Mathematical Objectives 2021/22

EYFS Learning Outcomes	
0 – 3 years	Combine objects like stacking blocks and cups. Put objects inside others and take them out again. Take part in finger rhymes with numbers. React to changes of amount in a group of up to three items. Compare amounts, saying 'lots', 'more' or 'same'. Develop counting-like behaviour, such as making sounds, pointing or saying some numbers in sequence. Count in everyday contexts, sometimes skipping numbers – '1-2-3-5'. Climb and squeeze themselves into different types of spaces. Build with a range of resources. Complete inset puzzles Compare sizes, weights etc. using gesture and language - 'bigger/little/smaller', 'high/low', 'tall', 'heavy'. Notice patterns and arrange things in patterns
3 – 4 years	Develop fast recognition of up to 3 objects, without having to count them individually ('subitising'). Recite numbers past 5. Say one number for each item in order: 1,2,3,4,5. Know that the last number reached when counting a small set of objects tells you how many there are in total ('cardinal principle'). Show 'finger numbers' up to 5. Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5 Experiment with their own symbols and marks as well as numerals. Solve real world mathematical problems with numbers up to 5. Compare quantities using language: 'more than', 'fewer than'. Talk about and explore 2D and 3D shapes (for example, circles, rectangles, triangles and cuboids) using informal and mathematical language: 'sides', 'corners'; 'straight', 'flat', 'round'Understand position through words alone – for example, "The bag is under the table," – with no pointing. Describe a familiar route. Discuss routes and locations, using words like 'in front of' and 'behind'. Make comparisons between objects relating to size, length, weight and capacity. Select shapes appropriately: flat surfaces for building, a triangular prism for a roof, etc. Combine shapes to make new ones – an arch, a bigger triangle, etc. Talk about and identify the patterns around them. For example: stripes on clothes, designs on rugs and wallpaper. Use informal language like 'pointy', 'spotty', 'blobs', etc. Extend and create ABAB patterns – stick, leaf, stick, leaf. Notice and correct an error in a repeating pattern. Begin to describe a sequence of events, real or fictional, using words such as 'first', 'then...'
Reception	Count objects, actions and sounds Subitise. Link the number symbol (numeral) with its cardinal number value Count beyond ten Compare numbers. Understand the 'one more than/one less than' relationship between consecutive numbers. Explore the composition of numbers to 10. Automatically recall number bonds for numbers 0–5 and some to 10. Select, rotate and manipulate shapes to develop spatial reasoning skills. Compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can. Continue, copy and create repeating patterns. Compare length, weight and capacity

ELG	ELG: (Number) Have a deep understanding of number to 10, including the composition of each number. ELG: (Number) Subitise (recognise quantities without counting) up to 5. ELG: (Number) Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts. ELG: (Numerical Patterns) Verbally count beyond 20, recognising the pattern of the counting system. ELG: (Numerical Patterns) Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity. ELG: (Numerical Patterns) Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.

Year 1 Autumn Term			
Week	Area	National Curriculum	Small Steps
1 2	Number: Place Value	Count to **ten**, forwards and backwards, beginning with 0 or 1, or from any given number. Count, read and write numbers to **10** in numerals and words. Given a number, identify one more or one less.	Sort objects. Count objects. Represent objects. Count, read and write forwards from any number 0 to 10. Count, read and writing backwards from any number 0 to 10. Count one more. Count one less.
3	Geometry: Shape	Recognise and name common 2-D shapes, including: (for example, rectangles (including squares), circles and triangles) Recognise and name common 3-D shapes, including: (for example, cuboids (including cubes), pyramids and spheres)	Recognise and name 3D shapes Sort 3D shapes. Recognise and name 2D shapes. Sort 2D shapes. Patterns with 3D and 2D shapes.
4 5	Number: Place Value	Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least.	One to one correspondence to start to compare groups. Compare groups using language such as equal, more/greater, less/fewer. Introduce = , > and < symbols. • Compare numbers. Order groups of objects. Order numbers. Ordinal numbers (1st, 2nd, 3rd ....). The number line.
6 7 8	Number: Addition and Subtraction (Within 10)	Represent and use number bonds and related subtraction facts **within 10** Read, write and interpret mathematical statements involving addition (+), 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.	Part whole model. Addition symbol.. Fact families – Addition facts. Find number bonds for numbers within 10. • Systematic methods for number bonds within 10. Number bonds to 10. Compare number bonds. Addition: Adding together. Addition: Adding more. Finding a part. Subtraction: Taking away, how many left? Crossing out. Subtraction: Taking away, how many left? Introducing the subtraction symbol. Subtraction: Finding a part, breaking apart.

9			Fact families – The 8 facts. Subtraction: Counting back. Subtraction: Finding the difference. Comparing addition and subtraction statements a + b > c. • Comparing addition and subtraction statements a + b > c + d.
10 11	Number: Place Value (within 20)	Count to twenty, forwards and backwards, beginning with 0 or 1, from any given number. Count, read and write numbers to 20 in numerals and words. Given a number, identify one more or one less. Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least.	Count forwards and backwards and write numbers to 20 in numerals and words. Numbers from 11 to 20. Tens and ones. Count one more and one less. Compare groups of objects. Compare numbers. Order groups of objects. Order numbers.
12	Additional weeks to be used as consolidation		

Year 1 Spring Term			
Week	Area	National Curriculum Link	Small Steps
1 2	Number: Addition and Subtraction	Represent and use number bonds and related subtraction facts within 20 Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs	Add by counting on. Find and make number bonds. Add by making 10. Subtraction – Not crossing 10.
3 4	Measurement: Length and Height	Measure and begin to record lengths and heights. Compare, describe and solve practical problems for: lengths and heights (for example, long/short, longer/shorter, tall/short, double/half)	Compare lengths and heights.
5 6	Number: Addition and Subtraction	Add and subtract one-digit and two-digit numbers to 20, including zero. Solve one step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7= □ – 9	Subtraction – Crossing 10 . Related Facts. Compare Number Sentences.
7 8	Measurement: Weight and Volume	Measure and begin to record mass/weight, capacity and volume. Compare, describe and solve practical problems for mass/weight: [for example, heavy/light, heavier than, lighter than]; capacity and volume [for example, full/empty, more than, less than, half, half full, quarter]	Introduce weight and mass. Measure mass. Compare mass. Introduce capacity. Measure capacity. Compare capacity.
9 10	Number: Place Value	Count to 50 forwards and backwards, beginning with 0 or 1, or from any number. Count, read and write numbers to 50 in numerals. Given a number, identify one more or one less. Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least.	Numbers to 50. Tens and ones. Represent numbers to 50. One more one less. Compare objects within 50. Compare numbers within 50. Order numbers within 50. Count in 2s.

11		Count in multiples of twos, fives and tens.	Count in 5s.
12	Additional weeks to be used as consolidation		

Year 1 Summer Term			
Week	Area	National Curriculum Link	Small Steps
1 2 3	Number: Multiplication and Division	Count in multiples of twos, fives and tens. Solve one step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.	Count in 10s. Make equal groups. Add equal groups. Make arrays. Make doubles. Make equal groups – grouping. Make equal groups – sharing.
4 5	Number: Fractions	Recognise, find and name a half as one of two equal parts of an object, shape or quantity. Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity. Compare, describe and solve practical problems for: lengths and heights (for example, long/short, longer/shorter, tall/short, double/half) Compare, describe and solve practical problems for: mass/weight [for example, heavy/light, heavier than, lighter than]; capacity and volume [for example, full/empty, more than, less than, half, half full, quarter	Halving shapes or objects. Halving a quantity. Find a quarter of a shape or object. Find a quarter of a quantity.
6	Geometry: Position and Direction	Describe position, direction and movement, including whole, half, quarter and three quarter turns	Describe turns. Describe Position
7 8	Number: Place Value	Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number. Count, read and write numbers to 100 in numerals. Given a number, identify one more and one less. Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than, most, least.	Counting to 100. Partitioning numbers. Comparing numbers Ordering numbers. One more, one less.
9	Measurement: Money	Recognise and know the value of different denominations of coins and notes.	Recognising coins. Recognising notes. Counting in coins.
10 11	Measurement: Time	Sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening. Recognise and use language relating to dates, including days of the week, weeks, months and years. Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times. Compare, describe and solve practical problems for time [for example, quicker, slower, earlier, later] Measure and begin to record time (hours, minutes, seconds)	Before and after. Dates. Time to the hour. Time to the half hour. Writing time. Comparing time.

12	Additional weeks to be used as consolidation

Year 2 Autumn Term			
Week	Area	National Curriculum Link	Small Steps
1 2 3	Number: Place Value	Read and write numbers to at least 100 in numerals and in words. Recognise the place value of each digit in a two digit number (tens, ones) Identify, represent and estimate numbers using different representations including the number line. Compare and order numbers from 0 up to 100; use <, > and = signs. Use place value and number facts to solve problems. Count in steps of 2, 3 and 5 from 0, and in tens from any number, forward and backward.	Count objects to 100 and read and write numbers in numerals and words. Represent numbers to 100. Tens and ones with a part whole model. Tens and ones using addition. Use a place value chart. Compare objects. Compare numbers. Order objects and numbers. Count in 2s, 5s and 10s. Count in 3s.
4 5	Number: Addition and Subtraction	Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100. Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: a two-digit number and ones; a two-digit number and tens; two two-digit numbers; adding three one-digit numbers. Show that the addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot.	Fact families – Addition and subtraction bonds to 20. Check calculations. Compare number sentences. Related facts. Bonds to 100 (tens). Add and subtract 1s. 10 more and 10 less. Add and subtract 10s. Add a 2-digit and 1-digit number – crossing ten. Subtract a 1-digit number from a 2-digit number – crossing 10. Add two 2-digit numbers – not crossing ten – add ones and add tens. Add two 2-digit numbers – crossing ten – add ones and add tens
6 7	Measurement: Money	Recognise and 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 and subtraction of money of the same unit, including giving change.	Count money – pence. Count money – pounds (notes and coins). Count money – notes and coins. Select money. Make the same amount. Compare money. Find the total. Find the difference. Find change. Two-step problems.
8 9	Number: Addition and Subtraction	Solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures; applying their increasing knowledge of mental and written methods. Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.	Subtract a 2-digit number from a 2-digit number – not crossing ten. Subtract a 2-digit number from a 2-digit number – crossing ten – subtract ones and tens. Bonds to 100 (tens and ones). Add three 1-digit numbers.

10 11	Number: Multiplication and Division	Recall and use multiplication and division facts for the 2, 5 and 10 times tables, including recognising odd and even numbers. Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (x), division (÷) and equals (=) sign. Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods and multiplication and division facts, including problems in contexts. Show that the multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot.	Recognise equal groups. Make equal groups. Add equal groups. Multiplication sentences using the x symbol. Multiplication sentences from pictures. Use arrays. 2 times-table. 5 times-table. 10 times-table
12	Additional weeks to be used as consolidation		

Year 2 Spring Term

Week	Area	National Curriculum Link	Small Steps
1 2	Number: Multiplication and Division	Recall and use multiplication and division facts for the 2, 5 and 10 times tables, including recognising odd and even numbers. Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods and multiplication and division facts, including problems in contexts. Show that the multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot.	Make equal groups – sharing. Make equal groups – grouping. Divide by 2. Odd and even numbers. Divide by 5. Divide by 10.
3 4	Statistics	Interpret and construct simple pictograms, tally charts, block diagrams and simple tables. Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity. Ask and answer questions about totalling and comparing categorical data.	Make tally charts. Draw pictograms Interpret pictograms Block diagrams.
5 6 7	Geometry: Properties of Shape	Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line. Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces. Identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid.] Compare and sort common 2-D and 3-D shapes and everyday objects.	Recognise 2D and 3D shapes Count sides on 2D shapes. Count vertices on 2D shapes. Draw 2D shapes. Lines of symmetry. Sort 2D shapes. Make patterns with 2D shapes. Count faces on 3D shapes. Count edges on 3D shapes. Count vertices on 3D shapes. Sort 3D shapes. Make patterns with 3D shapes
8 9 10	Number: Fractions	Recognise, find, name and write fractions 1/3, 1/4, 2/4 and 3/4 of a length, shape, set of objects or quantity. Write simple fractions for example, 1/2 of 6 = 3 and recognise the equivalence of 2/4 and 1/2	Make equal parts. Recognise half. Find half. Recognise quarters. Find a quarters. Recognise a third. Find a third. Unit fractions. Nonounit fractions. Equivalence of ½ and ²/₄. Find three quarters. Count in fractions.
11	Measurement: Length and Height	Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest	Measure length (cm). Measure length (m). Compare lengths. Order lengths.

		appropriate unit, using rulers, scales, thermometers and measuring vessels Compare and order lengths, mass, volume/capacity and record the results using >, < and =	Four operations with lengths.
12	Additional weeks to be used as consolidation		

Year 2 Summer Term

Week	Area	National Curriculum Link	Small Steps
1 2 3	Geometry: Position and Direction	Use mathematical vocabulary to describe position, direction and movement including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise). Order and arrange combinations of mathematical objects in patterns and sequences	Describing movement. Describing turns. Describing movement and turns. Making patterns with shapes.
4 5	Problem Solving and Efficient Methods	Across all areas	
6 7	Measurement: Time	Tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times. Know the number of minutes in an hour and the number of hours in a day. Compare and sequence intervals of time.	O'clock and half past. Quarter past and quarter to. Telling time to 5 minutes. Minutes in an hour, hours in a day. Find durations of time. Compare durations of time..
8 9 10	Measurement: Mass, Capacity and Temperature	Choose and use appropriate standard units to estimate and 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 and measuring vessels Compare and order lengths, mass, volume/capacity and record the results using >, < and = Investigations	Compare mass. Measure mass in grams. Measure mass in kilograms. Compare capacity. Millilitres. Litres. Temperature.
11	Investigations		
12	Additional weeks to be used as consolidation		

St.Joseph's Catholic Primary School

Year 3 Autumn Term

Week	Area	National Curriculum Link	Small Steps
1 2 3	Number: Place Value	Identify, represent and 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, ones). Compare and order numbers up to 1000 Read and write numbers up to 1000 in numerals and in words. Solve number problems and practical problems involving these ideas. Count from 0 in multiples of 4, 8, 50 and 100	Hundreds. Represent numbers to 1,000. 100s, 10s and 1s Number line to 1,000. Find 1, 10, 100 more or less than a given number. Compare objects to 1,000. Compare numbers to 1,000. Order numbers. Count in 50s.
4 5 6	Number: Addition and Subtraction	Add and subtract numbers mentally, including: a three-digit number and ones; a three-digit number and tens; a three digit number and hundreds Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction. .	Add and subtract multiples of 100. Add and subtract 3-digit numbers and ones – not crossing 10. Add 3-digit and 1-digit numbers – crossing 10. Subtract a 1-digit number from a 3-digit number – crossing 10. Add and subtract 3-digit numbers and tens – not crossing 100. Add a 3-digit number and tens – crossing 100. Add and subtract 100s. Spot the pattern – making it explicit. Add and subtract a 2-digit and 3-digit number – not crossing 10 or 100.
7 8	Number: Fractions	Number – fractions Count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10 Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators. Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators. Solve problems that involve all of the above.	Unit and non-unit fractions. Making the whole. Tenths. Count in tenths. Tenths as decimals. Fractions of a number line. Fractions of a set of objects
9 10 11	Measurement: Time	Measurement – time Tell and write the time from an analogue clock, including using Roman numerals from I to XII and 12-hour and 24-hour clocks. Estimate and read time with increasing accuracy to the nearest minute. Record and compare time in terms of seconds, minutes and hours. Use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight. Know the number of seconds in a minute and the number of days in each month, year and leap year. Compare durations of events [for example to calculate the time taken by particular events or tasks].	Months and years. Hours in a day. Telling the time to 5 minutes. Telling the time to the minute. AM and PM. 24 hour clock. Finding the duration. Comparing the duration. Start and end times. Measuring time in seconds.
12	Additional weeks to be used as consolidation		

Year 3 Spring Term			
Week	Area	National Curriculum Link	Small Steps
1 2 3	Number: Multiplication and Division	Number – Multiplication and Division Count from 0 in multiples of 4, 8, 50 and 100 Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables. Write and calculate mathematical statements for multiplication and division using the multiplication tables they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods. Solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objectives.	Multiplication – equal groups. Multiplying by 3. Dividing by 3. The 3 times-table. Multiplying by 4. Dividing by 4. The 4 times-table. Multiplying by 8. Dividing by 8. The 8 times-table
4	Measurement: Money	Add and subtract amounts of money to give change, using both £ and p in practical contexts	Pounds and pence. Converting pounds and pence. Adding money. Subtracting money. Giving change
5 6	Statistics	Interpret and present data using bar charts, pictograms and tables. Solve one-step and two-step questions [for example, 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables.	Pictograms. Bar charts. Tables.
7 8 9	Number: Multiplication and Division	Number – multiplication and division Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables. Write and calculate mathematical statements for multiplication and division using the multiplication tables they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods. Solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objectives.	Comparing statements. Related calculations. Multiply 2-digits by 1-digit Divide 2-digits by 1-digit Scaling. How many ways?
10 11	Number: Addition and Subtraction	Estimate the answer to a calculation and use inverse operations to check answers. Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction.	Add a 2-digit and 3-digit number – crossing 10 or 100. Subtract 2-digit number from a 3-digit number cross the 10 or 100. Add two 3-digit numbers – not crossing 10 or 100. Add two 3-digit numbers – crossing 10 or 100. • Subtract a 3 –digit number from a 3-digit number – no exchange. Subtract a 3-digit number from a 3-digit number – exchange. Exchange answers to calculations. Check.

12	Additional weeks to be used as consolidation

Year 3 Summer Term			
Week	Area	National Curriculum Link	Small Steps
1 2 3	Number: Fractions	Recognise and show, using diagrams, equivalent fractions with small denominators. Compare and order unit fractions, and fractions with the same denominators. Add and subtract fractions with the same denominator within one whole [for example, 5 7 + 1 7 = 6 7] Solve problems that involve all of the above.	Equivalent fractions Compare fractions. Order fractions. Add fractions. Subtract fractions.
4 5 6	Measurement: Length and Perimeter	Measure, compare, add and subtract: lengths (m/cm/mm) Measure the perimeter of simple 2D shapes.	Measure length. Equivalent lengths – m & cm. Equivalent lengths – mm & cm. Compare lengths. Add lengths. Subtraction lengths. Measure perimeter. Calculate perimeter
7 8	Geometry: Properties of Shape	Recognise angles as a property of shape or a description of a turn. Identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle. Identify horizontal and vertical lines and pairs of perpendicular and parallel lines. Draw 2-D shapes and make 3D shapes using modelling materials. Recognise 3-D shapes in different orientations and describe them	Turns and angles. Right angles in shapes. Compare angles. Draw accurately. Horizontal and vertical. Parallel and perpendicular. Recognise and describe 2D shapes. Recognise and describe 3D shapes. Make 3D shapes
9 10 11	Measurement: Mass and Capacity	Measure, compare, add and subtract: mass (kg/g); volume/capacity (l/ml).	Measure mass Compare mass. Add and subtract mass. Measure capacity Compare capacity. Add and subtract capacity
12	Additional weeks to be used as consolidation		

St. Joseph's Catholic Primary School

Year 4 Autumn Term

Week	Area	National Curriculum Link	Small Steps
1 2 3 4	Number: Place Value	Count in multiples of 6, 7, 9. 25 and 1000. Find 1000 more or less than a given number. Recognise the place value of each digit in a four digit number (thousands, hundreds, tens and ones) Order and compare numbers beyond 1000 Identify, represent and estimate numbers using different representations. Round any number to the nearest 10, 100 or 1000 Solve number and practical problems that involve all of the above and with increasingly large positive numbers. Count backwards through zero to include negative numbers. Read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value.	Roman numerals to 100. Round to the nearest 10. Round to the nearest 100. Count in 1,000s. 1,000s, 100s, 10s and 1s. Partitioning. Number line to 10,000. 1,000 more or less. Compare numbers. Order numbers. Round to the nearest 1,000. Count in 25s. Negative numbers.
5 6 7	Number: Addition and Subtraction	Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate. Estimate and use inverse operations to check answers to a calculation. Solve addition and subtraction two step problems in contexts, deciding which operations and methods to use and why.	Add and subtract 1s, 10s, 100s and 1000s. Add two 4-digit numbers – no exchange. Add two 4-digit numbers – one exchange. Add two 4-digit numbers – more than one exchange. Subtract two 4-digit numbers – no exchange. Subtract two 4-digit numbers – one exchange. Subtract two 4-digit numbers – more than one exchange. Efficient subtraction. Estimate answers. Checking strategies.
8	Measurement: Length and Perimeter	Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres Convert between different units of measure [for example, kilometre to metre]	Kilometres. Perimeter on a grid. Perimeter of a rectangle. Perimeter of rectilinear shapes.
9 10 11	Number: Multiplication and Division	Recall and use multiplication and division facts for multiplication tables up to 12 × 12. Count in multiples of 6, 7, 9. 25 and 1000 Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers. Solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects.	Multiply by 10. Multiply by 100. Divide by 10. Divide by 100. Multiply by 1 and 0. Divide by 1. Multiply and divide by 6. 6 times-table and division facts. Multiply and divide by 9. 9 times-table and division facts. Multiply and divide by 7. 7 times-table and division facts.
12	Additional weeks to be used as consolidation		

Year 4 Spring Term			
Week	Area	National Curriculum Link	Small Steps
1 2 3	Number: Multiplication and Division	Recall and use multiplication and division facts for multiplication tables up to 12 × 12. Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers. Recognise and use factor pairs and commutativity in mental calculations. Multiply two digit and three digit numbers by a one digit number using formal written layout. Solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects	11 and 12 times-table. Multiply 3 numbers. Factor pairs. Efficient multiplication. Written methods. Multiply 2-digits by 1 –digit. Multiply 3-digits by 1-digit. Divide 2-digits by 1-digit . Correspondence problems
4	Measurement: Area	Find the area of rectilinear shapes by counting squares.	What is area? Counting squares Making shapes. Comparing area.
5 6 7 8	Number: Fractions	Recognise and show, using diagrams, families of common equivalent fractions. Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten. Solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number. Add and subtract fractions with the same denominator	What is a fraction? Equivalent fractions Fractions greater than 1. Count in fractions. Add 2 or more fractions. Subtract 2 fractions. Subtract from whole amounts. Calculate fractions of a quantity. Problem solving – calculate quantities
9 10 11	Number: Decimals	Recognise and 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 and hundredths Solve simple measure and money problems involving fractions and decimals to two decimal places. Convert between different units of measure [for example, kilometre to metre]	Recognise tenths and hundredths. Tenths as decimals. Tenths on a place value grid. Tenths on a number line. Divide 1 digit by 10. Divide 2 digits by 10. Hundredths. Hundredths as decimals. Hundredths on a place value grid. Divide 1 or 2 digits by 100.
12	Additional weeks to be used as consolidation		

Year 4 Summer Term			
Week	Area	National Curriculum Link	Small Steps
1 2	Number: Decimals	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 and write decimal equivalents to 1 4 , 1 2 and 3 4 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 and hundredths	Make a whole. Write decimals. Compare decimals. Order decimals. Round decimals. Halves and quarters.
3 4	Measurement: Money	Estimate, compare and calculate different measures, including money in pounds and pence. Solve simple measure and money problems involving fractions and decimals to two decimal places.	Pounds and pence. Ordering amounts of money. Using rounding to estimate money. Four operations
5	Measurement: Time	Convert between different units of measure [for example,; hour to minute] Read, write and convert time between analogue and digital 12- and 24-hour clocks. Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days.	Hours, minutes and seconds. Years, months, weeks and days. Analogue to digital – 12 hour. Analogue to digital – 24 hour.
6 7	Statistics	Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs. Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs	Interpret charts. Comparison, sum and difference. Introducing line graphs. Line graphs
8 9 10	Geometry: Properties of Shape	Identify acute and obtuse angles and compare and order angles up to two right angles by size. Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and 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.	Identify angles. Compare and order angles. Triangles. Quadrilaterals. Lines of symmetry. Complete a symmetric figure.
11	Geometry: Position and Direction	Describe positions on a 2-D grid as coordinates in the first quadrant. Plot specified points and draw sides to complete a given polygon. Describe movements between positions as translations of a given unit to the left/ right and up/ down.	Describe position. Draw on a grid. Move on a grid. Describe a movement on a grid
12	Additional weeks to be used as consolidation		

St. Joseph's Catholic Primary School

Year 5 Autumn Term

Week	Area	National Curriculum Link	Small Steps
1 2 3	Number: Place Value	Read, write, order and compare numbers to at least 1000000 and determine the value of each digit. Count forwards or backwards in steps of powers of 10 for any given number up to 1000000. Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers including through zero. Round any number up to 1000000 to the nearest 10, 100, 1000, 10000 and 100000 Solve number problems and practical problems that involve all of the above. Read Roman numerals to 1000 (M) and recognise years written in Roman numeral	Number to 10,000. Roman numerals to 1,000. Round to the nearest 10, 100 and 1000. Number to 100,000. Compare and order numbers to 100,000. Round numbers within 100,000. Numbers to a million. Counting in 10s, 100s, 1,000s, 10,000s and 100,000s. Compare and order numbers to a million. Round numbers to a million. Negative numbers.
4 5	Number: Addition and Subtraction	Add and subtract numbers mentally with increasingly large numbers. Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy. Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.	Add whole numbers with more than 4digits (column method). Subtract whole numbers with more than 4-digits (column method). Round to estimate and approximate. Inverse operations (addition and subtraction). Multi-step addition and subtraction problems.
6 7	Statistics	Solve comparison, sum and difference problems using information presented in a line graph. Complete, read and interpret information in tables including timetables.	Read and interpret line graphs. Draw line graphs. Use line graphs to solve problems. Read and interpret tables. Two way tables. Timetables.
8 9	Number: Multiplication and Division	Multiply and divide numbers mentally drawing upon known facts. Multiply and divide whole numbers by 10, 100 and 1000. Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers. Recognise and use square numbers and cube numbers and the notation for squared (2) and cubed (3) Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes. Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers. Establish whether a number up to 100 is prime and recall prime numbers up to 19	Multiples. Factors. Common factors Prime numbers. Square numbers. Cube numbers. Multiplying by 10, 100 and 1000. Dividing by 10, 100 and 1000. Multiples of 10, 100 and 1000.
10	Measurement: Perimeter and Area	Measure and calculate the perimeter of composite rectilinear shapes in cm and m.	Measure perimeter. Calculate perimeter .Area of rectangles.

11		Calculate and compare the area of rectangles (including squares), and including using standard units, cm2, m2 estimate the area of irregular shapes.	Area of compound shapes. Area of irregular shapes.
12	Additional weeks to be used as consolidation		

Year 5 Spring Term			
Week	Area	National Curriculum Link	Small Steps
1 2 3	Number: Multiplication and Division	Multiply and divide numbers mentally drawing upon known facts. Multiply numbers up to 4 digits by a one or two digit number using a formal written method, including long multiplication for 2 digit numbers. Divide numbers up to 4 digits by a one digit number using the formal written method of short division and interpret remainders appropriately for the context. Solve problems involving addition and subtraction, multiplication and division and a combination of these, including understanding the use of the equals sign	Multiply 4-digits by 1-digit. Multiply 2-digits (area model). Multiply 2-digits by 2-digits. Multiply 3-digits by 2-digits. Multiply 4-digits by 2-digits. Divide 4-digits by 1-digit. Divide with remainders.
4 5 6 7 8 9	Number: Fractions	Compare and order fractions whose denominators are multiples of the same number. Identify, name and write equivalent fractions of a given fraction, represented visually including tenths and hundredths. Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements >1 as a mixed number [for example 2 5 + 4 5 = 6 5 = 1 1 5] Add and subtract fractions with the same denominator and denominators that are multiples of the same number. Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams. Read and write decimal numbers as fractions [for example 0.71 = 71 100] Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.	Equivalent fractions. Improper fractions to mixed numbers. Mixed numbers to improper fractions. Number sequences. Compare and order fractions less than 1. Compare and order fractions greater than 1. Add and subtract fractions. Add fractions within 1. Add 3 or more fractions. Add mixed numbers. Subtract fractions. Subtract mixed numbers. Subtract – breaking the whole. Subtract 2 mixed numbers. Multiply unit fractions by an integer. Multiply non-unit fractions by an integer. Multiply mixed numbers by integers. Fraction of an amount. Using fractions as operators.
10 11	Number: Decimals and Percentages	Read, write, order and compare numbers with up to three decimal places. Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents. Round decimals with two decimal places to the nearest whole number and to one decimal place. Solve problems involving number up to three decimal places. Recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal. Solve problems which require knowing percentage and decimal equivalents of 1 2 , 1 4 , 1 5 , 2 5 , 4 5 and those fractions with a denominator of a multiple of 10 or 25.	Decimals up to 2 d.p. Decimals as fractions Understand thousandths. Thousands as decimals. Rounding decimals. Order and compare decimals. Understand percentages. Percentages as fractions and decimals. Equivalent F.D.P.
12	Additional weeks to be used as consolidation		

Year 5 Summer Term			
Week	Area	National Curriculum Link	Small Steps
1 2 3 4	Number: Decimals	Solve problems involving number up to three decimal places. Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000. Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling.	Adding decimals within 1. Subtracting decimals within 1. Complements to 1. Adding decimals – crossing the whole. Adding decimals with the same number of decimal places. Subtracting decimals with the same number of decimal places. Adding decimals with a different number of decimal places. Subtracting decimals with a different number of decimal places. Adding and subtracting whole and decimals. Decimal sequences. Multiplying decimals by 10, 100 and 1000. Dividing decimals by 10, 100 and 1,000.
5 6 7	Geometry: Properties of Shape and Angles	Identify 3D shapes, including cubes and other cuboids, from 2D representations. Use the properties of rectangles to deduce related facts and find missing lengths and angles. Distinguish between regular and irregular polygons based on reasoning about equal sides and angles. Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles. Draw given angles, and measure them in degrees (o) Identify: angles at a point and one whole turn (total 360o), angles at a point on a straight line and ½ a turn (total 180o) other multiples of 90	Measuring angles in degrees. Measuring with a protractor. Drawing lines and angles accurately. Calculating angles on a straight line. Calculating angles around a point. Calculating lengths and angles in shapes. Regular and irregular polygons. Reasoning about 3D shapes.
8	Geometry: Position and Direction	Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed.	Position in the first quadrant. Reflection. Reflection with coordinates. Translation. Translation with coordinates.
9 10	Measurement: Converting Units	Convert between different units of metric measure [for example, km and m; cm and m; cm and mm; g and kg; l and ml] Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints. Solve problems involving converting between units of time.	Kilograms and kilometres. Milligrams and millilitres. Metric units. Imperial units. Converting units of time. Timetables.
11	Measurement: Volume	Estimate volume [for example using 1 cm3 blocks to build cuboids (including cubes)] and capacity [for example, using water] Use all four operations to solve problems involving measure	What is volume? Compare volume. Estimate volume. Estimate capacity.
12	Additional weeks to be used as consolidation		

St. Joseph's Catholic Primary School

Year 6 Autumn Term

Week	Area	National Curriculum Link	Small Steps
1 2	Number: Place Value	Read, write, order and compare numbers up to 10,000,000 and determine the value of each digit. Round any whole number to a required degree of accuracy. Use negative numbers in context, and calculate intervals across zero. Solve number and practical problems that involve all of the above.	Numbers to ten million. Compare an order any number. Round any numbers. Negative numbers
3 4 5 6	Number: Addition and Subtraction Multiplication and Division	Solve addition and subtraction multi step problems in contexts, deciding which operations and methods to use and why. Multiply multi-digit number up to 4 digits by a 2-digit number using the formal written method of long multiplication. Divide numbers up to 4 digits by a 2-digit whole number using the formal written method of long division, and 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 with mixed operations and large numbers. Identify common factors, common multiples and prime numbers. Use their knowledge of the order of operations to carry out calculations involving the four operations. Solve problems involving addition, subtraction, multiplication and division. Use estimation to check answers to calculations and determine in the context of a problem, an appropriate degree of accuracy	Add and subtract whole numbers. Multiply up to 4-digit by 1-digit number. Short division. Division using factors. Long division Common factors. Common multiples. Primes. Squares and cubes. Order of operations. Mental calculations and estimation. Reasoning from known facts.
7 8 9 10	Number: Fractions	Use common factors to simplify fractions; use common multiples to express fractions in the same denomination. Compare and order fractions, including fractions > 1 Generate and describe linear number sequences (with fractions) Add and subtract fractions with different denominations and mixed numbers, using the concept of equivalent fractions. Multiply simple pairs of proper fractions, writing the answer in its simplest form [for example 1 4 x 1 2 = 1 8] Divide proper fractions by whole numbers [for example 1 3 ÷ 2 = 1 6] Associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example 3 8] Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.	Simplify fractions. Fractions on a number line. Compare & order (denominator). Compare & order (numerator). Add & subtract fractions Adding fractions. Subtracting fractions. Mixed addition and subtraction. Multiply fractions by integers. Multiply fractions by fractions. Divide fractions by integers Four rules with fractions. Fraction of an amount. Finding the whole.
11	Geometry: Position and Direction	Describe positions on the full coordinate grid (all four quadrants). Draw and translate simple shapes on the coordinate plane, and reflect them in the axes.	Coordinates in the first quadrant. Coordinate in four quadrants. Translations. Reflections.

12	Additional weeks to be used as consolidation

Year 6 Spring Term			
Week	Area	National Curriculum Link	Small Steps
1 2	Number: Decimals	Identify the value of each digit in numbers given to 3 decimal places and multiply numbers by 10, 100 and 1,000 giving answers up to 3 decimal places. Multiply one-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	Three decimal places. Multiply by 10, 100 and 1,000. Divide by 10, 100 and 1,000. Multiply decimals by integers. Divide decimals by integers. Division to solve problems. Decimals as fractions. Fractions to decimals
3 4	Number: Percentages	Solve problems involving the calculation of percentages [for example, of measures and such as 15% of 360] and the use of percentages for comparison. Recall and use equivalences between simple fractions, decimals and percentages including in different contexts	Fractions to percentages. Equivalent FDP. Percentage of an amount Percentages – missing values. Percentage increase and decrease. Order FDP.
5 6	Number: Algebra	Use simple formulae Generate and 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.	Find a rule – one step. Find a rule – two step. Use an algebraic rule. Substitution. Formulae. Word problems. Solve simple one step equations. Solve two step equations. Find pairs of values. Enumerate possibilities.
7	Measurement: Converting Units	Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate. Use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to 3dp. Convert between miles and kilometres	Metric measures. Convert metric measures. Calculate with metric measures. Miles and kilometres. Imperial measures.
8 9	Measurement: Perimeter, Area and Volume	Recognise that shapes with the same areas can have different perimeters and vice versa. Recognise when it is possible to use formulae for area and volume of shapes. Calculate the area of parallelograms and triangles. Calculate, estimate and compare volume of cubes and cuboids using standard units, including cm3, m3 and extending to other units (mm3, km3)	Shapes – same area. Area and perimeter. Area of a triangle Area of a parallelogram. Volume – counting cubes. Volume of a cuboid
10 11	Number: Ratio	Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts. Solve problems involving similar shapes where the scale factor is known or can be found. Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.	Use ratio language. Ratio and fractions. Introducing the ratio symbol. Calculating ratio. Using scale factors. Calculating scale factors. Ratio and proportion problems.
12	Additional weeks to be used as consolidation		

Year 6 Summer Term			
Week	Area	National Curriculum Link	Small Steps
1 2	Geometry: Properties of Shape	Draw 2-D shapes using given dimensions and angles. Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals and regular polygons. Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.	Measure with a protractor. Introduce angles. Calculate angles. Vertically opposite angles. Angles in a triangle. Angles in a triangle – special cases. Angles in a triangle – missing angles. Angles in special quadrilaterals. Angles in regular polygons. Draw shapes accurately. Nets of 3D shapes.
3 4 5	Problem Solving	Revision and Assessment Period	Revision and Assessment Period
6 7	Statistics	Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius. Interpret and construct pie charts and line graphs and use these to solve problems. Calculate the mean as an average.	Read and interpret line graphs. Draw line graphs. Use line graphs to solve problems. Circles. Read and interpret pie charts. Pie charts with percentages. Draw pie charts. The mean.
8 9 10 11	Investigations	Investigations	Investigations
12	Additional weeks to be used as consolidation		