St. Joseph's Catholic Primary School

Maths

September 2025

This policy should be read in light of our Mission Statement as follows:

At St. Joseph's, we live love and learn by the example of Jesus.

Our curriculum intent

In short:

At St Joseph's we want every child to develop a love of maths.

We aim to enable a child to develop an enthusiastic, confident attitude towards maths, that will stay with them throughout their lives.

At St Joseph's, we view Mathematics as a tool for everyday life; a network of concepts and relationships which provide a way of viewing and making sense of the world, central importance for everyday life. The intent of our mathematics curriculum is to create and foster a positive attitude to the learning of mathematics and to help children enjoy maths activities throughout their time with us at St Joseph's, through creative and engaging lessons. We strive for the best for all our children and we are continually committed to raising standards. We want our all our children to be able to access our curriculum and maximise their mathematical development regardless of their starting points and backgrounds.
Our intention is that our children see links with maths in everyday life and become life-long, resilient problem solvers who can apply their mathematical knowledge to science and other subjects.

The National Curriculum for maths:

Aims

The national curriculum for Mathematics aims to ensure that all pupils:

- become fluent in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
- reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language
- can solve problems by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

Implementation

At St. Joseph's, teachers teach mathematics daily through discrete lessons, which last 45 minutes building to an hour for Key Stage 1 and 60 minutes for Key Stage 2, with shorter sessions in Early Years. Daily sessions of TT rockstars (lasting 3 minutes) and weekly arithmetic style fluency sessions also occur, beginning in year 2. This will also be present in Year 1 but in a more informal, verbal context. Additionally, there will be opportunities for children to be taught in a more cross curricular approach where appropriate: it may be linked to topic; out of school days for less confidence or high achieving; specific maths days/events; or through real life experiences such as money links with charitable events.

Mathematics programmes of study DfE

EYFS:

Developing a strong grounding in number is essential so that all children develop the necessary building blocks to excel mathematically. Children should be able to count confidently, develop a deep understanding of the numbers to 10, the relationships between them and the patterns within those numbers. By providing frequent and varied opportunities to build and apply this understanding - such as using manipulatives, including small pebbles and tens frames for organising counting - children will develop a secure base of knowledge and vocabulary from which mastery of mathematics is built. In addition, it is important that the curriculum includes rich opportunities for children to develop their spatial reasoning skills across all areas of mathematics including shape, space and measures. It is important that children develop positive attitudes and interests in mathematics, look for patterns and relationships, spot connections, 'have a go', talk to adults and peers about what they notice and not be afraid to make mistakes.

Mathematics ELG:

Number ELG: Have a deep understanding of number to 10, including the composition of each number

Number ELG: Subitise (recognise quantities without counting) up to 5.

Number ELG: Automatically recall (without reference to rhymes, counting or other aides) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts.

Numerical Patterns ELG: Verbally count beyond 20, recognising the pattern of the counting system.

Numerical Patterns ELG: Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as another quantity.

Numerical Patterns ELG: Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.

Year 1 & 2 (KS1):

The principal focus of mathematics teaching in key stage 1 is to ensure that pupils develop confidence and mental fluency with whole numbers, counting and place value. This should involve working with numerals, words and the four operations, including with practical resources [for example, concrete objects and measuring tools].

At this stage, pupils should develop their ability to recognise, describe, draw, compare and sort different shapes and use the related vocabulary. Teaching should also involve using a range of measures to describe and compare different quantities such as length, mass, capacity/volume, time and money.

By the end of year 2, pupils should know the number bonds to 20 and be precise in using and understanding place value. An emphasis on practice at this early stage will aid fluency.

Pupils should read and spell mathematical vocabulary, at a level consistent with their increasing word reading and spelling knowledge at key stage 1.

Year 1 in depth:

Number and place value:

- Counting up to 100 forwards and backwards
- Reading and writing numbers up to 100
- Reading and writing numbers up to 20 in words
- Counting on and back in twos, fives and tens – times tables
- Using a number line to put numbers in the correct order
- Recognising patterns in numbers
- Recognising odd and even numbers
- Estimating amounts of objects and then counting to check

Calculating:

- Learning simple addition and subtraction
- Recognising mathematical words and symbols
- Using money – paying and giving change
- Learning which pairs of numbers add up to 20 (number bonds)
- Doubling and halving
- Finding a quarter of a quantity
- Working out multiplication and division questions using objects to group or share out

Measuring:

- Telling the time to the hour and half hour
- Putting the days of the week and months of the year in order
- Measuring length, weight and capacity and comparing these measurements

Geometry:

- Recognising, naming and describing common 2D and 3D shapes
- Using shapes to make patterns, models and pictures
- Describing whole, half, quarter and three-quarter turns

Year 2 in depth:

Number and place value:

- Counting in steps of 2, 3 and 5
- Putting the numbers one to 100 in the correct order
- Using < and > symbols

- Recognising the place value of each digit in a two-digit number

Calculating:

- Adding and subtracting one- and two-digit numbers
- Knowing addition and subtraction facts up to 20
- Learning the 2, 5 and 10 times tables, plus division facts
- Identifying odd and even numbers

Fractions:

- Finding 1/3, 1/4, 2/4 and 3/4 of a shape or quantity

Measurement:

- Using appropriate units to measure length, weight and capacity
- Combining amounts of money to make a particular value
- Working out how much change to give
- Tell the time to five minutes, including quarter to / past the hour

Geometry:

- Identifying, describing and sorting common 2D and 3D shapes
- Understanding that a quarter turn is a right angle
- Confident with clockwise and anti-clockwise

Statistics:

- Interpreting and constructing simple pictograms, tally charts, block diagrams and tables
- Answer questions about the data presented

Year 3 & 4 (Lower KS2)

The principal focus of mathematics teaching in lower key stage 2 is to ensure that pupils become increasingly fluent with whole numbers and the four operations, including number facts and the concept of place value. This should ensure that pupils develop efficient written and mental methods and perform calculations accurately with increasingly large whole numbers.

At this stage, pupils should develop their ability to solve a range of problems, including with simple fractions and decimal place value. Teaching should also ensure that pupils draw with increasing accuracy and develop mathematical reasoning so they can analyse shapes and their properties, and confidently describe the relationships between them. It should ensure that they can use measuring instruments with accuracy and make connections between measure and number.

By the end of year 4, pupils should have memorised their multiplication tables up to and including the 12 multiplication table and show precision and fluency in their work.

Pupils should read and spell mathematical vocabulary correctly and confidently, using their growing word reading knowledge and their knowledge of spelling.

Year 3 in depth:

Number and place value:

- count from 0 in multiples of 4, 8, 50 and 100; 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
- identify, represent and estimate numbers using different representations
- read and write numbers up to 1000 in numerals and in words

- solve number problems and practical problems involving these ideas

Calculating:

- 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
- 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.
- 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 that 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 objects.

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, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators
- recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators
- recognise and show, using diagrams, equivalent fractions with small denominators
- add and subtract fractions with the same denominator within one whole [for example, + =]
- compare and order unit fractions, and fractions with the same denominators
- solve problems that involve all of the above.

Measurement:

- measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)
- measure the perimeter of simple 2-D shapes
- add and subtract amounts of money to give change, using both £ and p in practical contexts
- 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].

Geometry:

- draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them
- 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.

Statistics:

- interpret and present data using bar charts, pictograms and tables
- solve one-step and two-step questions using information presented in scaled bar charts and pictograms and tables.

Year 4 in depth:

Number and place value:

- count in multiples of 6, 7, 9, 25 and 1000
- find 1000 more or less than a given number
- count backwards through zero to include negative numbers
- 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
- 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.

Calculating:

- 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
- recall multiplication and division facts for up to 12 x 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.

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
- recognise and write decimal equivalents of any number of tenths or hundredths
- recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$
- find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths
- round decimals with one decimal place to the nearest whole number
- compare numbers with the same number of decimal places up to two decimal places
- solve simple measure and money problems involving fractions and decimals to two decimal places.

Measurement:

- Convert between different units of measure [for example, kilometre to metre; hour to minute]
- measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres
- find the area of rectilinear shapes by counting squares
- estimate, compare and calculate different measures, including money in pounds and pence
- 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.

Geometry:

- compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes
- identify acute and obtuse angles and compare and order angles up to two right angles by size
- 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.
- describe positions on a 2-D grid as coordinates in the first quadrant
- describe movements between positions as translations of a given unit to the left/right and up/down
- plot specified points and draw sides to complete a given polygon.

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.

Year 5 & 6 (Upper KS2)

The principal focus of mathematics teaching in upper key stage 2 is to ensure that pupils extend their understanding of the number system and place value to include larger integers. This should develop the connections that pupils make between multiplication and division with fractions, decimals, percentages and ratio.

At this stage, pupils should develop their ability to solve a wider range of problems, including increasingly complex properties of numbers and arithmetic, and problems demanding efficient written and mental methods of calculation. With this foundation in arithmetic, pupils are introduced to the language of algebra as a means for solving a variety of problems. Teaching in geometry and measures should consolidate and extend knowledge developed in number. Teaching should also ensure that pupils classify shapes with increasingly complex geometric properties and that they learn the vocabulary they need to describe them.

By the end of year 6, pupils should be fluent in written methods for all four operations, including long multiplication and division, and in working with fractions, decimals and percentages.

Pupils should read, spell and pronounce mathematical vocabulary correctly.

Year 5 in depth:

Number and place value:

- read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit
- count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000
- interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero
- round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000
- solve number problems and practical problems that involve all of the above

- read Roman numerals to 1000 (M) and recognise years written in Roman numerals

Calculating:

- add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)
- add and subtract numbers mentally with increasingly large numbers
- 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.
- identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers
- 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
- multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers
- multiply and divide numbers mentally drawing upon known facts
- 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
- multiply and divide whole numbers and those involving decimals by 10, 100 and 1000
- 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
- solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign
- solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.

Fractions:

- compare and order fractions whose denominators are all 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, $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$]
- 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 = $\frac{71}{100}$]
- 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
- read, write, order and compare numbers with up to three decimal places
- 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 $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{2}{5}$, $\frac{4}{5}$ and those fractions with a denominator of a multiple of 10 or 25.

Measurement:

- convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre)
- understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints
- measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres
- calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm^2) and square metres (m^2) and estimate the area of irregular shapes
- estimate volume [for example, using 1 cm^3 blocks to build cuboids (including cubes)] and capacity [for example, using water]
- solve problems involving converting between units of time
- use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling.

Geometry:

- identify 3-D shapes, including cubes and other cuboids, from 2-D representations
- know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles
- draw given angles, and measure them in degrees (°)
- identify:

angles at a point and one whole turn (total 360°)

angles at a point on a straight line and $\frac{1}{2}$ a turn (total 180°)

other multiples of 90°

- 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
- 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.

Statistics:

- solve comparison, sum and difference problems using information presented in a line graph
- complete, read and interpret information in tables, including timetables.

Year 6 in depth:

Number and 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.

Calculating:

- multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication
- divide numbers up to 4 digits by a two-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 two-digit number using the formal written method of short division where appropriate, 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 addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why
- 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.

Fractions:

- use common factors to simplify fractions; use common multiples to express fractions in the same denomination
- compare and order fractions, including fractions > 1
- add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions
- multiply simple pairs of proper fractions, writing the answer in its simplest form [for example, $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$]
- divide proper fractions by whole numbers [for example, $\frac{1}{3} \div 2 = \frac{1}{6}$]

- associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, $\frac{3}{8}$]
- identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places
- multiply one-digit numbers with up to two decimal places by whole numbers
- use written division methods in cases where the answer has up to two decimal places
- solve problems which require answers to be rounded to specified degrees of accuracy
- recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.

Measurement:

- 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 three decimal places
- convert between miles and kilometres
- 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 cubic centimetres (cm^3) and cubic metres (m^3), and extending to other units [for example, mm^3 and km^3].

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.

Ratio and proportion:

- 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 the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison
- 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.

Geometry:

- draw 2-D shapes using given dimensions and angles

- recognise, describe and build simple 3-D shapes, including making nets
- compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons
- illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius
- recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.
- 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.

Statistics:

- interpret and construct pie charts and line graphs and use these to solve problems
- calculate and interpret the mean as an average.

Assessment and Recording

At St Joseph's, we use an adaptive style of teaching, which enables all of our children to access the curriculum and their learning is personalised and flexible based on their confidence on each strand. Children use scaffolds to support their learning and may record in different ways using different representations based on their needs- for example a part whole for adding time durations or a number line. Children will be challenged and stretched through higher level question and problem solving- these may be a part of the lesson or as a part of the reflection. Following our new feedback and marking policy, children mark their books daily using purple pen and mark stations in classes. The children then write a reflection about their learning that day and how confident they feel. Each day before their next lesson, their teacher will look at their work and read their reflections and group the children on what support they need, if any. This will then feedback in to the next session and the conferencing. Children will then be conferenced in areas they need support or pushed through more challenging work.

At St. Joseph's we ensure that the children are regularly assessed against the relevant frameworks in maths. Within the assessment policy we have a feedback section whereby we measure the assessment against, including coding within books or the level of independence and verbal feedback being issued to support the learning. This results in each child receiving personalised learning and in turn increases their awareness of their next target(s).

Children attainment and progression is assessed every half-term, either my formative or summative assessments (HfL diagnostic tests/ SATs tests). There is a regular half-termly cycle of monitoring and assessment which provides data; this is collected, analysed and utilised for providing interventions, support and a reviewing of planning. In addition to this, the teachers meet with members of the leadership team to discuss each pupil's progress to find out the reasons behind their current attainment.

Impact

At St Joseph's we want every child to develop a love of maths.

We aim to enable a child to develop an enthusiastic, confident attitude towards maths, that will stay with them throughout their lives.

We want our children to leave with:

· Quick recall of facts and procedures

· The flexibility and fluidity to move between different contexts and representations of mathematics.

· The ability to recognise relationships and make connections in mathematics

A mathematical concept or skill has been mastered when a child can show it in multiple ways, using the mathematical language to explain their ideas, and can independently apply the concept to new problems in unfamiliar situations.

We hope that the impact of our maths curriculum is that our children leave with good to strong progress from their starting points and are ready for secondary school maths and further.

Inclusion

"The expectation of the curriculum is that the majority of pupils will move through the programmes of study at broadly the same pace. However, decisions about when to progress should always be based on the security of pupils' understanding and their readiness to progress to the next stage. Pupils who grasp concepts rapidly should be challenged through being offered rich and sophisticated problems before any acceleration through new content/ new year group. Those who are not sufficiently fluent with earlier material should consolidate their understanding, including through additional practice, before moving on."

We intend to support and challenge our children at St Joseph's through:

- Using a robust 'scheme' which has been written by experts, alongside the sequences themselves there are various opportunities to support and challenge- destination questions, speaking frames, greater depth challenges, tracking back documents, diagnostic tests.
- pre-teaching,
- daily conferencing and helicoptering,
- adaptive teaching using scaffolds to support and stretch,
- interventions,
- self-marking,
- booster groups (for all abilities of children not just below age-related),
- SATs prep groups,
- regular opportunities to reason and justify their answers using sentence stems to support children's written responses,
- concrete apparatus throughout key stages-regardless of ability,
- greater depth activities using NCTEM tools, essential maths and maths mastery GD written by government,

- maths in context,
- adult/peer support,
- continuous CPD for staff where required.

Monitoring

Subject leads and SLT are vigorous and book looks and monitoring happens regularly and recording in teacher's triangulation folders. The maths SL will then complete termly reports about the monitoring that has taken place, the impact and the next steps. This is then shared through staff meetings. Any CPD areas are addressed and support put in place.

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Children's attainment and progression is assessed every half term, either my formative or summative assessments (HfL diagnostic tests/ SATs tests). There is a regular half-termly cycle of monitoring and assessment, which provides data; this is collected, analysed and utilised for providing interventions, support and a review of planning. In addition to this, the teachers meet with members of the leadership team to discuss each pupil's progress to find out the reasons behind their current attainment.

Planning and resources

At St Joseph's we follow the Herts for Learning medium and short-term guide called ESSENTIALmaths. Teachers use this as a basis for their teaching and adapt planning to suit their classes individual needs. Planning is reviewed daily by the class teacher and annotated to show any changes or additions. Work in mathematics is differentiated as appropriate to enable all children to make effective progress and will, where possible, enable all children to reach the same target with scaffold and support. Differentiation will be seen as chilli challenge within classes, where children (with gentle guidance from teachers if necessary) pick their daily challenge from lemon and herb to medium to hot to extra hot. Differentiation may be planned for by the difficulty of the task, the support received during the task, the outcome of the task or by planning alternative activities.

Why ESSENTIALmaths- what is their intent of the sequences?

ESSENTIALmaths is written by Herts for Learning subject experts, to support the curriculum for primary teachers.

"Herts for Learning subject experts have designed an easy to pick up and use set of sequences with step by step guidance covering the entire mathematics curriculum from Year 1 to Year 6. Designed to support teachers, the planning includes examples of how concrete and pictorial representations can benefit pupils'

learning as well as other mastery techniques. The ESSENTIALmaths planning tool has a wealth of ideas to deepen and extend mathematical thinking for all learners." *HfL website July 2019*

The sequences are written as a spiral curriculum in which learning is built upon step by step, sequence by sequence and year on year. It is aspirational and ensures progression and coverage through the primary phase.

More information about the reasoning and thinking behind the idea of essentials can be found in the following blogs on HfL website: *HfL website July 2019*

https://www.hertsforlearning.co.uk/blog/essentialmaths-versus-eef-recommendations

https://www.hertsforlearning.co.uk/blog/not-quite-scheme

What is included?

Long term plans provide an overview of the learning for each term- these have been condensed and joined by subject lead to create a comprehensive overview and rough time scale, which is easily viewable as a whole school vision. The times indicated are for guidance only and cover fewer weeks than there are likely to be in a term. This allows for flexibility within the materials for our changing cohorts and time for assessments and diagnostic testing. Sequences of learning include identification of NC statements covered and key concepts. Stepped learning opportunities demonstrate the order of learning. Handouts which can include speaking frames, practice examples, games and problems solving opportunities. All of which should be visible in books and as scaffolds on working walls.

The approach has a strong focus on problem solving, reasoning (explaining or understanding how and why) and fluency. These are the three aims of the National Curriculum.

Cultural Capital and cross curricular links

Throughout the whole curriculum opportunities exist to use and apply, extend and promote mathematics through cross curricular teaching, real life experiences and through our forest school. Teachers seek to take advantage of all opportunities. We try and provide our children with life experience and cultural capitals they may not have experiences of at home.

Social, Moral, Spiritual and Cultural Opportunities

The mathematics curriculum promotes the Catholic Virtues and British values of tolerance and resilience through problem solving and understanding of concepts, encouraging pupils to persevere and try different methods to arrive at a correct solution. Mistakes are learning.

Teamwork through talk partners, peer assessment and group work underpins our teaching and learning style. Children work together in all areas of the maths curriculum to support each other and build mutual respect for one another.

Children are taught to use 'mistakes' in a positive light and learn from them in all maths lessons. This fosters confidence and builds self-esteem and encourages them to take risks and become lifelong learners whilst using their mathematical skills in all aspects of life.

Children are encouraged to:

- Sustain their self-esteem in their learning experience
- Develop ability for independent thought
- Recognise the unique value of each individual
- Listen and respond appropriately to the views of others
- Be confident to respond to errors proactively
- Show respect for resources
- Display a willingness to participate
- The School's Catholic Virtues are promoted throughout all maths lessons, as appropriate.

Review

This policy should be viewed as a working document for the benefit of all concerned in the education of the children at St. Joseph's Catholic Primary School.

Review Date: July 2026