



Sherdley Primary School

Maths Curriculum Map

2022 – 2023

Year Group	Autumn Term	Spring Term	Summer Term
Preschool	<p>Number Count and recite numbers in order. Join in with number rhymes. Count to 3. Understand the concept of more – can you get more? Subitise 1 and 2. Show me 1/2 fingers. Use a 1/2 frame.</p> <p>Shape, Space and Measure Match an object. Match an object (colour). Match an object (size). Use the positional language under, on top, in. Understand the concept of heavy when looking at weight. Understand the concept of more and size when looking at capacity. Begin to sequence events – now and next. Understand the concept of long when looking at length. Begin to notice patterns around them. Begin to copy a repeating pattern. Find and notice circles.</p>	<p>Number Count and recite numbers in order to 5. Join in with number rhymes to 5. Count to 5. Understand the concept of less – can you make it less? Begin to subitise 3. Show me 1/2/3 fingers. Notice numerals in the environment. Use a 3 frame.</p> <p>Shape, Space and Measure Match an object (shape). Find and notice triangles. Use the positional language behind and next to. Sequence events – now, next and then. Begin to join in with music patterns. Understand the concept of tall when looking at height. Extend a two-part repeating pattern.</p>	<p>Number Count and recite numbers in order beyond 5. Join in with number rhymes to 10. Count objects to 5 showing one to one correspondence. Show me 1/2/3/4/5 fingers. Compare amounts and use the language more than and fewer than. Understand 1 more and get 1 more. Subitise 3. Recognise some numerals in the environment. Match a numeral to the correct amount to 5. Make marks to represent numerals. Solve a problem using numbers to 5 (have the 3 pigs got enough chairs?) Use a 5 frame. Know that the last number reached when counting tells you the number of objects in total.</p> <p>Shape, Space and Measure Use the positional language in between. Begin to talk about 3D shapes when building. Select the appropriate 3D shapes for their model. Talk about 2D shapes in pictures and models. Begin to talk about a simple route. Create a two-part repeating pattern. Notice and correct a mistake in a repeating pattern. Sequence events using first, then..</p>



Sherdley Primary School

Maths Curriculum Map

2022 – 2023

	<p>Key Vocabulary: Count, order, subitise, match, heavy, light, more, now, next, long, patterns, repeating, circle, under, on top, in</p>	<p>Key Vocabulary: Count, less, subitise, numerals, match, triangle, behind, next to, now, next, then, tall, repeating pattern</p>	<p>Key Vocabulary: Count, compare, more than, fewer than, subitise, numerals, in between, pattern, first, then, 2D, 3D</p>
Reception			
Reception	<p>Number Count objects, actions and sounds. Recognise numbers 1-5. Begin to subitise to 5. Match an amount to the numeral to 5. Find one more of numbers to 5. Find one less of numbers to 5.</p> <p>Number Patterns Explore the composition of 2, 3, 4 and 5. Say the stem sentence 2 is made of 1 and another 1. Say which group has more to 5. Say which group has fewer to 5. Say which group is equal to 5. Compare quantities to 5. Count to 10.</p> <p>Shape, Space and Measure Match and sort objects to a specific criteria. Identify the odd one out. Compare different heights. Use the language tall and short. Compare different lengths. Use the language long and short. Compare capacity using the language more and less. Use positional language. Know and name 2D shapes - circle, triangle, square and rectangle. Talk about time – day and night.</p>	<p>Number Recognise the number 0. Recognise numbers 1-10. Subitise to 5. Match an amount to the numeral to 10. Compare numerals – which one is more or fewer. Find one more of numbers to 10. Find one less of numbers to 10.</p> <p>Number Patterns Explore the composition of numbers to 10. Say the stem sentence 5 is made fromand.... Estimate an amount. Share out an amount. Split numbers into two parts. Know that two parts make a whole. Add two amounts to make a total. Say which group has more to 10. Say which group has fewer to 10. Say which group is equal to 10. Compare quantities to 10. Say the stem sentenceis fewer than..... Oris more than..... Count to 20. Count on and back along a number track to 10. Identify mistakes on a number line.</p> <p>Shape, Space and Measure Know and use the term part and whole. Compare the mass of objects.</p>	<p>Number Know and order numbers to 10. Use the language less than and more than when comparing numbers on a number line. Count an amount to 20. Recognise numbers to 20. Subitise to 6. Make teen numbers using tens and ones.</p> <p>Number Patterns Count on and back along a number track to 10. Know that 1, 3, 5, 7 and 9 are odd numbers. Know that 2, 4, 6, 8, 10 are even numbers. Double numbers up to 10. Know doubling facts and recall them. Say the stem sentence is made of and Say the stem sentence double is Know number bonds to 5. Estimate an amount by comparing it to another number – is it more than or fewer than Use 10 frame to represent number bonds to 5. Develop their understanding of the composition of numbers to 10. Identify mistakes on a number line. Identify numbers that are missing on the number line. Count on from a larger number. Compare numbers on a number line. Subtract numbers. Add two numbers.</p>



Sherdley Primary School

Maths Curriculum Map

2022 – 2023

	<p>Sequence events and put them in the correct order of time. Use the language first, next. Copy and continue a repeating pattern.</p>	<p>Use the language heavy and light. Compare and order different capacities. Make comparisons in height and length. Use the language longest, tallest, shortest, longer than, taller than and shorter than. Know and name 3D shapes – cube, cuboid, cylinder, sphere, cone, triangular prism Know the properties of 3D shapes. Make a repeating pattern. Identify mistakes in a repeating pattern and correct them.</p>	<p>Find the missing number in an addition and subtraction sentence problems.</p> <p>Shape, Space and Measure Match and sort objects to their own criteria. Match, rotate and manipulate different shapes. Find shapes within other shapes. Make shapes using different shapes. Compare and order different capacities using non-standard units. Compare and order lengths using non-standard units. Make more complex repeating patterns and count how many times it is repeated. Sequence and follow a map.</p>
	<p>Key Vocabulary: Count, numbers, subitise, numeral, more than, less than, fewer, equal, tall, short, long, circle, triangle, square, rectangle, day, night, sequence, first, next, repeating pattern</p>	<p>Key Vocabulary: Subitise, numeral, compare, match, more, less, total, equal, count on, count back, part, whole, mass, heavy, light, heavier, lighter, height, length, longest, tallest, shortest, longer than, taller than, shorter than, cube, cuboid, cylinder, sphere, cone, triangular prism, repeating pattern</p>	<p>Key Vocabulary: Order, less than, more than, compare, tens, ones, count, odd, even, double, number bonds, estimate, add, subtract, match, sort, rotate, pattern, capacity, length</p>
1			
1	<p>Place Value – within 10 (5 weeks)</p> <ul style="list-style-type: none"> Count to 10 forwards/backwards beginning with 0 or 1 or from any given number Count, read & write numbers to 10 in numerals & words Given a number, identify one more or one less Identify & represent numbers using objects & pictorial representations including the number line, and use the language of equal to, more than, less than (fewer), most, least <p>Addition/Subtraction (5weeks)</p> <ul style="list-style-type: none"> Represent and use number bonds to 10 	<p>Place Value – within 20 (3 weeks)</p> <ul style="list-style-type: none"> Count to 20 forwards/backwards beginning with 0 or 1 or from any given number Count, read & write numbers to 20 in numerals & words Given a number, identify one more or one less Identify & represent numbers using objects & pictorial representations including the number line, and use the language of equal to, more than, less than (fewer), most, least <p>Addition/Subtraction – within 20 (3 weeks)</p> <ul style="list-style-type: none"> Represent and use number bonds to 20 	<p>Multiplication & division (3 weeks)</p> <ul style="list-style-type: none"> Count in multiples of 2s, 5s and 10s Solve one step problems that involve multiplication & division, by calculating the answer using concrete objects, pictorial representations & arrays with the support of the teacher <p>Fractions (2 weeks)</p> <ul style="list-style-type: none"> Recognise, find and name a half as one of two equal parts of an object, shape or quantity



Sherdley Primary School

Maths Curriculum Map

2022 – 2023

- Read, write and interpret mathematical statements involving addition (+) and subtraction (-) and equals (=) signs
- Add and subtract one-digit numbers to 10, including zero
- Solve one step problems that involve addition and subtraction, using concrete objects and pictorial representations and missing number problems

Geometry: Shape (1 week)

- Recognise and name common 2-D shapes, including (for example, rectangles (including squares), circles & triangles)
- Recognise and name 3-D shapes, including (for example, cuboids (including cubes), pyramids & spheres)

Consolidation (1 week)

- Read, write and interpret mathematical statements involving addition (+) and subtraction (-) and equals (=) signs
- Add and subtract one-digit and two-digit numbers to 20 including zero
- Solve one step problems that involve addition & subtraction, using concrete objects and pictorial representations and missing number problems e.g. $7 = \square - 9$

Place Value - within 50 (2 weeks)

- Count to 50 forwards/backwards beginning with 0 or 1 or from any given number
- Count, read & write numbers to 50 in numerals & words
- Given a number, identify one more or one less
- Identify & represent numbers using objects & pictorial representations including the number line, and use the language of equal to, more than, less than (fewer), most, least
- Count in multiples of 2s, 5s and 10s

Measurement: Length & Height (2 weeks)

- Measure & begin to record lengths & heights
- Compare, describe & solve practical problems for lengths & heights e.g. long/short, longer/shorter, tall/short, double/half

Measurement: Weight & Volume (2 weeks)

- Measure & begin to record mass/weight, capacity & volume
- Compare, describe & solve practical problems for mass/weight e.g. heavy/light, heavier than/lighter than, capacity & volume e.g. full/empty, more than/less than, half, half full, quarter

- Recognise, find & name a quarter as one of four equal parts of an object, shape or quantity

Geometry: Position & Direction (1 week)

- Describe position, direction & movement, including whole, half, quarter & three-quarter turns,

Place Value - within 100 (2 weeks)

- Count to 100 forwards/backwards beginning with 0 or 1 or from any given number
- Count, read & write numbers to 100 in numerals & words
- Given a number, identify one more or one less
- Identify & represent numbers using objects & pictorial representations including the number line, and use the language of equal to, more than, less than (fewer), most, least

Measurement: Money (1 week)

- Recognise & know the value of different denominations of coins and notes

Measurement: Time (2 weeks)

- Sequence events in chronological order using language e.g. before & after, next, first, today, yesterday, tomorrow, morning, afternoon & evening
- Recognise & use language relating to dates, including days of the week & months of the year
- Tell the time to the hour and half past the hour & draw hands on a clock to show these times. Compare, describe & solve practical problems for time e.g. quicker, earlier, slower, later
- Measure & begin to record time (hours, minutes & seconds)



Sherdley Primary School

Maths Curriculum Map

2022 – 2023

			Consolidation (1 week)
	<p>Key Vocabulary: represent, representation, forwards, backwards, equal to, more than, less than (fewer), most, least, ordinal numbers e.g. first, second, third etc, addition, subtraction, part-whole, compare, find the difference, 2-D shape names, 3-D shape names,</p>	<p>Key Vocabulary: represent, representation, forwards, backwards, equal to, more than, less than (fewer), most, least, partition, number bond, systematic approach, multiples, taller, shorter, longer, length, height, cm, mass/weight, heavy/light, heavier than/lighter than, capacity & volume, full/empty, more than/less than, half, half full, quarter</p>	<p>Key Vocabulary: equal groups, arrays, grouping, sharing, doubles, half, quarter, whole turn, half turn, quarter turn, three quarter turn, position, order, partition, compare, tens, ones, greater than, less than, equal to, pounds, pence, equal values, before, after, next, first, today, yesterday, tomorrow, morning, afternoon & evening, days of the week & months of the year, quicker, earlier, slower, later, hours, minutes, seconds</p>
2	<p>Place Value (4 weeks)</p> <ul style="list-style-type: none"> • Read & write numbers to at least 100 in numerals & words • Recognise the place value of a digit in a two-digit number (tens & ones) • Identify, represent & estimate numbers using different representations including the number line • Compare & order numbers from 0 up to 100; use <, > and = signs • Use place value & number facts to solve problems • Count in steps of 2, 3 and 5 from 0, and in tens from any number forwards & backwards <p>Addition/subtraction (5 weeks)</p> <ul style="list-style-type: none"> • Recall & use addition & subtraction facts to 20 fluently, & derive & use related facts up to 100 • Add & subtract numbers using concrete objects, pictorial representations, & mentally, including: a two-digit number and ones, a two-digit number and tens, two two-digit numbers, adding three one-digit numbers 	<p>Measurement: Money (2 weeks)</p> <ul style="list-style-type: none"> • Recognise & use symbols for pounds (£) and pence (p); combine amounts to make a particular value • Find different combinations of coins that equal the same amounts of money • Solve simple problems in a practical context involving addition & subtraction of money of the same unit, including giving change <p>Multiplication & division (5 weeks)</p> <ul style="list-style-type: none"> • Recall & use multiplication & division facts for the 2-, 5- and 10-times tables, including recognising odd & even numbers • Calculate mathematical statements for multiplication & division within the multiplication tables & write them using the multiplication (X), division (÷) and equals (=) sign • Solve problems involving multiplication & division, using materials, arrays, repeated addition, mental methods & multiplication & division facts, including problems in contexts • Show that the multiplication of two numbers can be done in any order (commutative) & division of one number by another cannot 	<p>Statistics (2 weeks)</p> <ul style="list-style-type: none"> • Interpret & construct simple pictograms, tally charts, block diagrams & simple tables • Ask & answer simple questions by counting the number of objects in each category by quantity • Ask & answer questions about totalling & comparing categorical data <p>Fractions (3 weeks)</p> <ul style="list-style-type: none"> • Recognise, find, name & write fractions $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$ and $\frac{3}{4}$ of a length, shape or quantity • Write simple fractions e.g. $\frac{1}{2}$ of 6 = 3 & recognise the equivalence of $\frac{2}{4}$ & $\frac{1}{2}$ <p>Geometry: Position & direction (2 weeks)</p> <ul style="list-style-type: none"> • Use mathematical vocabulary to describe position, direction & movement including movement in a straight line & distinguishing between rotation as a turn & in terms of right angles for quarter, half & three-quarter turns (clockwise & anti-clockwise) • Order & arrange combinations of mathematical objects in patterns & sequences <p>Problem solving (2 weeks)</p>



Sherdley Primary School

Maths Curriculum Map

2022 – 2023

	<ul style="list-style-type: none"> Show that the addition of two numbers can be done in any order (commutative) & subtraction of one number from another cannot Solve problems with addition & subtraction using concrete objects & pictorial representations, including those involving numbers, quantities & measures; applying their increasing knowledge of mental & written methods Recognise & use the inverse relationship between addition & subtraction & use this to check calculations & solve missing number problems <p>Geometry: Properties of shape (3 weeks)</p> <ul style="list-style-type: none"> Identify & describe the properties of 2-D shapes, including the number of sides & the line of symmetry in a vertical line Identify & describe the properties of 3-D shapes, including the number of edges, vertices & faces Identify 2-D shapes on the surface of 3-D shapes e.g. a circle on a cylinder & a triangle on a pyramid Compare & sort common 2-D & 3-D shapes & everyday objects 	<p>Measurement: Length & Height (2 weeks)</p> <ul style="list-style-type: none"> Choose & use appropriate standard units to estimate & measure length/height in any direction (m/cm), mass (kg/g), temperature (°C), capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers & measuring vessels Compare & order lengths, mass, volume/capacity & record the results using <, > and = <p>Measurement: Mass, capacity & temperature (3 weeks)</p> <ul style="list-style-type: none"> Choose & use appropriate standard units to estimate & measure length/height in any direction (m/cm), mass (kg/g), temperature (°C), capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers & measuring vessels Compare & order lengths, mass, volume/capacity & record the results using <, > and = 	<ul style="list-style-type: none"> Linked in to White Rose Daily Maths Problems <p>Time (3 weeks)</p> <ul style="list-style-type: none"> Tell & write the time to five minutes, including quarter to/past the hour & draw the hands on a clock face to show these times Know the number of minutes in an hour & the number of hours in a day Compare & sequence intervals of time
	<p>Key Vocabulary: place value chart, tens, ones, part-whole, partition, fact families, inverse, bar model, pounds, pence, combination, change, odd, even, sides, faces, vertices, edges, vertical line, symmetry,</p>	<p>Key Vocabulary:</p> <ul style="list-style-type: none"> equal groups, commutative, symbol, arrays, repeated addition, division, sharing, grouping, odd, even, interpret, measure, compare, order, four operations, length/height, (m/cm), mass (kg/g), temperature (°C), capacity (litres/ml), thermometers, measuring vessels, compare, measure, volume 	<p>Key Vocabulary: movement, turns, o'clock, half past, quarter to, quarter past, hours, days, duration, half, quarter, third, equivalent, fraction, non-unit fraction, pictograms, tally charts, block diagrams, simple tables, quarter turn, half turn, clockwise, anticlockwise</p>



3	<p>Place Value (3 weeks)</p> <ul style="list-style-type: none"> Identify, represent & estimate numbers using different representations Find 10 or 100 more or less than a given number Recognise the place value of each digit in a three-digit number (hundreds, tens & units) Compare & order numbers up to 1,000 Read & write numbers up to 1,000 in numerals & words Solve number problems & practical problems involving these ideas Count from 0 in multiples of 4, 8, 50 & 100 <p>Addition & subtraction (5 weeks)</p> <ul style="list-style-type: none"> Add & subtract numbers mentally, including, a three-digit number and ones, a three-digit number and tens; a three-digit number and hundreds Add & subtract numbers with up to three digits, using formal columnar addition & subtraction Estimate the answer to a calculation & use inverse operations to check answers Solve problems, including missing number problems, using number facts, place value, & more complex addition & subtraction <p>Multiplication & division A (4 weeks)</p> <ul style="list-style-type: none"> Count from 0 in multiples of 4, 8, 50 & 100 Recall & use multiplication & division facts for the 3, 4 & 8 multiplication tables Write & calculate mathematical statements for multiplication & division using the multiplication tables they know, including 	<p>Multiplication & division B (3 weeks)</p> <ul style="list-style-type: none"> Recall & use multiplication & division facts for the 3, 4 & 8 multiplication tables Write & calculate mathematical statements for multiplication & division using the multiplication tables they know, including for two-digit numbers time one-digit numbers, using mental & progressing to formal written methods Solve problems, including missing number problems, involving multiplication & division, including positive integer scaling problems & correspondence problems in which n objects are connected to m objects <p>Measurement: Length & Perimeter (3 weeks)</p> <ul style="list-style-type: none"> Measure, compare, add & subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) Measure the perimeter of simple 2-D shapes <p>Fractions A (3 weeks)</p> <ul style="list-style-type: none"> Count up & down in tenths; recognise that tenths arise from dividing an object into 10 equal parts & in dividing one-digit numbers or quantities by 10 Recognise & use fractions as numbers: unit fractions & non-unit fractions with small denominators Recognise, find & write fractions of a discrete set of objects: unit fractions & non-unit fractions with small denominators <p>Solve problems that involve all the above</p> <p>Measurement: Mass & capacity (3 weeks)</p>	<p>Fractions B (2 weeks)</p> <ul style="list-style-type: none"> Recognise & show, using diagrams, equivalent fractions with small denominators Compare & order unit fractions, & fractions with the same denominators Add & subtract fractions with the same denominator within one whole e.g. $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$ Solve problems that involve all of the above <p>Measures: Money (2 weeks)</p> <ul style="list-style-type: none"> Add & subtract amounts of money to give change, using both £ and p in practical contexts <p>Measures: Time (3 weeks)</p> <ul style="list-style-type: none"> Tell & write the time from an analogue clock, including using Roman numerals from I to XII & 12-hour/24-hour clocks Estimate & read time with increasing accuracy to the nearest minute Record & compare time in terms of seconds, minutes & hours Use vocabulary e.g. o'clock, a.m./p.m., morning, afternoon, noon & midnight Know the number of seconds in a minute & the number of days in each month, year and leap year Compare durations of events e.g. calculate the time taken by particular events or tasks <p>Geometry: Properties of shape (2 weeks)</p> <ul style="list-style-type: none"> Recognise angles as a property of shape or a description of a turn
----------	--	---	--



Sherdley Primary School

Maths Curriculum Map

2022 – 2023

	<p>for two-digit numbers time one-digit numbers, using mental & progressing to formal written methods</p> <ul style="list-style-type: none"> Solve problems, including missing number problems, involving multiplication & division, including positive integer scaling problems & correspondence problems in which n objects are connected to m objects 	<ul style="list-style-type: none"> Measure, compare, add & subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) 	<ul style="list-style-type: none"> Identify right angles, recognise that two right angles make a half-turn, three make three quarter of a turn & four make a complete turn; identify whether angles are greater than or less than a right angle Identify horizontal & vertical lines & pairs of perpendicular & parallel lines Draw 2-D shapes & make 3-D shapes using modelling materials Recognise 3-D shapes in different orientations & describe them <p>Statistics (2 weeks)</p> <ul style="list-style-type: none"> Interpret & present data using bar charts, pictograms & tables Solve one-step & two-step questions e.g. How many more? & How many fewer? using information presented in scaled bar charts & pictograms & tables
	<p>Key Vocabulary: Hundreds, place value chart, partition, interval, multiple, exchange, estimate, equal groups, multiply, divide, scaling, integers</p>	<p>Key Vocabulary: multiply, divide, scaling, integers, compare, arrays, convert, add, subtract, pictograms, bar charts, tables, symbol, measure, equivalent, compare, perimeter, units of measure – m/cm/mm, l/ml, kg/g, partition, ascending, descending, unit & non-unit fractions, tenths, numerator, denominator, decimals, whole</p>	<p>Key Vocabulary: equivalent fractions, compare, order, numerator, denominator, unit fractions, whole, a.m./p.m., duration, months, days, morning, afternoon, noon, midnight, analogue, turns, angles, right angle, horizontal, perpendicular, parallel, orientation, m/cm/mm, l/ml, kg/g</p>
4	<p>Place Value (4 weeks)</p> <ul style="list-style-type: none"> Count in multiples of 6, 7, 9, 25 and 1,000 Find 1,000 more or less than any given number Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens & ones) Order & compare numbers beyond 1,000 	<p>Multiplication & division (3 weeks)</p> <ul style="list-style-type: none"> Recall & use multiplication & division facts for multiplication tables up to 12 X 12 Count in multiples of 6, 7, 9, 25 and 1,000 Use place value, known & derived facts to multiply & divide mentally, including: multiplying by 0 & 1; dividing by 1; multiplying together three numbers <p>Solve problems involving multiplying & adding, including using the distributive law to multiply two-</p>	<p>Decimals (2 weeks)</p> <ul style="list-style-type: none"> Compare numbers with the same number of decimal places up to two decimal places Round decimals with one decimal place to the nearest whole number Recognise & write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$ & $\frac{3}{4}$ Understand the effect of dividing a one or two-digit number by 10 or 100. Identify the



Sherdley Primary School

Maths Curriculum Map

2022 – 2023

- Identify, represent & estimate numbers using different representations
- Round any number to the nearest 10, 100 & 1,000
- Solve number & practical problems that involve all of the above & with increasingly large positive numbers
- Count backwards through zero to include negative numbers

Addition & subtraction (3 weeks)

- Add & subtract numbers with up to 4-digits using the formal written columnar addition & subtraction where appropriate
- Estimate & use inverse operations to check answers to a calculation
- Solve addition & subtraction two-step problems in context, deciding which operations & methods to use and why

Measurement: Area (1 week)

- Find the area of rectilinear shapes by counting squares

Multiplication & division (3 weeks)

- Recall & use multiplication & division facts for multiplication tables up to 12 X 12
- Use place value, known & derived facts to multiply & divide mentally, including: multiplying by 0 & 1; dividing by 1; multiplying together three numbers
- Recognise & use factor pairs & commutativity in mental calculations
- Multiply two-digit & three-digit numbers by a one-digit number using formal written layout
- Solve problems involving multiplying & adding, including using the distributive law

digit numbers by one-digit, integer scaling problems & harder correspondence problems such as n objects are connected to m objects

Measurement: Length & perimeter (2 weeks)

- Measure & calculate the perimeter of a rectilinear figure (including squares) in centimetres & metres
- Convert between different units of measure e.g. kilometres to metres

Fractions (4 weeks)

- Recognise & show, using diagrams, families of common equivalent fractions
- Count up & down in hundredths; recognise that hundredths arise when dividing an object by one hundred & dividing tenths by ten
- Solve problems involving increasingly harder fractions to calculate quantities, & fractions to divide quantities, including non-unit fractions where the answer is a whole number
- Add & subtract fractions with the same denominator

Decimals (3 weeks)

- Recognise & write decimal equivalents of any number of tenths or hundredths
- Find the effect of dividing a one or two-digit number by 10 or 100, identifying the value of the digits in the answer as ones, tenths & hundredths
- Solve simple measure & money problems involving fractions & decimals to two decimal places
- Convert between different units of measure e.g. kilometre to metre

value of the digits in the answers as ones, tenths & hundredths

Measurement: Money (2 weeks)

- Estimate, compare & calculate different measures including money in pounds & pence
- Solve simple measure & money problems involving fractions & decimals to two decimal places

Measurement: Time (2 weeks)

- Read, write & convert time between analogue & digital 12- & 24-hour clocks
- Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days

Consolidation (1 week)

Geometry: Properties of shape (2 weeks)

- Identify acute & obtuse angles & compare & order angles up to two right angles by size
- Compare & classify geometric shapes, including quadrilaterals & triangles, based on their properties & sizes
- Identify lines of symmetry in 2-D shapes presented in different orientations
- Complete a simple symmetric figure with respect to a specific line of symmetry

Statistics (1 week)

- Interpret & present discrete & continuous data using appropriate graphical methods, including bar charts & time graphs
- Solve comparison, sum & difference problems using information presented in bar charts, pictograms, tables & other graphs

Geometry: Position & direction (2 weeks)



Sherdley Primary School

Maths Curriculum Map

2022 – 2023

	<p>to multiply two-digit numbers by one-digit, integer scaling problems & harder correspondence problems such as n objects are connected to m objects</p> <p>Consolidation (1 week)</p>		<ul style="list-style-type: none"> Describe positions on a 2-D grid as coordinates in the first quadrant. Plot specified points & draw sides to complete a given polygon Describe movements between positions as translations of a given unit to the left/right & up/down
	<p>Key Vocabulary: Roman numerals, compare, order, partition, round, positive, negative, place value grid, exchange, estimate, efficient method, operation, strategy, convert, perimeter, rectilinear, integer, scaling, commutative law, distributive law, commutativity, partitioning, equivalent, factor, product</p>	<p>Key Vocabulary: integer, scaling, factor, factor pair, product, commutativity, associative law, efficient multiplication, exchange, rectilinear, area, compare, surface, perpendicular, equivalent fraction, denominator, numerator, hundredths, tenths, non-unit & unit fractions, improper fraction, mixed numbers, abstract method, partition, decimal(s), relative scale, place holder, Gattegno chart, place value chart, the whole, kilometre (km), metre (m)</p>	<p>Key Vocabulary: decimal, fraction, half, quarter, three quarters, round, order, compare, partition, two decimal places, ascending, descending, integer, conversion, convert, place value grid, estimate, approximately, recombine, four operations, number bonds, analogue, digital, hours, minutes, seconds, years, months, days, interpret, comparison, sum, difference, line graph, scale, axes, data, continuous data, angles, acute, obtuse, right angle, degree(s), triangles, quadrilaterals, line of symmetry, symmetric, symmetric figure, horizontal, vertical, polygon, isosceles, scalene, equilateral, perimeter, rhombus, parallelogram, trapezium, parallel, equal, Frayer model, coordinates, x-axis, y-axis, notation, brackets, grid lines, left, right, up, down, translate, translation, original point, corresponding vertices, vertex, object, image</p>
5	<p>Place Value (3 weeks)</p> <ul style="list-style-type: none"> Read, write, order & compare numbers to at least 1,000,000 & determine the value of each digit Count forwards or backwards in steps of powers of 10 for any number up to 1,000,000 	<p>Multiplication & division (3 weeks)</p> <ul style="list-style-type: none"> Multiply & divide numbers mentally drawing upon known facts Multiply numbers up to 4 digits by a one or two-digit number using a written formal method, including long multiplication for 2-digit numbers 	<p>Geometry: Properties of shape (3 weeks)</p> <ul style="list-style-type: none"> Identify 3-D shapes, including cubes & other cuboids, from 2-D representations Use the properties of rectangles to deduce related facts & find missing lengths & angles



Sherdley Primary School

Maths Curriculum Map

2022 – 2023

- Interpret negative numbers in context, count forwards & backwards with positive & negative whole numbers including through zero
- Round any number up to 1,000,000 to the nearest 10, 100, 1,000, 10,000, & 100,000
- Solve number problems & practical problems that involve all of the above
- Read Roman numerals up to 1,000 (M) & recognise years written in Roman numerals

Addition & subtraction (2 weeks)

- Add & subtract numbers mentally with increasingly large numbers
- Add & subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition & subtraction). Use rounding to check answers to calculations & determine, in the context of a problem, levels of accuracy
- Solve addition & subtraction multi-step problems in contexts, deciding which operations & methods to use & why

Multiplication & division (3 weeks)

- Multiply & divide numbers mentally drawing upon known facts
- Multiply & divide whole numbers by 10, 100 & 1,000
- Identify multiples & factors, including finding all factor pairs of a number, & common factors of two numbers
- Recognise & use square numbers & cube numbers & the notation for squared (2) & cubed (3)
- Solve problems involving multiplication & division including using knowledge of factors & multiples, squares & cubes

- Divide numbers up to 4 digits by a 1 digit number using the formal written method of short division & interpret remainders appropriately for the context
- Solve problems involving addition & subtraction, multiplication & division & a combination of these, including understanding the use of the equals sign

Fractions B (2 weeks)

- Compare & order fractions whose denominators are multiples of the same number
- Identify, name & write equivalent fractions of a given fraction, represented visually including tenths & hundredths
- Recognise mixed numbers & improper fractions & convert from one form to the other & write mathematical statements >1 as a mixed number
e.g. $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$
- Add & subtract fractions with the same denominator & denominators that are multiples of the same number

Decimals & percentages (3 weeks)

- Read, write, order & compare numbers with up to three decimal places
- Recognise & use thousandths & relate them to tenths, hundredths & decimal equivalents
- Round decimals with two decimal places to the nearest whole number & to one decimal place
- Solve problems involving numbers up to three decimal places
- Recognise the percent symbol (%) & understand that per cent relates to 'number

- Distinguish between regular & irregular polygons based on reasoning about equal sides & angles
- Know angles are measured in degrees, estimate & compare acute, obtuse & reflex angles
- Draw given angles, & measure them in degrees
- Identify: angles at a point & one whole turn (total 360°), angles at a point on a straight line & $\frac{1}{2}$ a turn (total 180°) other multiples of 90°

Geometry: Position & direction (2 weeks)

- Identify, describe & represent the position of a shape following a reflection or translation, using the appropriate language, & know that the shape cannot be changed

Decimals (3 weeks)

- Recognise & write decimal equivalents of any number of tenths or hundredths
- Find the effect of dividing a one or two-digit number by 10 or 100 identifying the value of the digits in the answer as ones, tenths & hundredths
- Solve simple measures & money problems involving fractions & decimals to two decimal places
- Convert between different units of measure e.g. kilometre to metre

Number- Negative numbers (1 week)

- Interpret negative numbers in context, count forwards and backwards with



Sherdley Primary School

Maths Curriculum Map

2022 – 2023

	<ul style="list-style-type: none"> Know & use the vocabulary of prime numbers, prime factors & composite (non-prime) numbers Establish whether a number up to 100 is prime & recall prime numbers up to 19 <p>Fractions A (4 weeks)</p> <ul style="list-style-type: none"> Compare & order fractions whose denominators are multiples of the same number Identify, name & write equivalent fractions of a given fraction, represented visually including tenths & hundredths Recognise mixed numbers & improper fractions & convert from one form to the other & write mathematical statements >1 as a mixed number e.g. $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$ Add & subtract fractions with the same denominator & denominators that are multiples of the same number 	<p>of parts per hundred' & write percentages as a fraction with denominator 100, & as a decimal</p> <ul style="list-style-type: none"> Solve problems which require knowing percentage & decimal equivalents of $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{2}{5}$, $\frac{3}{5}$ & those fractions with a denominator of a multiple of 10 or 25 <p>Measurement: Perimeter & area (2 weeks)</p> <ul style="list-style-type: none"> Measure & calculate the perimeter of composite rectilinear shapes in cm & m Calculate & compare the area of rectangles (including squares), & including using standard units, cm^2, m^2 estimate the area of irregular shapes <p>Statistics (2 weeks)</p> <ul style="list-style-type: none"> Solve comparison, sum & difference problems using information presented in a line graph Complete, read & interpret information in tables including timetables 	<p>positive and negative whole numbers, including through zero</p> <p>Measurement: Converting units (2 weeks)</p> <ul style="list-style-type: none"> Convert between different units of metric measure e.g. km & m, m & cm, cm & mm, g & kg, l & ml Understand & use approximate equivalences between metric units & common imperial units e.g. inches, pounds & pints Solve problems involving converting between units of time <p>Measurement: Volume (1 week)</p> <ul style="list-style-type: none"> Estimate volume e.g. 1cm^3 blocks to build cuboids (including cubes) & capacity e.g. using water Use all four operations to solve problems involving measure
	<p>Key Vocabulary: round, negative, positive, interpret, number systems, Roman number system, estimate, smallest, greatest, halfway, partition, increase, decrease, approximate, inverse operations, multi-step, Gattegno chart, exchange, place holder, , sum, difference, vertical, horizontal, axes, intervals, scales, multiple, conversion, factors, common factors, prime numbers, composite numbers, square numbers, cube numbers, factor pairs, product, notation</p>	<p>Key Vocabulary: place holder, exchange, product, partition, area model, short division, remainders, equivalent fraction, proper fraction, improper fraction, mixed numbers, numerator, denominator, multiples, multiply, add, increase, decrease, sequence, common denominator, flexible partitioning, non-unit fraction, unit fraction, integer, commutativity, convert, repeated addition, per cent, percentage, tenths, hundredths, thousandths, rounding, line graph, table, two-way tables, comparison, perimeter, area, irregular, regular, compound shape, rectilinear shape</p>	<p>Key Vocabulary: complements, exchange, bridging, estimation, place holder, integers, acute, obtuse, reflex, angles, right angle, degrees, regular, irregular, polygons, full turn, half turn, quarter turn, protractor, parallel, perpendicular, isosceles, equilateral, surface, plan, elevation, projection, vertices, coordinates, x-coordinate, y-coordinate, axes, x-axis, y-axis, 1st quadrant, reflect, reflections, parallel, vertical, horizontal, dimensions, orientation, translated, translation, metric units, imperial units, converting, conversions, approximating, approximate equivalences, approximations, volume, capacity, cm^3, m^3, negative, positive</p>



Sherdley Primary School

Maths Curriculum Map

2022 – 2023

6	<p>Place Value (2 weeks)</p> <ul style="list-style-type: none"> Read, write order & compare numbers up to 10,000,000 & determine the value of each digit Round any whole number to a required degree of accuracy Use negative numbers in context, & calculate intervals across zero Solve number & practical problems that involve all of the above <p>Four Operations (5 weeks)</p> <ul style="list-style-type: none"> Solve addition & subtraction multi-step problems in contexts, deciding which operations & methods to use & why Multiply multi-digit numbers up to 4-digit numbers by a 2-digit number using the formal written method of long multiplication Divide numbers up to 4-digit numbers by a 2-digit whole number using the formal written method of long division, & interpret remainders as whole number remainders, fractions, or by rounding as appropriate for the context Divide numbers up to 4 digits by a 2-digit number using the formal written method of short division, interpreting remainders according to the context Perform mental calculations, including mixed operations & large numbers Identify common factors, common multiples & prime numbers Use their knowledge of the order of operations to carry out calculations involving the four operations 	<p>Ratio (2 weeks)</p> <ul style="list-style-type: none"> Solve problems involving the relative sizes of two quantities where the missing values can be found by using integer multiplication & division facts Solve problems involving similar shapes where the scale factor is known or can be found Solve problems involving unequal sharing & grouping using knowledge of fractions & multiples <p>Algebra (2 weeks)</p> <ul style="list-style-type: none"> Use simple formulae Generate & describe linear number sequences Express missing number problems algebraically Find pairs of numbers that satisfy an equation with two unknowns Enumerate possibilities of combinations of two variables <p>Decimals (2 weeks)</p> <ul style="list-style-type: none"> Identify the value of each digit in numbers given to three decimal places & multiply numbers by 10, 100 & 1,000 giving answers up to 3 decimal places Multiply 1-digit numbers with up to 2 decimal places by whole numbers Use written division methods in cases where the answer has up to 2 decimal places Solve problems which require answers to be rounded to specified degrees of accuracy <p>Fractions, decimals and percentages (2 weeks)</p>	<p>Geometry: Properties of shape (3 weeks)</p> <ul style="list-style-type: none"> Draw 2-D shapes using given dimensions & angles Compare & classify geometric shapes based on their properties & sizes & find unknown angles in any triangles, quadrilaterals & regular polygons Recognise angles where they meet at a point, are on a straight line, or vertically opposite, & find missing angles <p>Geometry: Position & direction (1 week)</p> <ul style="list-style-type: none"> Describe positions on the full coordinate grid (all four quadrants) Draw & translate simple shapes on the coordinate plane, & reflect them in the axes <p>Problem solving, Investigations and Consolidation</p>
----------	---	---	--



Sherdley Primary School

Maths Curriculum Map

2022 – 2023

- Solve problems involving addition, subtraction, multiplication & division
- Use estimation to check answers to calculations & determine in the context of a problem, an appropriate degree of accuracy

Fractions A & B (4 weeks)

- Use common factors to simplify fractions; use common multiples to express fractions in the same denomination
- Compare & order fractions, including >1
- Generate & describe linear number sequences (with fractions)
- Add & subtract fractions with different denominations & mixed numbers, using the concept of equivalent fractions.
- Multiply simple pairs of proper fractions, writing the answer in its simplest form
e.g. $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$
- Divide proper fractions by whole numbers
e.g. $\frac{1}{3} \div 2 = \frac{1}{6}$
- Associate a fraction with division & calculate decimal fraction equivalents e.g. 0.375 for a simple fraction e.g. $\frac{3}{8}$
- Recall & use equivalences between simple fractions, decimals & percentages, including in different contexts

Measurement- Converting units (1 week)

- Solve problems involving the calculation & conversion of units of measure, using decimal notation up to three decimal points where appropriate
- Use, read, write & convert between standard units, converting measurements of length, mass, volume & time from a smaller unit of measure to a larger unit & vice versa, using decimal notation up to 3 dp

- Solve problems involving the calculation of percentages e.g. of measures & such as 15% of 360 & the use of percentages for comparison
- Recall & use equivalences between simple fractions, decimals & percentages including in different contexts

Measurement: Area perimeter & volume (2 weeks)

- Recognise that shapes with the same areas can have different perimeters & vice versa
- Recognise when it is possible to use formulae for area & volume of shapes
- Calculate the area of parallelograms & triangles
- Calculate, estimate & compare volume of cubes & cuboids using standard units, including cm^3 , m^3 & extending to other units e.g. mm^3 , km^3

Statistics (2 weeks)

- Illustrate & name parts of circles, including radius, diameter & circumference & know that the diameter is twice the radius
- Interpret & construct pie charts & line graphs & use these to solve problems
- Calculate the mean as an average



Sherdley Primary School

Maths Curriculum Map

2022 – 2023

	<ul style="list-style-type: none"> Convert between miles & kilometres 		
	<p>Key Vocabulary: million, partition, greater than, less than, compare, order, ascending, descending, rounding, negative, positive, interval, horizontal, vertical, exchange, inverse, multi-step, multiples, divisor, dividend, factor pair, remainder, common factor, product, common multiples, prime numbers, prime factors, composite (non-prime) numbers, square numbers, cube numbers, commutativity, equivalent fraction, numerator, denominator, lowest common multiple (LCM), improper fractions, proper fractions, integers, convert, unit fraction, mixed numbers, metres (m), kilometres (km), convert, addition, subtraction, multiplication, division</p>	<p>Key Vocabulary: exchange, tenths, hundredths, thousandths, place value holder, converting, equivalent, integers, common fractions, numerator, denominator, percent, percentage, percentage equivalent, common equivalent fractions, equivalent percentages, order, compare, ascending, descending, algebra, one-step function, input, output, two-step function, expressions, numerical input, algebraic input, algebraic expressions, function machine, substitution, substitute, formulae, formula, algebraic notation, equation, inverse operation, integer values, variables, values, solution, corresponding value, metric measures, imperial measures, rectilinear shapes, quadrilateral, Carroll diagram, length, factor, area, perimeter, right-angled triangle, perpendicular, perpendicular height, base, parallelogram, volume, ratio, comparison, colon notation, scale factor, enlargement, similar</p>	<p>Key Vocabulary: protractor, right angle, acute angle, obtuse angle, reflex angle, degrees, half turn, quarter turn, three quarter turn, full turn, clockwise, anti-clockwise, North, South, East, West, vertically opposite angles, interior angles, equilateral/ isosceles/scalene & right-angled triangle, identical, hatch mark, trapezium, rhombus, square, parallelogram, polygon, hexagon, heptagon, pentagon, regular, irregular, single vertex, interpret, scale, data, intervals, , x-axis, y-axis, frequency, vertical axis, horizontal axis, line graph, radius, diameter, circumference, centre, pie chart, percentages, percentages bar, sector, the mean, average, quadrant, first quadrant, coordinates, vertex, vertices, polygon, endpoints, x-axis, y-axis, translate, translation, reflect, reflections, coordinate grid</p>