MATHEMATICS YEARLY PLAN (YEAR 5)

WEEK	TOPIC / LEARNING AREAS	LEARNING OBJECTIVES / LEARNING OUTCOME	REMARKS
	1. WHOLE NUMBER 1.1 Numbers to 1 000 000	1.1.1 Develop number sense up to 1 000 000. i. Name and write numbers up to 1 000 000. ii. Determine the place value of the digits in any whole number up to 1 000 000. iii. Compare value of numbers up to 1 000 000. iv. Round off numbers to the nearest tens, hundreds, thousands, ten thousands and hundred thousands.	
	1.2 Addition with the highest total of 1 000 000	1.2.1 Add numbers to the total of 1 000 000. i. Add any two to four numbers up to 1 000 000. ii. Solve addition problems.	
	1.3 Subtraction within the range of 1 000 000	1.3.1 Subtract numbers from a number less than 1 000 000. i. Subtract one number from a bigger number less than 1 000 000. ii. Subtract successively from a bigger number less than 1 000 000. iii. Solve subtraction problems.	
	1.4 Multiplication with the highest product of 1 000 000	1.4.1 Multiply any two numbers with the highest product of 1 000 000. i. Multiply up to five digit numbers with a. a one-digit number, b. a two-digit number, c. 10, 100 and 1000. ii. Solve problems involving multiplication.	
	1.5 Division with the highest dividend of 1 000 000	1.5.1 Divide a number less than1 000 000 by a two-digit number. i. Divide numbers up to six digits by a. one-digit number, b. 10, 100 and 1000, c. two-digit number, ii. Solve problems involving division.	
	1.6 Mixed operations	1.6.1 Perform mixed operations involving multiplication and division. i. Calculate mixed operation on whole numbers involving multiplication and division. ii. Solve problems involving mixed operations of division and multiplication.	

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	2. FRACTIONS 2.1 Improper fractions	2.1.1 Understand improper fractions. i. Name and write improper fractions with denominators up to 10. ii. Compare the value of the two improper fractions.	
	2.2 Mixed numbers	2.2.1 Understand mixed numbers. i. Name and write mixed numbers with denominators up to 10. ii. Convert improper fractions to mixed numbers and vice-versa.	
	2.3 Addition of fractions	2.3.1 Add two mixed numbers. i. Add two mixed numbers with the same denominators up to 10. ii. Add two mixed numbers with different denominators up to 10. iii. Solve problems involving addition of mixed numbers.	
	2.4 Subtraction of fractions	2.4.1 Subtract mixed numbers. i. Subtract two mixed numbers with the same denominator up to 10. ii. Subtract two mixed numbers with different denominators up to 10. iii. Solve problems involving subtraction of mixed numbers.	
	2.5 Multiplication of fractions	2.5.1 Multiply any proper fractions with a whole number up to 1 000 i. Multiply whole numbers with proper fractions. ii. Solve problems involving multiplication of fractions.	
	3. DECIMALS 3.1 Decimal numbers	3.1.1 Understand and use the vocabulary related to decimals. i. Name and write decimal numbers to three decimal places. ii. Recognise the place value of thousandths. iii. Convert fractions of thousandths to decimal numbers and vice versa. iv. Round off decimal numbers to the nearest a. tenths, b. hundredths.	
	3.2 Addition of decimal numbers	3.2.1 Add decimal numbers up to three decimal places. i. Add any two to four decimal numbers up to three decimal places involving a. decimal numbers and decimal numbers, b. whole numbers and decimal numbers,	

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		ii. Solve problems involving addition of decimal numbers.	
	3.3 Subtraction of decimal numbers	3.3.1 Subtract decimal numbers up to three decimal places. i. Subtract a decimal number from another decimal up to three decimal places. ii. Subtract successively any two decimal numbers up to three decimal places. iii. Solve problems involving subtraction of decimal numbers.	
	3.4 Multiplication of decimal numbers	3.4.1 Multiply decimal numbers up to three decimal places with a whole number. i. Multiply any decimal numbers up to three decimal places with a. a one-digit number, b. a two-digit number, c. 10, 100 and 1000. ii. Solve problems involving multiplication of decimal numbers.	
	3.5 Division of decimal numbers	3.5.1 Divide decimal numbers up to three decimal places by a whole number i. Divide a whole number by a. 10 b. 100 c. 1 000 ii. Divide a whole number by a. a one-digit number, b. a two-digit whole number, iii. Divide a decimal number of three decimal places by a. a one-digit number, b. a two-digit whole number, c. 10, d. 100. iv. Solve problem involving division of decimal numbers.	
	4. PERCENTAGE 4.1 Percentage	4.1.1 Understand and use percentage. i. Name and write the symbol for percentage. ii. State fraction of hundredths in percentage. iii. Convert fraction of hundredths to percentage and vice versa.	
	4.2 Convert fractions and decimal to percentage	4.2.1 Relate fractions and decimals to percentage i. Convert proper fractions of tenths to percentage. ii. Convert proper fractions with the denominators of 2, 4, 5, 20, 25 and 50 to percentage.	

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		iii. Convert percentage to fraction in its simplest form. iv. Convert percentage to decimal number and vice versa.	
	5. MONEY 5.1 Money to RM100 000	5.1.1 Understand and use the vocabulary related to money. i. Read and write the value of money in ringgit and sen up to RM100 000. 5.1.2 Use and apply mathematics concepts when dealing with money up to RM100 000. i. Add money in ringgit and sen up to RM100 000. ii. Subtract money in ringgit and sen within the range of RM100 000. iii. Multiply money in ringgit and sen with a whole number, fraction or decimal with products within RM100 000. iv. Divide money in ringgit and sen with the dividend up to RM100 000. v. Perform mixed operation of multiplication and division involving money in ringgit and sen up to RM100 000. vi. Solve problems in real context involving money in ringgit and sen up to RM100 000.	
	6. TIME 6.1 Reading and writing time	6.1.1 Understand the vocabulary related to time. i. Read and write time in the 24-hour system. ii. Relate the time in the 24-hour system to the 12-hour system. iii. Convert time from the 24-hour system to the 12-hour system and vice-versa.	
	6.2 Relationship between units of time	6.2.1 Understand the relationship between units of time. i. Convert time in fractions and decimals of a minute to seconds. ii. Convert time in fractions and decimals of an hour to minutes and to seconds. iii. Convert time in fractions and decimals of a day to hours, minutes and seconds. iv. Convert units of time from a. century to years and vice versa. b. century to decades and vice versa.	
	6.3 Basic operations involving time	6.3.1 Add, subtract, multiply and divide units of time. i. Add time in hours, minutes and seconds. ii. Subtract time in hours, minutes and seconds. iii. Multiply time in hours, minutes and seconds.	

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		iv. Divide time in hours, minutes and seconds.	
	6.4 Duration	6.4.1 Use and apply knowledge of time to find the duration. i. Identify the start and end times of an event. ii. Calculate the duration of an event, involving a. hours, minutes and seconds. b. days and hours. iii. Determine the start or end time of an event from a given duration of time. iv. Solve problems involving time duration in fractions and/or decimals of hours, minutes and seconds.	
	7. LENGTH 7.1 Measuring length	7.1.1 Measure and compare distances. i. Describe by comparison the distance of one kilometre. ii. Measure using scales for distance between places.	
	7.2 Relationship between units of length	7.2.1 Understand the relationship between units of length. i. Relate metre and kilometre. ii. Convert metre to kilometre and vice versa.	
	7.3 Basic operations involving length	7.3.1 Add, subtract, multiply and divide units of length. i. Add and subtract units of length involving conversion of units in a. kilometres, b. kilometres and metres. ii. Multiply and divide units of length in kilometres involving conversion of units with a. a one-digit number, b. 10, 100, 1 000. iii. Solve problems involving basic operations on length.	
	8. MASS 8.1 Comparing mass	8.1.1 Compare mass of objects. i. Measure and record masses of objects in kilograms and grams. ii. Compare the masses of two objects using kilogram and gram, stating the comparison in multiples or fractions. iii. Estimate the masses of objects in kilograms and grams.	
		8.1.2 Understand the relationship between units of mass. i. Convert units of mass from fractions and decimals of a kilogram to grams and vice	

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		versa. ii. Solve problems involving conversion of mass units in fraction and/or decimals.	
	9. VOLUME OF LIQUID 9.1 Comparing volume	9.1.1 Measure and compare volumes of liquid using standard units i. Measure and record the volumes of liquid in a smaller metric unit given the measure in fractions and/or decimals of a larger unit. ii. Estimate the volumes of liquid involving fractions and decimals in litres and mililitres. iii. Compare the volumes of liquid involving fractions and decimals using litres and mililitres.	
	9.2 Relationship between units of volume	9.2.1 Understand the relationship between units of volume of liquid i. Convert unit of volumes involving fractions and decimals in litres and vice-versa. ii. Solve problem involving volume of liquid.	
	9.3 Operations on volume of liquid	9.3.1 Add and subtract units of volume. i. Add units of volume involving mixed decimals in a. litres, b. mililitres, c. litres and mililitres. ii. Subtract units of volume involving mixed decimals in a. litres, b. mililitres, c. litres and mililitres.	
		9.3.2 Multiply and divide units of volume. i. Multiply units of volume involving mixed number using: a. a one-digit number, b. 10, 100, 1000, involving conversion of units. ii. Divide units of volume using a. up to 2 digit number, b. 10, 100, 1000, involving mixed decimals. iii. Divide unit of volume using: a. a one-digit number, b. 10, 100, 1000, involving conversion of units. iv. Solve problems involving computations for volume of liquids.	

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	10. SHAPE AND SPACE 10.1 Composite two-dimensional shapes	10.1.1 Find the perimeter of composite 2-D shapes i. Measure the perimeter of the following composite 2-D shapes. a. square and square, b. rectangle and rectangle, c. triangle and triangle, d. square and rectangle, e. square and triangle, f. rectangle and triangle. ii. Calculate the perimeter of the following composite 2-D shapes. a. square and square, b. rectangle and rectangle, c. triangle and triangle, d. square and rectangle, e. square and triangle, f. rectangle and triangle. iii. Solve problems involving perimeters of composite 2-D shapes.	
		10.1.2 Find the area of composite 2-D shapes. i. Measure the area of the following composite 2-D shapes. a. square and square, b. rectangle and rectangle, c. square and rectangle, ii. Calculate the area of the following composite 2-D shapes. a. square and square, b. rectangle and rectangle, c. square and rectangle, iii. Solve problems involving areas of composite 2-D shapes.	
	10.2 Composite three-dimensional shapes	10.2.1 Find the volume of composite 3-D shapes. i. Measure the volume of the following composite 3-D shapes. a. cube and cube, b. cuboid and cuboid c. cube and cuboid. ii. Calculate the volume of the composite 3-D shapes following. a. cube and cube, b. cuboid and cuboid, c. cuboid and cuboid iii. Solve problems involving perimeters of composite 3-D shapes.	

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	11. DATA HANDLING 11.1 Average	11.1.1 Understand and use the vocabulary related to average. i. Describe the meaning of average. ii. State the average of two or three quantities. iii. Determine the formula for average. 11.1.2 Use and apply knowledge of average. i. Calculate the average using formula. ii. Solve problem in real life situation.	
	11.2 Organising and interpreting data	11.2.1 Understand the vocabulary relating to data organisation in graphs. i. Recognise frequency, mode, range, maximinum and minimum value from bar graphs. 11.2.2 Organise and interpret data from tables and charts i. Construct a bar graph from a given set of data. ii. Determine the frequency, mode, range, average, maximum and minimum value from a given graph.	