

MARINA INTERNATIONAL SCHOOL

MATHEMATICS SCHEME OF WORK

YEAR 4 - TERM 1

WEEK	TOPIC	TOPIC DETAILS
1.1	counting on and back	Count on and count back in steps of constant size: 1-digit numbers, tens, hundreds or thousands, starting from any number not beyond zero.
1.2	counting on and back	Count on and count back in steps of constant size: 1-digit numbers, tens, hundreds or thousands, starting from any number, and extending beyond zero to include negative numbers.
1.3	Read and write number names	Read and write number names and whole numbers greater than 1000 and less than 0.
1.4	compare and order	1.4 Understand the relative size of quantities to compare and order whole numbers, using the symbols =, > and <. 1.5 Understand the relative size of quantities to compare and order positive and negative numbers, using the symbols =, > and <.
2.1	Sequences	Recognise and extend linear sequences, and describe the term-to-term rule
2.2	Sequences	Recognise and extend non-linear sequences, and describe the term-to-term rule.
2.3	Sequences	Recognise and extend the spatial pattern of square numbers.
2.4	Place value	2.4 Understand and explain that the value of each digit in numbers is determined by its position in that number. 2.5 Improving Refining mathematical ideas or representations to develop a more effective approach or solution.
3.1	Place value	Understand and explain that the value of each digit in numbers is determined by its position in that number.
3.2	Place value	Improving Refining mathematical ideas or representations to develop a more effective approach or solution

WEEK	TOPIC	TOPIC DETAILS
3.3	Place value	3.4 Use knowledge of place value to divide whole numbers by 10 and 100. 3.5 Compose, decompose and regroup whole numbers
3.4	Place value	3.4 Use knowledge of place value to divide whole numbers by 10 and 100. 3.5 Compose, decompose and regroup whole numbers
4.1	Rounding	Round numbers to the nearest 10, 100 or 1000.
4.2	Rounding	Round numbers to the nearest 10 000 or 100 000.
4.3	Factors and Multiples	Understand the relationship between multiples and factors.
4.4	Test of divisibility	4.4 Use knowledge of factors and multiples to understand tests of divisibility by 2, 5, 10, 25, 50 and 100. 4.5 Characterising Identifying and describing the mathematical properties of an object
5.1	Test of divisibility	Use knowledge of factors and multiples to understand tests of divisibility by 2, 5, 10, 25, 50 and 100.
5.2	Test of divisibility	Characterising Identifying and describing the mathematical properties of an object
5.3	Time	Read and record time accurately in digital notation (12-hour) and on analogue clocks.
5.4	Time	5.4 Read and record time accurately in digital notation (24-hour) and on analogue clocks 5.5 Interpret and use the information in timetables (12- and 24-hour clock).
6.1	Time	Understand the direct relationship between units of time, and convert between them.
6.2	Time interval	Find time intervals between different units: days, weeks, months and years.
6.3	Time interval	Find time intervals between different units: seconds, minutes and hours that do not bridge through 60.
6.4	Shapes	6.4 Investigate what shapes can be made if two or more shapes are combined, and analyse their properties, including reference to tessellation. 6.5 Characterising Identifying and describing the mathematical properties of an object
7.1	Shapes	Conjecturing Forming mathematical questions or ideas.

WEEK	TOPIC	TOPIC DETAILS
7.2	Shapes	Convincing Presenting evidence to justify or challenge a mathematical idea or solution
7.3	Lines of symmetry	Identify all horizontal, vertical and diagonal lines of symmetry on 2D shapes and patterns.
7.4	Line of symmetry/ Perimeter and area	7.4 Reflect 2D shapes in a horizontal or vertical mirror line, including where the mirror line is the edge of the shape, on square grids. 7.5 Estimate and measure perimeter and area of 2D shapes,
8.1	Area and perimeter	Understanding that two areas can be added together to calculate the area of a compound shape.
8.2	Area and perimeter	Draw rectangles and squares on square grids, and measure their perimeter and area. .
8.3	Area and perimeter	Derive and use formulae to calculate areas and perimeters of rectangles and squares.
8.4	Mid-term break	Mid-term break
9.1	Irregular shape	Estimate the area of irregular shapes on a square grid (whole and part squares).
9.2	2D shapes	Identify 2D faces of 3D shapes, and describe their properties.
9.3	3D shapes	Match nets to their corresponding 3D shapes.
9.4	Even and odd numbers	9.4 Recognise and explain generalisations when adding and subtracting combinations of even and odd numbers. 9.5 Generalising Recognising an underlying pattern by identifying many examples that satisfy the same mathematical criteria.
10.1	Puzzle	Recognise the use of objects, shapes or symbols to represent unknown quantities in addition and subtraction calculations.
10.2	Estimation	Estimate, add and subtract whole numbers with up to three digits.
10.3	Association property (commutative)	Understand the associative property of multiplication, and use this to simplify calculations.

WEEK	TOPIC	TOPIC DETAILS
10.4	Timestable/ multiplication	10.4 Know all times tables from 1 to 10. 10.5 Estimate and multiply whole numbers up to 1000 by 1-digit whole numbers.
11.1	Division	Estimate and divide whole numbers up to 100 by 1-digit whole numbers.
11.2	Data collection	Plan and conduct an investigation to answer statistical questions, considering what data to collect (categorical and discrete data).
11.3	Data collection	Plan and conduct an investigation to answer statistical questions, considering what data to collect (categorical and discrete data).
11.4	Data collection	11.4 Record, organise and represent categorical and discrete data. Choose and explain which representation to use in a given situation: <ul style="list-style-type: none"> - Venn and Carroll diagrams - tally charts and frequency tables - pictograms and bar charts - dot plots (one dot per count). 11.5 Interpret data, identifying similarities and variations, within and between data sets, to answer statistical questions. Discuss conclusions, considering the sources of variation.
12.1	Fraction	Understand that the more parts a whole is divided into, the smaller the parts become.
12.2	Fraction	Understand that a fraction can be represented as a division of the numerator by the denominator (unit fractions and three-quarters).
12.3	Fraction	Understand that a fraction can be represented as a division of the numerator by the denominator (unit fractions and three-quarters).
12.4	Fraction/angles	12.4 Use knowledge of fractions to read and interpret a measuring scale. 12.5 Estimate, compare and classify angles, using geometric vocabulary including acute, right and obtuse.
13.1	Translation	Interpret and create descriptions of position, direction and movement, including reference to cardinal and ordinal points, and their notations.
13.2	Coordinates	Understand that position can be described using coordinate notation. Read and plot coordinates in the first quadrant (with the aid of a grid)
13.3	Coordinates	Characterising Identifying and describing the mathematical properties of an object

WEEK	TOPIC	TOPIC DETAILS
13.4	Coordinates	13.4 Classifying Organising objects into groups according to their mathematical properties. 13.5 Understand that position can be described using coordinate notation. Read and plot coordinates in the first quadrant (with the aid of a grid)
14.1	Coordinates	Characterising Identifying and describing the mathematical properties of an object Classifying Organising objects into groups according to their mathematical properties
14.2	Probability	Use language associated with chance to describe familiar events, including reference to maybe, likely, certain, impossible.
14.3	Probability	Conduct chance experiments, using small and large numbers of trials, and present and describe the results using the language of probability.
14.4	Fun Day	Fun Day

MATHEMATICS SCHEME OF WORK

YEAR 4 - TERM 2

WEEK	TOPIC	TOPIC DETAILS
1.2	-	-
1.3	Count on and count back	Count on and count back in steps of constant size: 1-digit numbers, tens, hundreds or thousands, starting from any number not beyond zero.
1.4	Count on and count back/Read and write number names	1.4 Count on and count back in steps of constant size: 1-digit numbers, tens, hundreds or thousands, starting from any number, and extending beyond zero to include negative numbers. 1.5 Read and write number names and whole numbers greater than 1000 and less than 0.
2.1	Compare and order	Understand the relative size of quantities to compare and order whole numbers, using the symbols =, > and <.
2.2	Compare and order	Understand the relative size of quantities to compare and order positive and negative numbers, using the symbols =, > and <.
2.3	Sequences	Recognise and extend linear sequences, and describe the term-to-term rule.
2.4	Sequences	2.4 Recognise and extend non-linear sequences, and describe the term-to-term rule. 2.5 Recognise and extend the spatial pattern of square numbers.
3.1	Place value	Understand and explain that the value of each digit in numbers is determined by its position in that number.
3.2	Place value	Improving Refining mathematical ideas or representations to develop a more effective approach or solution.

WEEK	TOPIC	TOPIC DETAILS
3.3	Place value	3.4 Use knowledge of place value to divide whole numbers by 10 and 100. 3.5 Compose, decompose and regroup whole numbers.
3.4	Place value	3.4 Use knowledge of place value to divide whole numbers by 10 and 100. 3.5 Compose, decompose and regroup whole numbers.
4.1	Rounding	Round numbers to the nearest 10, 100 or 1000.
4.2	Rounding	Round numbers to the nearest 10 000 or 100 000.
4.3	Factors and Multiples	Understand the relationship between multiples and factors.
4.4	Test of divisibility	4.4 Use knowledge of factors and multiples to understand tests of divisibility by 2, 5, 10, 25, 50 and 100. 4.5 Characterising Identifying and describing the mathematical properties of an object.
5.1	Time	Read and record time accurately in digital notation (12-hour) and on analogue clocks.
5.2	Time	Read and record time accurately in digital notation (24-hour) and on analogue clocks.
5.3	Time	Interpret and use the information in timetables (12- and 24-hour clock).
5.4	Time	5.4 Understand the direct relationship between units of time, and convert between them. 5.5 Find time intervals between different units: days, weeks, months and years.
6.1	Time	Find time intervals between different units: seconds, minutes and hours that do not bridge through 60.

WEEK	TOPIC	TOPIC DETAILS
6.2	Shapes	Investigate what shapes can be made if two or more shapes are combined, and analyse their properties, including reference to tessellation.
6.3	Shapes	Characterising Identifying and describing the mathematical properties of an object
6.4	Shapes	6.4 Conjecturing Forming mathematical questions or ideas. 6.5 Convincing Presenting evidence to justify or challenge a mathematical idea or solution
7.1	Line of symmetry	Identify all horizontal, vertical and diagonal lines of symmetry on 2D shapes and patterns.
7.2	Line of symmetry	Reflect 2D shapes in a horizontal or vertical mirror line, including where the mirror line is the edge of the shape, on square grids.
7.3	area and perimeter	Estimate and measure perimeter and area of 2D shapes,
7.4	Mid-term break	Mid-term break
8.1	Area and perimeter	Understanding that two areas can be added together to calculate the area of a compound shape.
8.2	Area and perimeter	Draw rectangles and squares on square grids, and measure their perimeter and area. .
8.3	irregular shape	Derive and use formulae to calculate areas and perimeters of rectangles and squares.

WEEK	TOPIC	TOPIC DETAILS
8.4	2D shapes	<p>8.4 Estimate the area of irregular shapes on a square grid (whole and part squares).</p> <p>8.5 Identify 2D faces of 3D shapes, and describe their properties.</p> <p>Bring into whole class, group and pair working.</p> <p>I think a square is a rectangle. What do you think?</p> <p>If you multiply a number by 10 the answer is always bigger than the start number.</p>
9.1	3D shape	Match nets to their corresponding 3D shapes.
9.2	Even and Odd numbers	Recognise and explain generalisations when adding and subtracting combinations of even and odd numbers.
9.3	Even and Odd numbers	Generalising Recognising an underlying pattern by identifying many examples that satisfy the same mathematical criteria
9.4	Puzzle	<p>9.4 Recognise the use of objects, shapes or symbols to represent unknown quantities in addition and subtraction calculations.</p> <p>9.5 Estimate, add and subtract whole numbers with up to three digits.</p>
10.1	Association property (commutative)	Understand the associative property of multiplication, and use this to simplify calculations.
10.2	Timestable	Know all times tables from 1 to 10.
10.3	Multiplication	Estimate and multiply whole numbers up to 1000 by 1-digit whole numbers.
10.4	Division/data collection	<p>10.4 Estimate and divide whole numbers up to 100 by 1-digit whole numbers.</p> <p>10.5 Plan and conduct an investigation to answer statistical questions, considering what data to collect (categorical and discrete data).</p>
11.1	Data collections	Plan and conduct an investigation to answer statistical questions, considering what data to collect (categorical and discrete data).

WEEK	TOPIC	TOPIC DETAILS
11.2	Data collections	Record, organise and represent categorical and discrete data. Choose and explain which representation to use in a given situation: <ul style="list-style-type: none"> - Venn and Carroll diagrams - tally charts and frequency tables - pictograms and bar charts - dot plots (one dot per count).
11.3	Interpretation of data	Interpret data, identifying similarities and variations, within and between data sets, to answer statistical questions. Discuss conclusions, considering the sources of variation.
11.4	Fractions	11.4 Understand that the more parts a whole is divided into, the smaller the parts become. 11.5 Understand that a fraction can be represented as a division of the numerator by the denominator (unit fractions and three-quarters).
12.1	Fraction	Understand that a fraction can be represented as a division of the numerator by the denominator (unit fractions and three-quarters)
12.2	Fraction	Use knowledge of fractions to read and interpret a measuring scale.
12.3	Angles	Estimate, compare and classify angles, using geometric vocabulary including acute, right and obtuse.
12.4	Translation (movement)/coordinates	12.4 Interpret and create descriptions of position, direction and movement, including reference to cardinal and ordinal points, and their notations. 12.5 Understand that position can be described using coordinate notation. Read and plot coordinates in the first quadrant (with the aid of a grid)
13.1	Coordinates	Characterising Identifying and describing the mathematical properties of an object

WEEK	TOPIC	TOPIC DETAILS
13.2	Coordinates	Classifying Organising objects into groups according to their mathematical properties
13.3	Coordinates	Understand that position can be described using coordinate notation. Read and plot coordinates in the first quadrant (with the aid of a grid)
13.4	Probability	13.4 Use language associated with chance to describe familiar events, including reference to maybe, likely, certain, impossible. 13.5 Conduct chance experiments, using small and large numbers of trials, and present and describe the results using the language of probability.
14.1	Timestable	Know all times tables from 1 to 10.
14.2	Multiplication	Estimate and multiply whole numbers up to 1000 by 1-digit whole numbers.
14.3	Division	Estimate and divide whole numbers up to 100 by 1-digit whole numbers.
14.4	Fun day /Consultation	14.4 Fun day 14.5 Consultation

MATHEMATICS SCHEME OF WORK

YEAR 4 - TERM 3

WEEK	TOPIC	TOPIC DETAILS
1.2	counting on and back	Count on and count back in steps of constant size: 1-digit numbers, tens, hundreds or thousands, starting from any number not beyond zero.
1.3	Count on and count back	Count on and count back in steps of constant size: 1-digit numbers, tens, hundreds or thousands, starting from any number, and extending beyond zero to include negative numbers.
1.4	Read and write number names/Comparing and ordering	1.4 Read and write number names and whole numbers greater than 1000 and less than 0. 1.5 Understand the relative size of quantities to compare and order whole numbers, using the symbols =, > and <.
2.1	Mid- term break	Mid- term break
2.2	Mid- term break	Mid- term break
2.3	Mid- term break	Mid- term break
2.4	Mid- term break	Mid- term break
3.1	Comparing and ordering	Understand the relative size of quantities to compare and order positive and negative numbers, using the symbols =, > and <.
3.2	Sequences	Recognise and extend linear sequences, and describe the term-to-term rule.
3.3	Sequences	3.4 Recognise and extend the spatial pattern of square numbers. 3.5 Understand and explain that the value of each digit in numbers is determined by its position in that number. Improving Refining mathematical ideas or representations to develop a more effective approach or solution.

WEEK	TOPIC	TOPIC DETAILS
3.4	Sequences/ Place value	3.4 Recognise and extend the spatial pattern of square numbers. 3.5 Understand and explain that the value of each digit in numbers is determined by its position in that number. Improving Refining mathematical ideas or representations to develop a more effective approach or solution.
4.1	Multiplication	Use knowledge of place value to multiply whole numbers by 10 and 100.
4.2	Division	Use knowledge of place value to divide whole numbers by 10 and 100.
4.3	Place value	Compose, decompose and regroup whole numbers.
4.4	Rounding	4.4 Round numbers to the nearest 10, 100 or 1000. 4.5 Round numbers to the nearest 10 000 or 100 000.
5.1	Factors and multiples	Understand the relationship between multiples and factors.
5.2	Test of divisibility	Use knowledge of factors and multiples to understand tests of divisibility by 2, 5, 10, 25, 50 and 100. Characterising Identifying and describing the mathematical properties of an object.
5.3	Time	Read and record time accurately in digital notation (12-hour) and on analogue clocks.
5.4	Time	5.4 Read and record time accurately in digital notation (24-hour) and on analogue clocks. 5.5 Interpret and use the information in timetables (12- and 24-hour clock).
6.1	Time	Understand the direct relationship between units of time, and convert between them.
6.2	Time interval	Find time intervals between different units: days, weeks, months and years
6.3	Time interval	Find time intervals between different units: seconds, minutes and hours that do not bridge through 60.

WEEK	TOPIC	TOPIC DETAILS
6.4	Shapes/line of symmetry	<p>6.4 Investigate what shapes can be made if two or more shapes are combined, and analyse their properties, including reference to tessellation.</p> <p>Characterising Identifying and describing the mathematical properties of an object Conjecturing Forming mathematical questions or ideas. Convincing Presenting evidence to justify or challenge a mathematical idea or solution</p> <p>6.5 Identify all horizontal, vertical and diagonal lines of symmetry on 2D shapes and patterns.</p>
7.1	Line of symmetry	Reflect 2D shapes in a horizontal or vertical mirror line, including where the mirror line is the edge of the shape, on square grids.
7.2	Area and perimeter	Estimate and measure perimeter and area of 2D shapes,
7.3	Area and perimeter	Understanding that two areas can be added together to calculate the area of a compound shape.
7.4	Area and perimeter	<p>7.4 Draw rectangles and squares on square grids, and measure their perimeter and area.</p> <p>7.5 Derive and use formulae to calculate areas and perimeters of rectangles and squares.</p>
8.1	Irregular shapes	Estimate the area of irregular shapes on a square grid (whole and part squares).
8.2	2D shapes	Identify 2D faces of 3D shapes, and describe their properties.
8.3	3D shapes	Match nets to their corresponding 3D shapes.
8.4	Even and odd numbers/puzzles	<p>8.4 Recognise and explain generalisations when adding and subtracting combinations of even and odd numbers.</p> <p>Generalising Recognising an underlying pattern by identifying many examples that satisfy the same mathematical criteria.</p> <p>8.5 Recognise the use of objects, shapes or symbols to represent unknown quantities in addition and subtraction calculations.</p>
9.1	Estimation	Estimate, add and subtract whole numbers with up to three digits.

WEEK	TOPIC	TOPIC DETAILS
9.2	Association property (commutative)	Understand the associative property of multiplication, and use this to simplify calculations.
9.3	Timestable	Know all times tables from 1 to 10.
9.4	Division/multiplication	9.4 Estimate and multiply whole numbers up to 1000 by 1-digit whole numbers. 9.5 Estimate and divide whole numbers up to 100 by 1-digit whole numbers.
10.1	Data collections	Plan and conduct an investigation to answer statistical questions, considering what data to collect (categorical and discrete data).
10.2	Data collections	Plan and conduct an investigation to answer statistical questions, considering what data to collect (categorical and discrete data).
10.3	Data collections	Record, organise and represent categorical and discrete data. Choose and explain which representation to use in a given situation: - Venn and Carroll diagrams - tally charts and frequency tables - pictograms and bar charts - dot plots (one dot per count).
10.4	Interpretation of data/fractions	10.4 Interpret data, identifying similarities and variations, within and between data sets, to answer statistical questions. Discuss conclusions, considering the sources of variation. 10.5 Understand that the more parts a whole is divided into, the smaller the parts become.
11.1	Fractions	Understand that a fraction can be represented as a division of the numerator by the denominator (unit fractions and three-quarters).
11.2	Fractions	Understand that a fraction can be represented as a division of the numerator by the denominator (unit fractions and three-quarters).
11.3	Fractions	Use knowledge of fractions to read and interpret a measuring scale.
11.4	Fun day/consultation	11.4 Fun day 11.5 consultation

