

ALSAGOFF ARAB SCHOOL
ACQUIRED KNOWLEDGE DEPARTMENT
PRIMARY 4 MATHEMATICS SCHEME OF WORK 2016

Term 1: Monday 4 January to Friday 11 March

School Holidays/Functions:

Week # 0	New Year's Day	Friday 1 January
Week # 1	First Day of School	Monday 4 January
Week # 3	Maulid Celebrations	Saturday 23 January
Week # 4	Maulid (In-Lieu)	Monday 25 January
Week # 5	Haflah Celebrations	Saturday 6 February
Week # 6	Chinese New Year	Monday 8 February & Tuesday 9 February
Between Term 1 & 2		Saturday 12 March - Sunday 20 March

*Week(s)	Chapter/Topic	Instructional Objectives	Period
1 & 2	<u>Chapter 1:</u> Numbers to 100000	<p>Read, compare and order numbers according to the place values of their digits. Rounding is used in estimation. Recognise that 10 thousands = 1 ten thousand. Translate numbers (10 000 to 99 999) from:</p> <ul style="list-style-type: none"> (i) numerals and words to place value models (ii) numerals to words and (iii) words to numerals <p>Recognise that 10 ten thousands = 1 hundred thousand. State the place and value of each digit in a number (10 000 to 99 999). Write a number as the sum of the values of each digit in the number. Compare and order numbers up to 100 000. Look for a pattern to complete a number sequence. Use the number line to round numbers to the nearest ten, hundred and thousand. Use the symbol \approx to show a number has been approximated or rounded to the nearest 10, 100 or 1000. Make a list of numbers that can round to a number. Use the rounding strategy to estimate the answers in calculations involving addition and subtraction. Estimate to check the reasonableness of answers by rounding the number in calculations involving addition and subtraction. <i>Chapter Assessment</i></p>	15
2 & 3	<u>Chapter 2:</u> Factors & Multiples	<p>Any whole number is a multiple of its factors. Recognise that if $c = a \times b$, then a and b are factors of c, where a, b and c are whole numbers. List the factors of a whole number (up to 100). State that if $a \div b = c$, where a, b and c are whole numbers, then b is a factor of a. Determine if a 1-digit whole number is a factor of another whole number by division. Identify the common factors of two whole numbers. State that a multiple of a whole number is a product of this whole number and another whole number. Determine if a whole number is a multiple of another 1-digit whole number by division. List the first (up to 12th) multiples of a given 1-digit whole number. Identify the common multiples of two or three 1-digit whole numbers. <i>Chapter Assessment</i></p>	14

*Week(s)	Chapter/Topic	Instructional Objectives	Period
4 & 5	<u>Chapter 3:</u> Multiplication & Division of Whole Numbers	<p>When carrying out multiplication or division, use estimation to check if the answer is reasonable.</p> <p>Use the procedures in multiplication to multiply a whole number (up to 4 digits) by a 1-digit number with or without renaming.</p> <p>Estimate the product of a whole number (up to 4 digits) and a 1-digit number to determine whether the answer is reasonable</p> <p>Use the procedures in multiplication to multiply a whole number (up to 3 digits) by 10 or tens using different methods with or without renaming.</p> <p>Multiply a whole number (2 or 3 digits) by a 2-digit number with or without renaming.</p> <p>Estimate the product of a whole number (2 or 3 digits) and a 2-digit number to determine whether the answer is reasonable.</p> <p>Use the procedures in division to divide a whole number (up to 4 digits) by a 1-digit number with or without renaming and without remainder.</p> <p>Use the procedures in division to divide a whole number (up to 4 digits) by a 1-digit number with or without renaming and with remainder.</p> <p>Estimate the quotient when a whole number (up to 4 digits) is divided by a 1-digit number to determine whether the answer is reasonable.</p> <p><i>Chapter Assessment</i></p>	18
5, 6 & 7	<u>Chapter 4:</u> Whole Numbers: Word Problems	<p>Use the four-step problem-solving method to help you solve word problems.</p> <p>Use models to solve multi-part and multi-step word problems involving the four operations.</p> <p><i>Chapter Assessment</i></p>	16
7 & 8	<u>Chapter 5:</u> Angles	<p>Angles can be seen and measured when two lines meet at a point.</p> <p>State that an angle is formed when two straight lines meet at a point (or vertex).</p> <p>Use two ways in naming angles (for example, $\angle ABC$ and $\angle x$).</p> <p>Draw an angle (up to 180°) using a protractor.</p> <p>Draw an angle at a point on a line in two ways using a protractor.</p> <p>Associate a -turn with 90° or 1 right angle.</p> <p>Associate a -turn with 90° or 2 right angles.</p> <p>Associate a -turn with 90° or 3 right angles.</p> <p>Associate a complete turn with 360° or 4 right angles.</p> <p>Name these eight directions on the compass: north (N), south (S), east (E), west (W), north-east (NE), north-west (NW), south-east (SE) and south-west (SW).</p> <p>State that the angle between any two adjacent directions above is 45°</p> <p>Recognise the direction of a turn as clockwise or anti-clockwise.</p> <p>State the direction of a place, person or object with respect to a given north.</p> <p>State the direction faced after turning through an angle from a given direction.</p> <p>Locate or name the direction of a place in relation to a person or object.</p> <p><i>Chapter Assessment</i></p>	14
9	Review: Chapters 1 – 5	Review chapters 1 – 5 to allow pupils to recall and prepare for Continual Assessment 1.	10
10	Continual Assessment 1	Administer pen and paper assessment. Go through answers and ensure that corrections are done.	10

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Term 2: Monday 21 March to Friday 27 May

School Holidays/Functions:

Week # 7 Labour Day (In-lieu)

Monday 2 May

Between Semesters 1 & 2

Saturday 28 May to 12 June

*Week(s)	Chapter/Topic	Instructional Objectives	Period
1 & 2	<u>Chapter 6:</u> Squares & Rectangles	Squares and rectangles are 4-sided figures with special properties. State that a square has 4 equal sides and 4 right angles. State that the opposite sides of a square are parallel. State that the opposite sides of a rectangle are equal and parallel. State that a rectangle has 4 right angles. Differentiate a square from a rectangle and vice versa. Find unknown sides and angles of squares and rectangles. Draw squares using a ruler, protractor and set-square. Draw rectangles using a ruler, protractor and set-square. <i>Chapter Assessment</i>	12
2 & 3	<u>Chapter 7:</u> Symmetry	When a symmetric figure is folded along its line of symmetry, the two parts fit exactly. Identify symmetric figures. Identify a line of symmetry in a figure. Use folding to determine whether a figure is symmetric and to find a line of symmetry. Cut out a symmetric figure from a folded piece of paper. Complete a symmetric figure or pattern on square grid paper with respect to a given line of symmetry. Use a symmetric figure to make a pattern. <i>Chapter Assessment</i>	15
4, 5 & 6	<u>Chapter 8:</u> Fractions	Improper fractions and mixed numbers are used to name fractions greater than 1 whole. Express the sum of a whole number and a proper fraction as a mixed number. Interpret pictorial representations of mixed numbers. Write the fractional part of a mixed number in its simplest form. Use a number line to identify mixed numbers. Recognise an improper fraction as an extension of a proper fraction. Interpret pictorial representation of improper fractions. Write an improper fraction in its simplest form. Use a number line to identify improper fractions. Convert an improper fraction to a mixed number. Convert a mixed number to an improper fraction. Compare mixed numbers, improper fractions, or a mixed number with an improper fraction. Interpret a fraction as part of a set. Find a fractional part of a number. Use and interpret models to find fraction of a set. Find a fraction of a set of items using the unitary method. <i>Chapter Assessment</i>	21

*Week(s)	Chapter/Topic	Instructional Objectives	Period
7	MYE: Paper 1, Oral & LC only		
6 & 8	Revision	Review chapters 1 - 8 to prepare for Mid-Year Examination	
9 & 10	Mid-Year Written Examination	Administer pen & paper assessment	

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Term 3: Monday 13 June to Friday 25 June, Monday 11 July to Friday 2 September

School Holidays/Functions:

Last 10 days of Ramadhan	Saturday 25 June to 10 July
Week # Youth Day (In-lieu)	Monday 4 July
Hari Raya Puasa	Wednesday 6 July
Week # 6 Family Day (In-lieu)	Monday 1 August
Week # 7 National Day	Tuesday 9 August & Wednesday 10 August
Week # 10 Teachers' Day	Friday 2 September

*Week(s)	Chapter/Topic	Instructional Objectives	Period
1 & 2	<u>Chapter 9:</u> Addition & Subtraction of Fractions	Adding and subtracting fractions can involve fractions greater than a whole. Add two fractions greater than a whole. Subtract two fractions greater than a whole. Solve word problems involving addition and subtraction of fractions. Use the four-step problem-solving method and models to solve word problems. <i>Chapter Assessment</i>	16
3, 4 & 5	<u>Chapter 10:</u> Decimals	Decimals are fractions in another form. Read and write tenths in decimal form (1 decimal place). Represent and interpret tenths using fraction discs, fraction bars, number line and place value models. Recognise that 10 tenths = 1 one. Write a fraction with denominator 10 as a decimal. Read and write thousandths in decimal form (3 decimal places). Represent and interpret thousandths using fraction discs, fraction bars, number line and place value models. Recognise that 10 thousandths = 1 hundredth. Write a fraction with denominator 1000 as a decimal. Compare and order decimals. Look for a pattern to complete a number sequence. Round decimals to the nearest whole number. Round decimals to the nearest tenth or 1 decimal place. Round decimals to the nearest hundredth or 2 decimal places. Express a fraction (whose denominator is a factor of 10 or 100) as a decimal by changing the denominator to 10 or 100. Express a decimal as a fraction in its simplest form. <i>Chapter Assessment</i>	26

*Week(s)	Chapter/Topic	Instructional Objectives	Period
6 & 7	Chapter 11: The Four Operations	Decimals can be added, subtracted, multiplied and divided like whole numbers. Add decimals up to 2 decimal places with and without renaming. Estimate the sum of two decimals up to 2 decimal places to determine if the answer is reasonable. Subtract decimals up to 2 decimal places with and without renaming. Subtract a decimal up to 2 decimal places from a whole number. Estimate the difference between two decimals up to 2 decimal places to determine if the answer is reasonable. Multiply decimals up to 2 decimal places by a 1-digit whole number. Estimate the product when a decimal up to 2 decimal places is multiplied by a 1-digit whole number to determine if the answer is reasonable. Divide decimals up to 2 decimal places by a 1-digit whole number. Round quotients to 1 or 2 decimal places. Estimate the quotient when a decimal up to 2 decimal places is divided by a 1-digit whole number to determine if the answer is reasonable. <i>Chapter Assessment</i>	20
8 & 9	Review: Chapters 9 – 11	Review chapters 9 – 11 to allow pupils to recall and prepare for Continual Assessment 2.	20
10	Continual Assessment 2	Administer pen and paper assessment. Go through answers and ensure that corrections are done.	10

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Term 4: Monday 12 September to Friday 18 November

School Holidays/Functions:

Week # 1 Hari Raya Haji Monday 12 September & Tuesday 13 September
 Week # 4 Children's Day Friday 7 October

*Week(s)	Chapter/Topic	Instructional Objectives	Period
1 & 2	<u>Chapter 12:</u> Decimals: Word Problems	The four operations can be used to solve word problems involving decimals. Solve one-step word problems involving the four operations of decimals. Use models to solve multi-part and multi-step word problems involving the four operations of decimals. <i>Chapter Assessment</i>	12
2 & 3	<u>Chapter 13:</u> Area & Perimeter	The unknown side of a rectangle or a square can be found given the other side and its area or perimeter. Recall the formulas to find the perimeter and area of a square and a rectangle. Find the length or breadth of a rectangle given its perimeter and the breadth or length respectively. Find the side of a square given its perimeter. Find the length or breadth of a rectangle given its area and the breadth or length respectively. Find the side of a square given its area. Visualise that a composite figure can be dissected into two or more shapes. Find the perimeter of a composite figure made up of squares and/or rectangles. Find the area of a composite figure made up of squares and/or rectangles. Solve word problems involving area and perimeter of composite figures. Apply the 'whole – parts = parts' strategy to solve word problems. <i>Chapter Assessment</i>	15
4	<u>Chapter 14:</u> Tables & Line Graphs	Tables and line graphs are different ways to present information. Collect data and present the data in a table. Use tally to collect data using a table. Read and interpret data presented in a table involving more than, less than, the most, the least, etc. Complete a table and interpret the data. Read and interpret line graphs. Transfer data from a table to a line graph. Read and interpret line graphs with different scales. <i>Chapter Assessment</i>	10
5 & 6	<u>Chapter 15:</u> Time	Time can be expressed in different units of measurement. State that 60 seconds = 1 minute. Use seconds to measure time. Estimate duration in seconds. Write time using the 24-hour clock. Convert time from the 12-hour clock to the 24-hour clock and vice versa. Find the duration between two given times using the 24-hour clock. Find the starting/ending time given the duration and the ending/starting time. <i>Chapter Assessment</i>	11

*Week(s)	Chapter/Topic	Instructional Objectives	Period
6	Review	Review chapters to allow pupils to recall and prepare for the End-of-Year Assessment.	10
7 & 8	End-of-Year Assessment	Administer pen and paper assessment.	
9 & 10	Post-Examination Activities		