

St Patrick's Catholic Primary School

The Catholic Diocese of Lancaster

Our Mission Statement:

"Sharing Our Faith, Inspiring Education, Achieving Our Dreams"

"Go, therefore, make disciples of all nations.
And look, I am with you always; yes, to the end of
time." (Matthew 28:19-20)



Mathematics Policy

At St Patrick's Catholic Primary School, we celebrate that we are all unique and loved by God. With Christ at the centre of all we do, we strive to unlock each child's potential to become the individual they are created to be. We are working together to build a community built on love, faith, forgiveness and service.

Approved by ____ J. Murphy (Headteacher) Date: __ October 2025 ____

Approved by Governing Body/Committee: _Resources_____ Date: __ October 2025 ____

Next review date: _October 2028_____

Mathematics Policy Statement

1. School Mission and Curriculum Vision

At **St Patrick's Catholic Primary School**, we celebrate that we are all unique and loved by God. With Christ at the centre of all we do, we strive to unlock each child's potential to become the individual they are created to be. We are working together to build a community built on love, faith, forgiveness and service, deeply rooted in our mission statement: "*Sharing Our Faith, Inspiring Education, Achieving Our Dreams*". Guided by the Gospel directive to go forth and make disciples, we teach our children to look at the human journey through time with empathy, respect, and a desire to seek truth.

At St Patrick's, we believe that Mathematics is a key skill that helps us to make sense of the world around us. It enables children to understand and appreciate relationships and pattern in both number and space in their everyday lives. Through their growing knowledge and understanding, children learn to understand and apply their knowledge to solve real life problems.

At St Patrick's, we also believe that Mathematics equips children with a uniquely powerful set of tools to understand and change the world. These tools include logical reasoning, problem-solving skills and the ability to think in abstract ways.

Mathematics is important in everyday life, many forms of employment, science and technology, medicine, the economy, the environment and development and in public decision-making. Different cultures have contributed to the development and application of mathematics. Today, the subject transcends cultural boundaries, and its importance is universally recognised.

2. Aims

- *Have a sense of the size of a number and where it fits into the number system*
- *Know by heart number facts, such as number bonds, multiplication tables*
- *Use what they know by heart to figure out answers mentally*
- *Calculate accurately and efficiently, both mentally and with pencil and paper, drawing on a range of calculation strategies*
- *Recognise when it is appropriate to use a calculator, and be able to do so effectively*
- *Ensure pupils can make sense of number problems, including non-routine problems, and recognise the operations needed to solve them*
- *Enable pupils to be able to explain their methods and reasoning, using correct mathematical terms*
- *Enable pupils to be able to suggest suitable units for measuring, and make sensible estimates of measurements*
- *Enable pupils to make predictions from the numbers in graphs, diagrams, charts and tables*
- *Ensure all pupils become fluent in the fundamentals of mathematics*
- *Enable pupils to solve increasingly sophisticated problems*
- *Build resilience, independence and perseverance*
- *Prepare pupils for future learning and everyday life*
- *Promote enjoyment and confidence in mathematics*
- *Ensure all children make good progress regardless of starting point.*

3. Implementation of Policy

St Patrick's uses a variety of teaching and learning styles in mathematics lessons with a focus on Mastery. Our principal aim is to develop children's knowledge, skills and understanding in mathematics.

We do this through a daily lesson that has a mix of whole-class and group teaching.

During these lessons we encourage children to ask as well as answer mathematical questions. They have the opportunity to use a wide range of resources such as number lines, number squares, digit cards and small apparatus to support their work appropriate to their age and ability level.

At St Patrick's, children use ICT in mathematics lessons where it will enhance their learning, as in modelling ideas and methods. Wherever possible, we encourage the children to use and apply their learning in everyday situations.

In all classes there are children of differing mathematical ability. We recognise this fact and provide suitable learning opportunities for all children by ensuring that support is in place to enable children to make accelerated progress. We achieve this through a range of strategies – in some lessons through differentiated group work and in other lessons by organising the children to work in pairs on open-ended problems or games. Along with quality first teaching, we also use classroom assistants to support targeted groups and to provide in situ feedback to ensure that

work is matched to the needs of individuals. Work is marked/assessed swiftly so that misconceptions can be addressed shortly after the lesson on the same day.

At St Patrick's we do this through careful planning and preparation, ensuring that throughout the school:

- *children are given opportunities for: practical activities, role play and mathematical board games*
- *the development of mental and oral strategies with an emphasis on speed recall of number bonds and multiplication tables*
- *the development of mathematical vocabulary*
- *problem solving*
- *individual, paired, group and whole class discussions and activities*
- *open and closed tasks*
- *a range of methods of calculating e.g. mental, pencil and paper and using a calculator*
- *children understand mathematics through a process of enquiry and experiment*
- *regular use of ICT games to reinforce, develop and enthuse learning*
- *introduction of Abacus scheme to secure arithmetical abilities*
- *lessons are carefully sequenced with a mastery-style progression*

4. The National Curriculum

The National Curriculum order for mathematics describes what must be taught in each key stage. St Patrick's follows the primary mathematics framework, which provides detailed guidance for the implementation of the orders and ensures continuity and progression in the teaching of mathematics. The Abacus scheme follows this closely and, through a cyclical approach, revisits and builds-on learning throughout the year to ensure progression.

Every teacher in St Patrick's has access to the framework for teaching mathematics and the Abacus curriculum map outlining progression. In early years, the curriculum is guided by the Early Learning Goals.

Early Years Foundation Stage

At St Patrick's, children follow the early years foundation stage curriculum using the Abacus scheme. We give all children the opportunity to talk and communicate in a widening range of situation and to practise and extend their range of vocabulary and numeracy skills. They have the opportunity to explore, enjoy, learn about, and use mathematics in a range of situations. Mathematics is planned on a half termly basis and assessed using the criteria from the early learning goals. Mathematics is taught both as a discrete subject and within the whole Early Years curriculum to give children opportunities to use their Numeracy skills in real life situations.

Key Stages 1 and 2

At St Patrick's, daily maths lessons are between 45 minutes and one hour depending on the age of the children. There are termly plans for each term's work, following the Abacus scheme. There are also daily plans, which cover the daily content of each lesson.

Number

The programme of Study specifies a progression of number-based skills for children to acquire as they develop their mathematical ability. In order to facilitate this, the teaching staff in St Patrick's will ensure that:

- *Children will be encouraged to use mental calculations where appropriate*
- *Children will have the opportunity to discuss and develop a range of calculation strategies*
- *Teaching will encourage flexibility of thinking and utilisation of connections within mathematics*
- *Children's computational skills will be developed and consolidated using a balance between practice and application in meaningful contexts*
- *Opportunities will be provided for children to develop their estimation skills, and will be encouraged to estimate answers before completing calculations*
- *Teaching will place a strong emphasis on ensuring children gain a sound understanding of the Place Value basis of the number system.*

Shape and Space

The Programme of Study specifies a progression of skills in Shape and Space for children to acquire as they develop their mathematical ability. In order to facilitate this, the teaching staff in St Patrick's will ensure that:

- *Teaching will place emphasis on observing and understanding the properties of 2-D and 3-D shapes*
- *Opportunities will be provided for the practical construction and investigation of shapes*
- *Children will be given opportunities to explore position and movement in real-life contexts, utilising ICT.*

Measures

The programme of study specifies a progression of skills in measures for children to acquire as they develop their mathematical ability. In order to facilitate this, the teaching staff in St Patrick's will ensure that:

- *Children will use a range of measuring equipment in meaningful contexts, and be encouraged to make choices regarding the most suitable equipment*

- *Children will follow a progression beginning with direct comparison, through measuring with non-standard units, to measuring with standard units with increasing accuracy*
- *Children will be given opportunities to develop estimation skills in all measures*
- *Teaching will place strong emphasis on ensuring that children understand that all measurement is approximate, and that they can make sensible decisions on the accuracy necessary in different situations.*

Handling Data

The programme of study specifies a progression of skills in handling data for children to acquire as they develop their mathematical ability. In order to facilitate this, the teaching staff in St Patrick's will ensure that:

- *Teaching will be designed to ensure that children understand that the collection, representation and interpretation of data is a means through which real-life decisions can be made*
- *Handling data skills are used as a means of solving problems, through a four-point process: Pose a question; Collect data; organise, display & interpret data; Answer original question*
- *Children will be given opportunities to make decisions regarding what information is collected, how it is collected, how information is processed and how it is displayed*
- *Children will be given opportunities to apply data handling skills in a range of contexts, across subject areas*
- *Children will be given opportunities to develop an increasing range of ICT based handling data skills.*

5. Teaching Methods and Approaches

At St Patrick's, lessons follow the Abacus scheme to develop reasoning skills through a mastery-style approach to learning, following closely the Singapore method. Lessons aim to:

- *build upon prior knowledge*
- *use practical equipment before moving to pictorial and abstract representations*
- *encourage mathematical discussion*
- *develop conceptual understanding*
- *promote mathematical vocabulary*
- *provide opportunities for independent application.*

In lessons, Teachers use:

- *whole-class teaching*
- *guided group work*
- *partner discussion*
- *independent practice*
- *investigative activities*
- *retrieval practice*
- *questioning to deepen understanding.*

In EYFS, the aim is to have prepared the children by the end of the year for a daily 45-minute maths lesson.

The teaching of maths at St Patrick's provides opportunities for:

- *Group work*
- *Paired work*
- *Whole class teaching*
- *Individual work*

Children engage in:

- *The development of mental strategies*
- *Written methods*
- *Practical work*
- *Investigational work*
- *Problem- solving*
- *Mathematical discussion*
- *Consolidation of basic skills and routines*

Across all year groups, a CPA (Concrete, Pictorial, Abstract) approach will be used where appropriate.

Teaching follows the CPA approach where appropriate. Children learn by progressing through:

Concrete

- *manipulatives such as counters, cubes, place value equipment, bead strings and number lines*

Pictorial

- *diagrams*
- *bar models*
- *number representations*
- *drawings*

Abstract

- *written calculations*
- *symbols*
- *mathematical notation*

Children may move flexibly between these stages depending on their understanding.

At St Patrick's, we recognise the importance of establishing a secure foundation in mental calculation and recall of number facts before standard written methods are introduced. Additionally, vocabulary is explicitly taught throughout every lesson.

Teachers:

- model correct mathematical language
- encourage pupils to explain reasoning
- display key vocabulary
- revisit terminology regularly.

We endeavour to set work that is challenging, motivating and encourages the children to talk about what they have been doing.

Reasoning and Problem Solving

Reasoning forms an integral part of every mathematics lesson.

Children are encouraged to:

- *explain their thinking*
- *justify answers*
- *identify mistakes*
- *compare strategies*
- *make mathematical connections*
- *solve multi-step problems.*

Additionally, teachers use open-ended questions to deepen understanding.

6. Parental Involvement

At St Patrick's, we recognise that parental involvement is an important factor in helping children achieve their best and actively encourage parents to become involved with their children's development in Mathematics through:

- *Parents' meetings twice a year, along with opportunities to look at children's work*
- *The school's 'open' approach to visits from parents/carers, where teachers make themselves available for discussion when a need is identified.*
- *Attending Maths events in and out of school.*
- *Maths Week*
- *Use of the Homework Materials, maths games and subscription to Times Tables Rockstars online learning for use at home*
- *Class newsletters informing them of curriculum information and how they can support their child.*

At St Patrick's, we recognise the important role that display has in the teaching and learning of mathematics by having maths work displayed in the school. Every class has a 'Numeracy Working Wall' which is a visual aid to support children with their work.

7. Resources

At St Patrick's, resources for the delivery of the maths curriculum are stored both centrally and in classrooms. Everyday basic equipment is kept in classrooms. Additional equipment and topic-specific items are stored centrally in the 'Stars Room.'

We use a variety of materials to facilitate the teaching of mathematics but recognise the need for the teaching of maths to be investigative and grounded in real life circumstances wherever possible.

There is a variety of interactive resources to help with the delivery of Maths throughout the school and these are stored centrally on the staff network or accessed via teacher logins.

8. Contribution in Mathematics to Teaching in Other Curriculum Areas

English

At St Patrick's, mathematics contributes significantly to the teaching of English in our school by actively promoting the skills of reading, writing, speaking and listening. The very nature of the mastery approach means there is a real focus on reading, reasoning and discussion.

Computing

At St Patrick's, the effective use of computing can enhance the teaching and learning of mathematics when used appropriately. When considering its use, we take into account the following points:

- *Computing should enhance good mathematics teaching. It should be used in lessons only if it supports good practice in teaching mathematics;*
- *Any decision about using computing in a particular lesson or sequence of lessons must be directly related to the teaching and learning objectives for those lessons;*
- *Computing should be used if the teacher and/or the children can achieve something more effectively with it than without it;*
- *Useful suggestions as to integrating computing into units of work are given in the planning section of the Renewed Framework.*

Science

At St Patrick's, almost every scientific investigation or experiment is likely to require one or more of the mathematical skills of classifying, counting, measuring, calculating, estimating and recording

in tables and graphs. In science, children will for example order numbers, including decimals, calculate simple means and percentages, use negative numbers when taking temperatures, decide whether it is more appropriate to use a line graph or bar chart, and plot, interpret and predict from graphs. There is useful information within the Renewed Framework in relation to 'cross-curricular' aspects of mathematics and science.

Art, Design and Technology

At St Patrick's, measurements are often needed in art and design and technology. Many patterns and constructions are based on spatial ideas and properties of shapes, including symmetry. Designs may need enlarging or reducing, introducing ideas of multiplication and ratio. When food is prepared a great deal of measurement occurs, including working out times and calculating cost; this may not be straightforward if only part of a packet of ingredients has been used.

History, Geography and Religious Education

In history and geography, children will collect data by counting and measuring and making use of measurements of many kinds. The study of maps includes the use of co-ordinates and ideas of angle, direction, position, scale and ratio. The pattern of the days of the week, the calendar and recurring annual festivals all have a mathematical basis. For older children historical ideas require understanding of the passage of time, which can be illustrated on a timeline, similar to the number line that they already know.

Physical Education and Music

At St Patrick's, athletic activities require measurement of height, distance and time, while ideas of counting, time, symmetry, movement, position and direction are used extensively in music, dance, gymnastics and ball games.

Personal, Social and Health Education (PSHE) and Citizenship

At St Patrick's, mathematics contributes to the teaching of personal, social and health education, and citizenship. The work that children do outside their normal lessons encourages independent study and helps them to become increasingly responsible for their own learning. The planned activities that children do within the classroom encourage them to work together and respect each other's views, especially when discussing most different ways to solve reasoning problems.

Spiritual, moral, social and cultural development

The teaching of mathematics supports the social development of our children through the way we expect them to work with each other in lessons. We often group children so that they can work together, and we give them a chance to discuss their ideas and results. The study of famous mathematicians around the world contributes to the cultural development of our children. Mathematics contributes to children's spiritual development. Children can find shapes and pattern in nature. They can see the order, logic and pattern that numbers offer.

9. Assessment and Record Keeping

At St Patrick's, we are continually assessing our children and recording their progress. We see assessment as an integral part of the teaching process and endeavour to make our assessment purposeful, allowing us to match the correct level of work to the needs of the children, thus benefiting the children and ensuring progress.

10. Reporting

At St Patrick's, all parents receive an oral termly report of their child's progress and an annual written report on which there is a summary of their child's effort and progress in mathematics over the year. Parents also have opportunities to discuss progress at two parent's evenings and an open day. Within curriculum newsletters parents will receive information on areas of development in mathematics for their child.

11. Equal Opportunities

As a staff we endeavour to maintain an awareness of, and to provide for equal opportunities for, all our children in mathematics. We aim to take into account cultural background, gender and Special Needs, both in our teaching attitudes and in the published materials we use with our children.

12. Special Educational Needs

At St Patrick's, we aim to fully include SEND children in the daily mathematics lesson so that they benefit from the emphasis on oral and mental work and by listening and participating with other children in demonstrating and explaining their methods.

Where necessary teachers will, in consultation with the SENCO, draw up a target within an Individual Educational Plan for a child. If a child's needs require it, they will work on an individualised programme written in consultation with the appropriate staff.

When planning, teachers will try to address the child's needs through simplified or modified tasks or the use of support staff.

Where appropriate, a group educational plan is developed with common objectives and learning targets for a group, though the expectation is that all children are entitled to access the mastery-style approach to mathematics.

13. Role and Responsibilities of Mathematics Subject Leader

- *Monitor planning, teaching and learning in mathematics, to ensure continuity and progression.*
- *Ensure there is well sequenced and progressive curriculum map which contains the key knowledge, skills and vocabulary children need to be procedurally fluent in mathematics.*
- *Monitor standards in mathematics throughout the school, including SEND, more able, CLA, etc.*
- *Identify strengths and areas for improvement and to lead and drive improvements within the school.*
- *Keep up to date with new initiatives and train staff on these (also to facilitate in or out of school training for staff).*
- *Feed back to the Headteacher on standards in mathematics*

14. Monitoring and Review

At St Patrick's, the subject leader supports colleagues in their teaching, by keeping informed about current developments in mathematics, and by providing a strategic lead and direction for this subject; gives the headteacher an annual summary report in which he evaluates the strengths and weaknesses in mathematics and indicates areas for further improvement.

The subject leader uses allocated management time to review evidence of the children's work, and to observe mathematics lessons across the school. The quality of teaching and learning in mathematics is monitored and evaluated by the headteacher as part of the school's agreed cycle of lesson observations. A named member of the school's governing body is briefed to oversee the teaching of mathematics. The mathematics link governor meets regularly with the subject leader to review.

This policy will be reviewed yearly.

15. Disability Equality Impact Assessment

This policy has been written with reference to and in consideration of the school's Disability Equality Scheme. Assessment will include consideration of issues identified by the involvement of disabled children, staff and parents and any information the school holds on disabled children, staff and parents.

Any questions or concerns regarding this policy should be made to Mr P Houghton, Maths Lead

16. Review

This policy will be reviewed every two years or earlier if national guidance changes.

Signed: _____

Headteacher

Signed: _____

Chair of Governors