IV. Organisation of Units

To help teachers acquire a better understanding of the learning content in each Key Stage, the learning objectives of the units are further elaborated below. Based on the class structure that most schools currently adopt, an exemplar on the organisation of units is provided. Teachers should make their own adaptation according to the teaching content, teaching periods available and the needs and abilities of their pupils. Direct adoption of the organisation is not advisable.

In adapting the suggested learning contents and designing teaching sequences, teachers should take the cognitive development and the abilities of pupils into consideration. Learning contents should be arranged from known to unknown, from simple to complex and from concrete to abstract. In designing teaching sequence, the continuity of curriculum should be stressed. Besides, attention should also be paid to the coherence of the learning objectives. Transference of knowledge should be attended to. Pupils should be provided with opportunities to accommodate and apply the knowledge they learned from a particular learning unit to other contexts. Teachers should also consider the completeness of the adopted school-based curriculum. A proper linkage between the learning contents and pupils' experience should be maintained so as to ensure that pupils are able to master the basic mathematical concepts and knowledge necessary to continue their studies in other Key Stages and Key Learning Areas.

1. An Exemplar on the Organisation of Units

Level	Unit				
	Number	**Shape and Space**	**Measures**	**Data Handling**	**Algebra**
P.1 (First term)	1N1 (17) Numbers to 10 1N2 (14) Numbers to 20 1N3 (23) Basic addition and subtraction (within 18)	1S1 (10) 3-D shapes (I) (prisms, pyramids and spheres) 1S2 (3) Straight lines and curves	1M1 (6) Length and distance (I) (basic concept, direct comparison, improvised unit)		
P.1 (Second term)	1N4 (10) Numbers to 100 1N5 (18) Addition and subtraction (I) (addition within 2 places; subtraction within 2 places, excluding decomposition)	1S3 (12) 2-D shapes (polygons and circles)	1M2 (10) Hong Kong money (I) (coins) 1M3 (7) Length and distance (II) (centimetre) 1M4 (8) Time (I) (hour, year, month, day, week)		

The numbers in parenthesis are suggested numbers of teaching periods.

Level	Unit				
	Number	**Shape and Space**	**Measures**	**Data Handling**	**Algebra**
P.2 (First term)	2N1 **(6)** 3-digit numbers 2N2 **(12)** Addition and subtraction (II) (addition within 3 places; subtraction within 2 places) **2N3** (20) Basic multiplication (basic concept and computation)	2S1 (8) 3-D shapes (II) (prisms, cylinders, pyramids and cones) 2S2 (4) Angles (I) (angles and right angles)	2M1 (8) Length and distance (III) (metre) 2M2 (9) Time (II) (hour, minute, a.m., p.m., day, year)		
P.2 (Second term)	2N4 (4) 4-digit numbers 2N5 (13) Addition and subtraction (III) (subtraction within 3 places; mixed operations of addition & subtraction) 2N6 (20) Basic division (basic concept and computation)	2S3 (4) The four directions 2S4 (9) Quadrilaterals (I) (rectangles, squares, trapeziums, rhombuses, etc.)	2M3 (9) Hong Kong money (II) (bank-notes) 2M4 (8) Weight (gram and kilogram)	2D1 (6) Pictograms (I) (1 picture represents 1 unit)	

The numbers in parenthesis are suggested numbers of teaching periods.

Level	Unit				
	Number	**Shape and Space**	**Measures**	**Data Handling**	**Algebra**
P.3 (First term)	3N1 (4) 5-digit numbers 3N2 (9) Addition and subtraction (IV) (within 4 places) 3N3 (10) Multiplication (I) (multiplier 1 digit and multiplicand 2 or 3 digits) 3N4 (15) Division (I) (divisor 1 digit and dividend 2 or 3 digits)	3S1 (3) Parallel and perpendicular 3S2 (6) Quadrilaterals (II) (characteristics of parallelograms)	3M1 (10) Length and distance (IV) (kilometre and millimetre) 3M2 (7) Time (III) (second)		
P.3 (Second term)	3N5 (16) Mixed operations (I) (addition, subtraction, multiplication and brackets) 3N6 (10) Fractions (I) (basic concept, comparison)	3S3 (5) Angles (II) (acute and obtuse angles) 3S4 (10) Triangles	3M3 (10) Capacity (litre and millilitre) 3M4 (5) Time (IV) (the 24-hour time)	3D1 (6) Block graphs (1 square represents 1 unit, average value)	

The numbers in parenthesis are suggested numbers of teaching periods.

	Unit				
Level	**Number**	**Shape and Space**	**Measures**	**Data Handling**	**Algebra**
P.4 (First term)	4N1 (10) Multiplication (II) (multiplier 2 digits and multiplicand 2 or 3 digits) 4N2 (10) Division (II) (divisor 2 digits and dividend 2 or 3 digits, divisibility) 4N3 (5) Acquaintance with modern calculating devices (calculators) 4N4 (10) Multiples and factors 4N5 (9) Common multiples and common factors	4S1 (10) Quadrilaterals (III) (characteristics of quadrilaterals)	4M1 (11) Perimeter (I) (irregular shapes, squares and rectangles)		
P.4 (Second term)	4N6 (10) Mixed operations (II) (the four operations) 4N7 (16) Fractions (II) (types, equivalent fractions, addition and subtraction of fractions with the same denominator) 4N8 Decimals (I) (5) (basic concept)	4S2 (9) Fitting and dissecting shapes 4S3 (8) Symmetry	4M2 (12) Area (I) (square centimetre, square metre, squares, rectangles)	4D1 (12) Bar charts (I) (1 square represents 1, 2, 5 or 10 units, average value)	

The numbers in parenthesis are suggested numbers of teaching periods.

Level	Unit Number	Shape and Space	Measures	Data Handling	Algebra
P. 5 (First term)	5N1 (5) Large numbers (approximation) 5N2 (15) Fractions (III) (addition and subtraction of fractions with different denominators) 5N3 (14) Fractions (IV) (multiplication)	5S1 (6) The eight compass points	5M1 (14) Area (II) (parallelograms, triangles, trapeziums and polygons)	5D1 (7) Pictograms (II) (1 picture represents 10 or 100 units)	5A1 (10) Elementary algebra (algebraic symbols)
P.5 (Second term)	5N4 (8) Decimals (II) (addition and subtraction) 5N5 (10) Decimals (III) (multiplication) 5N6 (11) Fractions (V) (division)	5S2 (10) 3-D shapes (III) (characteristics of prisms, pyramids and spheres)	5M2 (11) Volume (I) (cubic centimetre, cubic metre, cuboids, cubes)	5D2 (8) Bar charts (II) (compound bar charts, 1 square represents 50 or 100 units)	5A2 (8) Simple equations (I) (involving one step in finding solution)

The numbers in parenthesis are suggested numbers of teaching periods.

Level	Unit				
	Number	**Shape and Space**	**Measures**	**Data Handling**	**Algebra**
P. 6 (First term)	6N1 (14) Decimals (IV) (division) 6N2 (8) Decimals (V) (conversion between decimals and fractions, comparison of fractions) 6N3 (12) Percentages (I) (basic concept, convert percentages into decimals or fractions and vice versa)	6S1 (14) 3-D shapes (IV) (vertices, edges, faces and sections)	6M1 (14) Volume (II) (capacity and volume)	6D1 (5) Averages 6D2 (6) Bar charts (III) (frequency counts of 1000 or above)	
P. 6 (Second term)	6N4 (24) Percentages (II) (uses of percentages)	6S2 (6) Circles	6M2 (6) Perimeter (II) (circumference) 6M3 (10) Speed (metre per second, kilometre per hour)	6D3 (8) Broken line graphs	6A1 (15) Simple equations (II) (involving two steps in finding solution)

The numbers in parenthesis are suggested numbers of teaching periods.

2. Suggested Learning Objectives P.1(1st term)

Unit	Learning Objectives	Suggested Time Ratio
	Dimension : Number	
1N1 Numbers to 10	1. Develop an understanding of numbers 1-10 through counting, reading and writing. 2. Develop an understanding of counting on and counting back. 3. Recognize odd and even numbers. 4. Compare two groups of objects with one-to-one correspondence. 5. Develop an understanding of the composition of numbers 1-10.	17
1N2 Numbers to 20	1. Develop an understanding of numbers 11-20 through counting, reading and writing. 2. Develop an understanding of ordinal numbers and cardinal numbers. 3. Develop an understanding of the composition of numbers 11-18. Remarks : 1. The composition of numbers to 18, i.e. the basic addition and subtraction facts of two single-digit numbers, for example 9 + 8 = 17 , 17 – 8 = 9 8 + 9 = 17 , 17 – 9 = 8 Only oral exercises and graphical recording are involved at this stage. 2. Ordinal numbers show the order of objects. Cardinal numbers show the quantity of objects. No need to mention the terms ‘ordinal numbers’ and ‘cardinal numbers’.	14

P.1(1st term)

Unit	Learning Objectives	Suggested Time Ratio
	Dimension : Number	
1N3 Basic addition and subtraction	1. Develop the basic concept of addition and subtraction. 2. Add and subtract within 18 orally. 3. Record addition and subtraction within 18 in horizontal form. 4. Develop an understanding of zero through subtraction. 5. Explore the relationship between addition and subtraction. 6. Recognize the commutative property of addition through concrete examples, for example 2 + 3 = 3 + 2 No need to mention 'commutative property of addition'.	23
	Dimension : Shape and Space	
1S1 3-D shapes (I)	1. Recognize prisms, pyramids and spheres. 2. Identity 3-D shapes intuitively. 3. Group 3-D shapes. 4. Describe the relative positions of two 3-D shapes briefly. Remarks : 1. Group 3-D shapes according to shape, size, colour, thickness, hardness or other properties. 2. Describe the relative positions of two 3-D shapes using 'in front of', 'behind', 'left', 'right', 'over' or 'under'.	10
1S2 Straight lines and curves	1. Recognize straight lines and curves. 2. Identify straight lines and curves intuitively. 3. Make straight lines and curves in a variety of ways.	3

P.1(1st term)

Unit	Learning Objectives	Suggested Time Ratio
Dimension : Measures		
1M1 Length and distance (I)	1. Develop the concept of length and distance. 2. Compare the lengths of objects and the distances between objects directly. 3. Compare the lengths of objects and the distances among objects with improvised units. 4. Measure with appropriate improvised units. Remark : After pupils have grasped the concept of measuring lengths, encourage them to estimate before measuring.	6

2. Suggested Learning Objectives P.1(2nd term)

Unit	Learning Objectives	Suggested Time Ratio
Dimension : Number		
1N4 Numbers to 100	1. Develop an understanding of numbers 21-100 through counting, reading and writing. 2. Recognize the units and the tens places. 3. Count in groups of two, five and ten. 4. Estimate the quantity of objects.	10
1N5 Addition and subtraction (I)	1. Perform addition within two places, including carrying. 2. Recognize the column form of calculation. 3. Perform addition of three numbers. 4. Perform subtraction within two places, excluding decomposition. 5. Solve simple problems. 6. Estimate the answers. Remarks : 1. The sum should be less than 100. 2. In solving problems, no statement is expected from pupils.	18
Dimension : Shape and Space		
1S3 2-D shapes	1. Recognize triangles, quadrilaterals, pentagons, hexagons and circles. 2. Identify 2-D shapes intuitively. 3. Group 2-D shapes. 4. Identify squares and rectangles intuitively. 5. Describe the relative positions of two 2-D shapes briefly. 6. Make 2-D shapes in a variety of ways. Remarks : 1. Recognize 2-D shapes through observation of 3-D shapes. 2. Group 2-D shapes according to shape, size, colour or other properties. 3. Describe the relative positions of two 2-D shapes using ‘in front of’, ‘behind’, ‘left’, ‘right’, ‘over’ or ‘under’.	12

P.1(2nd term)

Unit	Learning Objectives	Suggested Time Ratio
Dimension : Measures		
1M2 Hong Kong money (I)	1. Identify the coins of Hong Kong money. 2. Read price tags. 3. Practise using coins through activities. Remarks : 1. Exclude giving change. 2. No need to mention the value of decimal place in reading price tags. (i.e. Read $2.50 as two dollars and fifty cents.)	10
1M3 Length and distance (II)	1. Understand the need for using standard unit. 2. Introduce centimetre (cm). 3. Measure and compare the lengths of objects and the distances between objects with centimetre. 4. Estimate the lengths of objects and distances among objects with 'ever-ready rulers'. 5. Measure with appropriate tools. Remark : Encourage pupils to estimate before measuring.	7
1M4 Time (I)	1. Introduce 'hour'. 2. Tell time in terms of o'clock. 3. Introduce days of a week. 4. Recognize that there are 12 months in a year. 5. Read out dates and days from a calendar. Remark : Tell time from a clock face.	8

2. Suggested Learning Objectives P.2(1st term)

Unit	Learning Objectives	Suggested Time Ratio
Dimension : Number		
2N1 3-digit numbers	1. Develop an understanding of 3-digit numbers through counting, reading and writing. 2. Recognize the place value 'hundreds'. 3. Count in groups of fifty or hundred. 4. Estimate the quantity of objects.	6
2N2 Addition and subtraction (II)	1. Perform addition within three places, including carrying and addition of three numbers. 2. Perform subtraction within two places, including decomposition. 3. Solve simple problems. 4. Estimate the answers. Remarks : 1. The sum should be less than 1000. 2. Teachers should encourage pupils to give statements on solving problems.	12
2N3 Basic multiplication	1. Develop the concept of multiplication. 2. Construct the multiplication tables (0-10). 3. Perform basic multiplication. 4. Discover the commutative property of multiplication through concrete examples, for example $2 \times 3 = 3 \times 2$ No need to mention 'communicative property of multiplication'. 5. Solve simple problems.	20

P.2(1st term)

Unit	Learning Objectives	Suggested Time Ratio
Dimension : Shape and Space		
2S1 3-D shapes (II)	1. Identify prisms and cylinders intuitively. 2. Identify pyramids and cones intuitively. 3. Recognize faces intuitively. 4. Group 3-D shapes. 5. Make 3-D shapes.	8
2S2 Angles (I)	1. Introduce angles. 2. Introduce right angles. 3. Compare the sizes of angles. 4. Make angles in a variety of ways.	4
Dimension : Measures		
2M1 Length and distance (III)	1. Understand the need for using a larger unit for measuring. 2. Introduce 'metre' (m). 3. Measure and compare the lengths of objects and the distances between objects using 'metre'. 4. Measure with appropriate measuring tools. 5. Record the lengths of objects and the distances between objects with appropriate measuring units. 6. Estimate the lengths of objects and the distances among objects with 'ever-ready rulers'. Remarks : 1. Encourage pupils to estimate before measuring. 2. Record the lengths of objects and the distances among objects with a single unit.	8

P.2(1st term)

Unit	Learning Objectives	Suggested Time Ratio
Dimension : Measures		
2M2 Time (II)	1. Introduce ‘minute’. 2. Tell time in terms of o’clock and minutes. 3. Measure the duration of time spent on different activities using ‘minutes’. 4. Report the duration of time spent on different activities using ‘hours’ (h) and ‘minutes’ (min). 5. Recognize that there are 24 hours in a day. 6. Develop the concept of ‘morning’ (a.m.) and ‘afternoon’ (p.m.). 7. Tell time in terms of ‘morning’, ‘afternoon’, ‘noon’ and ‘midnight’. 8. Recognize the number of days in each month. 9. Recognize the number of days in a year and the leap year. Remarks : 1. Tell time from clock faces and digital clocks. 2. ‘Morning’ can be written as (a.m.), ‘afternoon’ can be written as (p.m.). Some digital clocks use AM and PM to show morning and afternoon.	9

2. Suggested Learning Objectives P.2(2nd term)

Unit	Learning Objectives	Suggested Time Ratio
Dimension : Number		
2N4 4-digit numbers	1. Recognize the place value 'thousands'. 2. Count in groups of five hundred and thousand.	4
2N5 Addition and subtraction (III)	1. Perform subtraction within three places, including decomposition. Check the answers with addition. 2. Perform mixed operations of addition and subtraction for sums involving at most two operations. 3. Solve simple problems. 4. Estimate the answers.	13
2N6 Basic division	1. Develop the concept of division: sharing and grouping. 2. Work out sums for division, including sums with remainders. 3. Recognize the relationship between multiplication and division. 4. Solve simple problems. Remark : No need to mention the terms 'sharing' and 'grouping'.	20
Dimension : Shape and Space		
2S3 The four directions	1. Recognize the four directions: east, south, west and north. 2. Use a compass to measure directions.	4
2S4 Quadrilaterals (I)	1. Recognize some common quadrilaterals, including rectangles, squares, trapeziums and rhombuses. 2. Identify the similarities and differences between squares and rectangles. 3. Make quadrilaterals in a variety of ways.	9

P.2(2nd term)

Unit	Learning Objectives	Suggested Time Ratio
Dimension : Measures		
2M3 Hong Kong money (II)	1. Identify Hong Kong notes and coins. 2. Read price tags. 3. Exchange current notes and coins.	9
2M4 Weight	1. Develop the concept of weight. 2. Compare the weights of objects directly. 3. Measure and compare the weights of objects using improvised units. 4. Understand the need for using standard units. 5. Measure and compare the weights of objects using 'gram'(g) and 'kilogram'(kg). 6. Choose the appropriate tools for measuring. 7. Record the weights of objects with appropriate units. Remarks : 1. After pupils have grasped the concept of weight, encourage them to estimate before measuring. 2. Record weights with a single unit. 3. In their true sense, gram and kilogram are units of mass but not weight. However, in view of the language used by the majority, it is suggested not to use the term 'mass' at the primary level.	8
Dimension : Data Handling		
2D1 Pictograms (I)	1. Compare the quantity of three or more types of objects by arranging them in lines. 2. Read and discuss simple pictograms. 3. Construct pictograms, using a one-to-one representation.	6

2. Suggested Learning Objectives P.3(1st term)

Unit	Learning Objectives	Suggested Time Ratio
Dimension : Number		
3N1 5-digit numbers	1. Recognize the place value 'ten thousands'.	4
3N2 Addition and subtraction (IV)	1. Perform addition and subtraction within four places. 2. Solve simple problems. 3. Estimate the answers.	9
3N3 Multiplication (I)	1. Perform multiplication with multiplier 1 digit and multiplicand 2 digits. 2. Perform multiplication with multiplier 1 digit and multiplicand 3 digits. 3. Solve problems. 4. Estimate the answers.	10
3N4 Division (I)	1. Perform basic division by short division. 2. Perform division with divisor 1 digit and dividend 2 digits. 3. Perform division with divisor 1 digit and dividend 3 digits. 4. Solve problems. 5. Estimate the answers. Remark : **Encourage pupils to perform simple division by short division.**	15
Dimension : Shape and Space		
3S1 Parallel and perpendicular	1. Recognize parallel lines. 2. Make parallel lines in a variety of ways. 3. Recognize perpendicular lines. 4. Make perpendicular lines in a variety of ways.	3
3S2 Quadrilaterals (II)	1. Recognize the simple characteristics of parallelograms (opposite sides parallel; opposite sides equal).	6

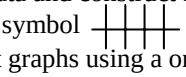
P.3(1st term)

Unit	Learning Objectives	Suggested Time Ratio
	Dimension : Measures	
3M1 Length and distance (IV)	1. Understand the need for using a unit greater than 'metre' for measurement. 2. Introduce 'kilometre' (km). 3. Compare lengths of objects and distances between objects using 'kilometre'. 4. Understand the necessity of using a unit smaller than 'centimetre' for measurement. 5. Introduce 'millimetre' (mm). 6. Measure and compare lengths of objects and distances between objects using 'millimetre'. 7. Choose the appropriate tools for measurement. 8. Record lengths of objects and distances between objects with appropriate units. Remarks : 1. Encourage pupils to estimate before measuring. 2. Record lengths of objects and distances between objects with a single unit.	10
	Dimension : Measures	
3M2 Time (III)	1. Introduce 'second'. 2. Tell time in terms of o'clock, minutes and seconds. 3. Record the duration of time for different activities using 'second'(s). 4. Record the duration of time for different activities using 'hours and minutes' or 'minutes and seconds'. Remarks : 1. Encourage pupils to estimate the duration of time for different activities. 2. Tell time from clock faces and digital clocks.	7

2. Suggested Learning Objectives P.3(2nd term)

Unit	Learning Objectives	Suggested Time Ratio
Dimension : Number		
3N5 Mixed operations (I)	1. Recognize and use brackets in mixed operations. 2. Perform mixed operations of a. multiplication and addition; b. multiplication and subtraction. (For sums involving at most two operations.) 3. Solve problems involving addition and subtraction, multiplication and addition, and multiplication and subtraction. 4. Estimate the answers. Remark : Problems include calculation of money.	16
3N6 Fractions (I)	1. Develop the concept of fractions as a part of one whole and a part of a set of objects. 2. Recognize the relationship between fractions and 1. 3. Compare fractions with the same denominator or numerator.	10
Dimension : Shape and Space		
3S3 Angles (II)	1. Recognize acute angles and obtuse angles. 2. Compare the sizes of angles.	5
3S4 Triangles	1. Recognize the simple characteristics of triangles. 2. Recognize some special triangles, such as right-angled triangles, isosceles triangles, equilateral triangles and scalene triangles. 3. Make triangles.	10

P.3(2nd term)

Unit	Learning Objectives	Suggested Time Ratio
	Dimension : Measures	
3M3 Capacity	1. Develop the concept of capacity. 2. Compare the capacity of containers directly. 3. Measure and compare the capacity of containers using improvised units. 4. Understand the need for using standard units. 5. Measure and compare the capacity of containers using 'litre' (L) and 'millilitre' (mL). 6. Measure with appropriate tools. 7. Record the capacity of containers with appropriate units. Remarks : 1. 'Litre' can be expressed as 'L' or '*l*', 'millilitre' can be expressed as 'mL' or '*ml*'. 2. After pupils have grasped the concept of capacity, encourage them to estimate before measuring. 3. Record capacity with a single unit.	10
3M4 Time (IV)	1. Introduce the '24-hour time'. 2. Tell time in terms of '24-hour time'.	5
	Dimension : Data Handling	
3D1 Block graphs	1. Read and discuss block graphs. 2. Construct block graphs: a. Collect data and construct frequency tables (e.g. using the symbol  or 正 for recording). b. Construct graphs using a one-to-one representation. c. Discuss the block graphs constructed. 3. Estimate the average from block graphs.	6

2. Suggested Learning Objectives P.4(1st term)

Unit	Learning Objectives	Suggested Time Ratio
Dimension : Number		
4N1 Multiplication (II)	1. Discover the associative property of multiplication through concrete examples, for example $(3 \times 2) \times 5 = 3 \times (2 \times 5)$. 2. Apply the commutative and associative properties of multiplication in computation, for example $2 \times 8 \times 5 = (2 \times 5) \times 8$. 3. Perform multiplication with multiplier 2 digits and multiplicand 2 digits. 4. Perform multiplication with multiplier 2 digits and multiplicand 3 digits. 5. Solve problems. 6. Estimate the answers. Remark : No need to mention 'associative property' and 'commutative property' of multiplication.	10
4N2 Division (II)	1. Perform division with divisor 2 digits and dividend 2 digits. 2. Perform division with divisor 2 digits and dividend 3 digits. 3. Recognize divisibility when the divisors are 2, 5 and 10. 4. Solve problems. 5. Estimate the answers.	10
4N3 Acquaintance with modern calculating devices	1. Be familiar with modern calculating devices. 2. Recognize the basic operations and functions of a calculator. 3. Use calculators to carry out activities to foster pupils' number sense.	5

P.4(1st term)

Unit	Learning Objectives	Suggested Time Ratio
	Dimension : Number	
4N4 Multiples and factors	1. Develop an understanding of multiples. 2. Develop an understanding of factors. 3. Find out all the factors of a number. 4. Explore the relationship between factors and multiples.	10
4N5 Common multiples and common factors	1. Develop an understanding of common multiples. 2. List the multiples of two numbers, hence find the common multiples and the least common multiple of the two numbers. 3. Develop an understanding of common factors. 4. List the factors of two numbers, hence find the common factors and the highest common factor of the two numbers.	9
	Dimension : Shape and Space	
4S1 Quadrilaterals (III)	1. Develop an understanding of the simple characteristics of trapeziums and rhombuses. 2. Compare the characteristics of different types of quadrilaterals. 3. Make quadrilaterals in a variety of ways.	10
	Dimension : Measures	
4M1 Perimeter (I)	1. Develop the concept of perimeter. 2. Measure the perimeter of 2-D shapes. 3. Find the perimeter of squares and rectangles. 4. Find the perimeter of simple 2-D shapes. Remark : In measuring activities, encourage pupils to estimate before measuring.	11

2. Suggested Learning Objectives P.4(2nd term)

Unit	Learning Objectives	Suggested Time Ratio
Dimension : Number		
4N6 Mixed operations (II)	1. Perform mixed operations of a. division and addition; b. division and subtraction; c. multiplication and division. (For sums involving at most two operations.) 2. Perform mixed operations for sums involving at most four steps. 3. Solve problems involving mixed operations. 4. Estimate the answers. Remark : Use of large numbers is not encouraged.	10
4N7 Fractions (II)	1. Develop the concept of proper fractions, improper fractions and mixed numbers. 2. Develop the concept of equivalent fractions. 3. Explore the methods for converting equivalent fractions. 4. Add and subtract fractions with the same denominators and reduce the answers to the simplest form.	16
4N8 Decimals (I)	1. Recognize decimals as another way of recording fractions. 2. Develop the concept of place value in decimals. 3. Recognize the use of decimals in daily life situations.	5
Dimension : Shape and Space		
4S2 Fitting and dissecting shapes	1. Make shapes by fitting 2-D shapes together. 2. Dissect 2-D shapes and identify the shapes dissected.	9
4S3 Symmetry	1. Develop an understanding of symmetrical shapes, and find the line(s) of symmetry. 2. Make symmetrical shapes.	8

P.4(2nd term)

Unit	Learning Objectives	Suggested Time Ratio
	Dimension : Measures	
4M2 Area (I)	1. Develop the concept of area. 2. Compare directly the area of 2-D shapes. 3. Compare the area of 2-D shapes using improvised units. 4. Introduce the standard units square centimetre (cm^2) and square metre (m^2). 5. Measure the area of 2-D shapes using square centimetres and square metres. 6. Understand and apply the formulae for calculating the area of squares and rectangles. Remark : In measuring activities, encourage pupils to estimate before measuring.	12
	Dimension : Data Handling	
4D1 Bar charts (I)	1. Read and discuss simple bar charts and introduce the vertical and horizontal axes. 2. Construct simple bar charts: a. use a one-to-one representation; b. use a one-to-two, a one-to-five or a one-to-ten representation; c. discuss the bar charts constructed. 3. Estimate the average from bar charts.	12

2. Suggested Learning Objectives P.5(1st term)

Unit	Learning Objectives	Suggested Time Ratio
Dimension : Number		
5N1 Large numbers	1. Develop an understanding of large numbers. 2. Develop the concept of approximation. 3. Estimate the number of a large quantity of objects. 4. Round off large numbers in 'thousands', 'ten thousands', 'hundred thousands', 'millions', 'ten millions' or 'hundred millions'.	5
5N2 Fractions (III)	1. Perform addition and subtraction of simple fractions with different denominators for sums involving at most two operations. 2. Solve problems involving addition and subtraction of simple fractions. 3. Estimate the answers. Remark : The denominators involved should not exceed 12.	15
5N3 Fractions (IV)	1. Perform multiplication of fractions, for sums involving at most two operations. 2. Solve simple problems. 3. Estimate the answers.	14
Dimension : Shape and Space		
5S1 The eight compass points	1. Recognize the eight compass points. 2. Find directions with a compass.	6
Dimension : Measures		
5M1 Area (II)	1. Understand and apply the formulae for finding the area of parallelograms, triangles and trapeziums. 2. Find the area of polygons.	14

P.5(1st term)

Unit	Learning Objectives	Suggested Time Ratio
Dimension : Data Handling		
5D1 Pictograms (II)	1. Read and discuss pictograms. 2. Construct pictograms of greater frequency counts: a. Organize and classify data appropriately; b. Round off data to the nearest unit; c. Construct pictograms, using a one-to-ten or a one-to-hundred representation. 3. Discuss the pictograms constructed.	7
Dimension : Algebra		
5A1 Elementary algebra	3. Use symbols or letters to represent numbers. 4. Record with algebraic symbols, for example 'John is x years old now, how old will he be after 10 years?' Record as: (x + 10) years old.	10

2. Suggested Learning Objectives P.5(2nd term)

Unit	Learning Objectives	Suggested Time Ratio
Dimension : Number		
5N4 Decimals (II)	1. Perform the addition and subtraction of decimals up to two places of decimals and for sums involving at most three operations. 2. Estimate the answers.	8
5N5 Decimals (III)	1. Develop an understanding of multiplication of decimals through daily life examples. 2. Multiply decimals by whole numbers. 3. Multiply decimals by decimals. 4. Estimate the answers. Remarks : 1. The numbers involved should not exceed 2 places of decimal. 2. Answers corrected to the nearest tenths or hundredths.	10
5N6 Fractions (V)	1. Perform division of fractions for sums involving at most two operations. 2. Solve simple problems, excluding problems on finding the original numbers. 3. Estimate the answers.	11
Dimension : Shape and Space		
5S2 3-D shapes (III)	1. Recognize the characteristics of cones, pyramids, cylinders, prisms and spheres. 2. Make nets of cubes and cuboids.	10

P.5(2nd term)

Unit	Learning Objectives	Suggested Time Ratio
	Dimension : Measures	
5M2 Volume (I)	1. Develop the concept of volume. 2. Compare the volume of objects intuitively. 3. Introduce the standard unit 'cubic centimetre' (cm^3). 4. Measure and compare the volume of objects using 'cubic centimetre'. 5. Understand the need for using a unit larger than 'cubic centimetre'. 6. Introduce 'cubic metre' (m^3). 7. Understand and apply the formulae for finding the volume of cubes and cuboids. Remark : Encourage pupils to estimate the answers whenever appropriate.	11
	Dimension : Data Handling	
5D2 Bar charts (II)	1. Read and discuss bar charts. 2. Construct bar charts: a. using a one-to-fifty or a one-to-hundred representation; b. making charts with appropriate scales. 3. Read and discuss compound bar charts. 4. Construct compound bar charts and discuss the bar charts constructed.	8
	Dimension : Algebra	
5A2 Simple equations (I)	1. Understand the concept of equations. 2. Solve simple equations involving one step in the solutions and check the answers (involving whole numbers only). 3. Solve problems by simple equations (involving only one step in the solutions).	8

2. Suggested Learning Objectives P.6(1st term)

Unit	Learning Objectives	Suggested Time Ratio
Dimension : Number		
6N1 Decimals (IV)	5. Develop an understanding of division of decimals through daily life examples. 6. Divide decimals by whole numbers and whole numbers by whole numbers. 7. Divide decimals by decimals. 8. Perform mixed operations on decimals for sums involving at most three operations. 9. Estimate the answers. Remarks : 3. The numbers involved should not exceed 2 places of decimal. 4. Answers corrected to the nearest tenths or hundredths.	14
6N2 Decimals (V)	1. Convert decimals into fractions. 2. Convert fractions into decimals, rounding off the answers to the nearest tenths or hundredths. 3. Compare fractions by converting them into decimals. 4. Estimate the answers.	8
6N3 Percentages (I)	1. Recognize percentages through daily life examples. 2. Develop an understanding of percentages. 3. Convert percentages into decimals and vice versa. 4. Convert percentages into fractions and vice versa.	12

P.6(1st term)

Unit	Learning Objectives	Suggested Time Ratio
Dimension : Shape and Space		
6S1 3-D shapes (IV)	1. Recognize the vertices, edges and faces of 3-D shapes. 2. Make frameworks of prisms and pyramids. 3. Explore the relationship between the number of edges and the number of sides of the bases of prisms and pyramids. 4. Explore the relationship between the number of vertices and the number of sides of the bases of prisms and pyramids. 5. Explore and design nets of prisms. 6. Make pyramids and prisms. 7. Recognize the different sections of prisms, pyramids and spheres.	14
Dimension : Measures		
6M1 Volume (II)	1. Recognize the relationship between capacity and volume. 2. Find the volume of irregular solids by displacement of water.	14
Dimension : Data Handling		
6D1 Averages	1. Find the average of a group of data. 2. Solve simple problems. 3. Estimate the answers.	5
6D2 Bar charts (III)	1. Read and discuss bar charts of large frequency counts. 2. Construct bar charts, using a one-to-thousand, a one-to-ten thousand or a one-to-hundred thousand representation. 3. Estimate the average from bar charts.	6

2. Suggested Learning Objectives P.6(2nd term)

Unit	Learning Objectives	Suggested Time Ratio
	Dimension : Number	
6N4 Percentages (II)	1. Solve simple problems on percentages, including a. finding percentages; b. expressing the value of a percentage of a quantity; c. discount. 2. Estimate the answers.	24
	Dimension : Shape and Space	
6S2 Circles	1. Recognize the properties of circles, centre, radius, diameter and circumference. 2. Draw circles in a variety of ways.	6
	Dimension : Measures	
6M2 Perimeter (II)	1. Recognize circumference. 2. Explore the relationship between the circumference and the diameter / radius. 3. Develop an understanding of π. 4. Tell the stories of ancient Chinese Mathematicians on discovering π. 5. Apply the formula of circumference. Remark : Emphasis is placed on the contribution of Chinese Mathematicians on the discovery of π, but not on the methods used for calculating π.	6
6M3 Speed	1. Understand the concept of speed. 2. Use 'metres per second' (m/s) and 'kilometres per hour' (km/h) as the unit of speed. 3. Read travel graphs. 4. Solve simple problems. Remark : Problems on chasing are not included.	10

P.6(2nd term)

Unit	Learning Objectives	Suggested Time Ratio
Dimension : Data Handling		
6D3 Broken line graphs	1. Read and discuss broken line graphs. 2. Construct broken line graphs.	8
Dimension : Algebra		
6A1 Simple equations (II)	1. Solve equations involving at most two steps in the solutions, and examine the results. 2. Solve problems by simple equations (involving at most two steps in the solutions). Remark : Operations of like terms are not included.	15