

ST. LUKE'S CHURCH OF ENGLAND PRIMARY SCHOOL



Church Lane
Lowton
Warrington
WA3 2PW

☎
Fax
web

01942 201140
01942 205048
www.saintlukes.wigan.sch.uk
enquiries@admin.saintlukes.wigan.sch.uk

Headteacher: Mr S Hardaker e-mail

St Luke's is built on a core set of Christian values, where children feel happy and cared for. Here they find, love, joy, hope and peace.

John 13: 34-35 says: 'Love one another. As I have loved you... By this everyone will know that you are my disciples.'

'Following in God's way, Learning day by day, Working with one another, Caring for each other'

MATHEMATICS POLICY

Date of Policy: 2021

Review Date: 2024

1 Aims and objectives

- 1.1 At St Luke's C. E. Primary School, we believe mathematics is an important part of children's development throughout school, right from an early age. We want all pupils to experience the beauty, power and enjoyment of mathematics and develop a sense of curiosity about the subject with a clear understanding. We believe all children can achieve in mathematics, and teach for secure and deep understanding of mathematical concepts through manageable steps. At our school, the children will spend time becoming true masters of content, applying and being creative with new knowledge in multiple ways so that all pupils know more, remember more and understand more.
- 1.2 The intentions of our Maths teaching is that all pupils will:
- become fluent in the fundamentals of mathematics so that they develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
 - be able to solve problems by applying their mathematics to a variety of problems with increasing sophistication, including in unfamiliar contexts and to model real-life scenarios
 - reason mathematically by following a line of enquiry and develop and present a justification, argument or proof using mathematical language.
 - have an appreciation of number and number operations, which enables mental calculations and written procedures to be performed efficiently, fluently and accurately to be successful in mathematics.

2 Teaching and learning style

- 2.1 At St Luke's we use a variety of teaching and learning styles in mathematics lessons, as recommended by the National Curriculum. Our principal aim is to develop children's knowledge, skills and understanding in mathematics. We do this through a daily lesson that has a high proportion of whole-class and group-direct teaching. During these lessons we encourage children to speak as well as listen to mathematical questions. They have the opportunity to use a wide range of interactive resources such as number lines, number squares, digit cards and small apparatus to support their work. Children use IT 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 and across the curriculum.
- 2.2 In all classes at St Luke's school there are children of differing mathematical ability. We recognise this fact and provide suitable learning opportunities for all children by matching the challenge of the task to the ability of the child. We achieve this through a range of strategies – in some lessons through differentiated group work, while in other lessons we ask the children to work from the same starting point before moving on at their own pace, with support if needed. In other lessons, we organise the children to work in pairs on open-ended problems or games. We use classroom assistants to support some children and to ensure that work is matched to the needs of individuals.

3 Mathematics curriculum planning

- 3.1 Mathematics is a core subject in the National Curriculum and we use the White Rose Hub as the basis for implementing the statutory requirements. From Year 1 to Year 6, each term is split into twelve weeks. As part of each overview, a significant amount of time is devoted to developing key number concepts each year. This ensures children build upon their fluency, as number sense will affect their success in other areas of mathematics.
- 3.2 We carry out the curriculum planning in mathematics in the form of short-term weekly plans.
- 3.3 Our short-term, weekly overview of mathematics is completed by the class teacher. These weekly plans list the intentions of the teaching and learning for each week through daily, specific learning objectives and give details of the assessment for learning opportunities. The class teacher keeps these individual plans and a copy of the weekly plan is also given to the subject leader.
- 3.4 The calculation policy is used within school to ensure a consistent approach to teaching the four operations over time.
- 3.5 White Rose Maths promotes kinaesthetic learning to ensure children acquire fluency of skills by introducing concepts in a practical/concrete way to progress to pictorial then abstract.
- Concrete** – children have the opportunity to use concrete objects and manipulatives to help them understand and explain what they are doing.
- Pictorial** – children then build on this concrete approach by using pictorial representations, which can then be used to reason and solve problems.
- Abstract** – With the foundations firmly laid, children can move to an abstract approach using numbers and key concepts with confidence.

4 The Early Years Foundation Stage

- 4.1** We teach mathematics to our reception children who form the Early Years Foundation Stage of St Luke's School. We relate the mathematical aspects of the children's work to the objectives set out in the EYFS profile outcomes, which underpin the Early Years Foundation Stage curriculum planning. The White Rose Schemes of Learning are used as a basis for our planning. We give all the children ample opportunity to develop their understanding of number, measurement, pattern, shape and space through varied activities that allow them to enjoy, explore, practise and talk confidently about mathematics.

5 Contribution of mathematics to teaching in other curriculum areas

5.1 English

Mathematics contributes significantly to the teaching of English in our school by actively promoting the skills of reading, writing, speaking and listening. For example, we regularly encourage children to read and interpret problems in order to identify the mathematics involved. The children explain and present their work to others during plenary sessions. Younger children enjoy stories and rhymes that rely on counting and sequencing. Older children encounter mathematical vocabulary, graphs and charts when using non-fiction texts.

5.2 Computing

Children use and apply mathematics in a variety of ways when solving problems using ICT. Younger children use ICT to communicate results with appropriate mathematical symbols. Older children use it to produce graphs and tables when explaining their results or when creating repeating patterns, such as tessellations. When working on control, children use standard and non-standard measures for distance and angle. They use simulations to identify patterns and relationships. Children also have access to interactive numeracy programmes such as: TTRS and Prodigy game.

5.3 Personal, social and health education (PSHE) and citizenship

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, encourages them to work together and respect each other's views. We present older children with real-life situations in their work on the spending of money.

5.4 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 group children so that they work together, and we give them the chance to discuss their ideas and results.

6 Mathematics and Inclusion

- 6.1** At St Luke's we provide equality of opportunity for all pupils. Similarities and differences between people and cultures are explored sensitively. Equal treatment is given to boys and girls and non-stereotypical behaviour/ views are positively encouraged. All children have equal opportunity to reach their full potential throughout school, regardless of their race, gender, cultural background, ability or any physical or sensory disability. Children with additional needs are given extra support to enable them to access the full curriculum. We aim to overcome any barriers to learning, e.g. dyslexia, dyspraxia and dyscalculia, which can hinder pupils' learning, by adapting the teaching or resources to meet the pupils' individual needs.

- 6.2** At St Luke's we teach mathematics to all children, whatever their ability. Mathematics forms part of the school curriculum policy to provide a broad and balanced education to all children. Through our mathematics teaching we provide learning opportunities that enable all pupils to make progress. We do this by setting suitable learning challenges and responding to each child's different needs. Termly assessment, using Learning Ladders, allows us to consider each child's attainment and progress against year group expectations.
- 6.3** When progress falls significantly outside the expected range, the child may have special educational needs. Our assessment process looks at a range of factors – classroom organisation, teaching materials, teaching style, differentiation – so that we can take some additional or different action to enable the child to learn more effectively. This ensures that our teaching is matched to the child's needs.
- 6.4** Following a graduated approach, teachers may consider it appropriate to provide additional support and interventions for some pupils through an Individual Education Plan (IEP) for children with special educational needs. The IEP may include, as appropriate, specific targets relating to mathematics.
- 6.5** We enable pupils to have access to the full range of activities involved in learning mathematics. Where children are to participate in activities outside the classroom, for example, a maths trail, we carry out a risk assessment prior to the activity, to ensure that the activity is safe and appropriate for all pupils.

6.6 Resources

We have a range of resources to support the teaching of mathematics across the school. All classrooms have a range of appropriate small apparatus. All other mathematical equipment is located in the main resource area. The library contains a range of books to support children's individual research. A wide range of software is available to support work both on the computers based in classrooms and in the ICT suite.

7 Assessment for Learning:

- 7.1** We believe that formative assessment is fundamental to the success of our learning and teaching strategies. We want our children to be active participants in their assessment and to value the next steps in their learning. Teachers assess children's work as part of every lesson to help them to adjust their daily plans. They match these short-term assessments closely to the teaching objectives. Written or verbal feedback is given to help guide children's progress. Teachers also use 'Fix This' in their feedback to allow children to edit their work or complete a next step/challenge. Children are encouraged to make judgements about how they can improve their own work. The teacher and the pupil highlight any targets met in their individual Learning Ladder booklets in order to keep track of their progress. These are shared with parents on a regular basis.
- 7.2** Assessment for Learning is an integral part of Mathematics teaching. Every lesson has a clear learning objective (Can I? question) as well as a differentiated list of success criteria. Children routinely refer to the success criteria throughout the lesson and at the end when opportunities for both self and peer assessment are built in. The children are able to identify strengths and ways forward in order to become more independent learners. Children are also given opportunities to self assess. All self and peer assessment must then be carefully observed by the teacher and future teaching and learning adapted accordingly.

7.3 Teachers input data from the Learning Ladders booklets which equate to points progress within the age related expectations. They can then summarise the progress of each child before reporting it to the child's parents. The next teacher then uses these assessments as the planning basis for the new school year.

7.4 Children undertake the national tests at the end of Year 2 and Year 6, and formal assessments at the end of Years 3, 4 and 5. Children in reception are assessed through the Early Years Foundation Stage Profile (EYFS Profile) and Year 1 pupils undertake a mathematics test.

8 Monitoring and review

8.1 Monitoring of the standards of children's work and the quality of teaching in Mathematics is the responsibility of Mathematics subject leader. The work of the Mathematics subject leader also involves supporting colleagues in their teaching, being informed about current developments in the subject, and providing a strategic lead and direction for Maths in the school. The subject leader gives the headteacher a twice yearly summary report evaluating the strengths and weaknesses in the subject, and indicating areas for further improvement. The leader has specially-allocated regular management time in which to review samples of the children's work, monitor books, interview children and to undertake lesson observations of Mathematics teaching and learning across the school. The named governor responsible for Mathematics meets regularly with the subject leader in order to review progress.



INVESTOR IN PEOPLE

