
			<p>12.3 Continued Ratio (pp.12.25 – 12.31)</p> <ul style="list-style-type: none"> • Teachers should introduce the notation of continued ratios. • Teachers should illustrate the steps in finding $a : b : c$ from given $a : b$ and $b : c$. 	1.5 periods /1.5 periods	Demonstrating some examples and giving some classwork	<ul style="list-style-type: none"> • Worksheet 12.3 • Workbook 12.3 • Ongoing Assessment Package: Quiz 12.3 • Test Bank 12.3 			

School Term	Weeks	Topics/ Extended Parts*	Learning Objectives/ Teaching Focus	SL/AL	Teaching and Learning Activities	Consolidation and Assessment	Self-directed Learning Skills [♦]	Values [#]	Basic Law Education
			<ul style="list-style-type: none"> Students should be able to write down any two-term ratio from $a : b : c$. Students should be able to solve daily life problems. 						
			<p>12.4 Applications of Ratios (pp.12.32 – 12.41)</p> <ul style="list-style-type: none"> Students should be able to solve problems related to similar figures. Teachers should point out that, apart from corresponding sides, the corresponding heights for two similar figures are also proportional. Teachers should 	2.5 periods /2.5 periods	Demonstrating some examples and giving some classwork	<ul style="list-style-type: none"> Worksheet 12.4 Workbook 12.4 Ongoing Assessment Package: Quiz 12.4 Test Bank 12.4 			

School Term	Weeks	Topics/ Extended Parts*	Learning Objectives/ Teaching Focus	SL/AL	Teaching and Learning Activities	Consolidation and Assessment	Self-directed Learning Skills [♦]	Values [#]	Basic Law Education
			<p>introduce scale drawing and the scale.</p> <ul style="list-style-type: none"> Students should be able to solve problems related to scale drawing. 						
			<p>Chapter Summary Assess Your Progress Revision Exercise Enrichment Mathematics – What Is the Relation between the Planets in Solar System? (p.12.53)</p> <ul style="list-style-type: none"> This enrichment guides students study the relation between ‘the distances of the planets from the Sun’ and ‘the times to complete one 	<p>0.5 period /0.5 period</p>	<p>Demonstrating some examples and giving some classwork</p>	<ul style="list-style-type: none"> Workbook TSA Supplement ary Exercises Intensive Practice Ongoing Assessment Package: Formative Assessment <p>12</p>			

School Term	Weeks	Topics/ Extended Parts*	Learning Objectives/ Teaching Focus	SL/AL	Teaching and Learning Activities	Consolidation and Assessment	Self-directed Learning Skills [♦]	Values [#]	Basic Law Education
			revolution around the Sun' using ratio.			• Test Bank (Multiple-choice Questions)			

* The extended parts should be marked with asterisks. These parts should be more challenging and can be covered when the students can master the knowledge and skills covered in the conventional topics.

Core Values of Wah Yan College, Kowloon

I. Love and care	1. Accept & feel positive about himself 2. Appreciation & Gratitude 3. Empathy & Compassion	4. Forgiveness & Reconciliation 5. Service 6. Family as a basic unit of society; marriage is the foundation of a family
II. Strive for excellence	7. Reflective 8. Commitment 9. Perseverance	10. Curiosity & willingness to learn 11. Value imagination and creativity
III. Respect and Justice	12. Life is valuable and respectable 13. Openness to good in all things 14. Respect for himself & others	15. Integrity 16. Faithfulness
IV. Responsibility	17. Freedom & Self-discipline 18. Care for the environment	19. Social Identities: citizen identity, national identity and global citizen identity
V. Faith	20. Experience of God 21. Explore & practise one's faith	22. Appreciate religious liturgies