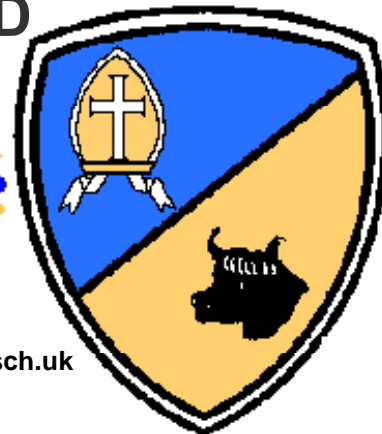


# ST. LUKE'S CHURCH OF ENGLAND PRIMARY SCHOOL



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## Mathematics Policy

### 1 Aims and objectives

1.1 Mathematics teaches how to make sense of the world through developing a child's ability to calculate, to reason and to solve problems. 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 appreciate the contribution made by many cultures to the development and application of mathematics.

1.2 The aims of mathematics are:

- to promote enjoyment and enthusiasm for learning through practical activity, exploration and discussion;
- to promote confidence and competence with numbers and the number system;
- to develop the ability to solve problems through decision-making and reasoning in a range of contexts;
- to develop a practical understanding of the ways in which information is gathered and presented;
- to explore features of shape and space, and develop measuring skills in a range of contexts;
- to understand the importance of mathematics in everyday life.

### 2 Teaching and learning style

2.1 The school uses a variety of teaching and learning styles in mathematics lessons. 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 ask as well as answer 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 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 and across the curriculum.

**2.2** In all classes 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, and in other lessons by organising 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 New Primary Strategy as the basis for implementing the statutory requirements of the programme of study for mathematics. The Primary Strategy for mathematics is divided into Blocks A to E and then each block is sub-divided into units 1, 2 and 3 containing 2/3 weeks work.

**3.2** We carry out the curriculum planning in mathematics in the form of short-term weekly plans. However, the Primary Strategy gives teachers a detailed outline of what they will be teaching in the long term.

**3.3** Our short-term weekly plans are devised from the Framework. It is the class teacher who completes the weekly plans for the teaching of mathematics. These weekly plans list the specific, more streamlined learning objectives, from the Primary Strategy and give details of how the lessons are to be taught, and assessment for learning opportunities. The class teacher keeps these individual plans. A copy of the weekly plan is also given to the co-ordinator.

### **4 The Foundation Stage**

**4.1** We teach mathematics to our reception children who form the Foundation Stage of St Luke's School. We relate the mathematical aspects of the children's work to the objectives set out in the Primary Strategy and the Early Learning Goals, which underpin the Early Years Foundation Stage curriculum planning for children aged four to five. 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 Information and communication technology (ICT)**

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.

### **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 Teaching mathematics to children with special educational needs**

### **6.1** At our school 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 both Dcfs point scores along with the National Curriculum level descriptors, allows us to consider each child's attainment and progress against expected levels.

### **6.2** When progress falls significantly outside the expected range, the child may have special educational needs. We aim to become a Dyslexia Friendly School supporting Inclusive education, therefore we use a range of strategies, for example, classroom organisation, teaching materials, teaching style and 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. The new Wave 3 material (related to the Renewed framework), has given teachers the opportunity to identify any problems children are experiencing with certain objectives, and provides detailed lesson plans, activities and resources to enable the children to overcome any barriers that might be affecting in their learning of a particular topic.

### **6.3** Intervention through School Action and School Action Plus will lead to the creation of an Individual Education Plan (IEP) for children with special educational needs. The IEP may include, as appropriate, specific targets relating to mathematics.

### **6.4** 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.

## **7 Assessment and recording**

### **7.1** We make short-term assessments, which we use to help us adjust our daily plans. These short-term assessments are closely matched to the teaching objectives and are recorded on the weekly plan. Assessment for learning is paramount within teachers planning and teaching, these assessment opportunities are designed to be child friendly.

- 7.2** We have assessment weeks twice a year where children complete optional SATs papers and then the results are then used to target specific children and identify any areas for development. In conjunction with this, the Dcfs point scores enable us to assess individuals termly. Teachers also use the Wigan Numeracy Team's Mental Maths Assessments every other week in class to monitor and assess the children's mental maths skills.
- 7.3** We make long-term assessments towards the end of the school year, and we use these to assess progress against school and national targets. We can then set targets for the next school year and make a summary of each child's progress before discussing it with parents. We pass this information on to the next teacher at the end of the year, so that s/he can plan for the new school year. We make the long-term assessments with the help of end-of-year tests and teacher assessments. We use the statutory national tests for children in Year 2 and Year 6, plus the optional national tests for children at the end of Years 3, 4 and 5. In Year 1 Nfer assessment is undertaken at the beginning and end of the academic year to measure children's progress. We also make annual assessments of children's progress measured against the level descriptions of the National Curriculum. The children in the reception class are assessed throughout the year through observations during self-chosen and teacher directed tasks. These are used to update the Mathematical Problem Solving, Reasoning and Numeracy section of The Foundation Stage Profile.
- 7.4** The mathematics subject leader reviews children's progress, through book trawls, informal observations and class teacher observations, and this evidence is kept in the subject leaders file. This allows school to see what the expected level of achievement is in mathematics in each year of the school.

## **8 The marking of Mathematics work**

- 8.1** Refer to the school's marking policy and calculations booklet. Children should be encouraged to try things out without fear of 'getting it wrong'. Investigation often requires procedures of trial and error. It is expected therefore that jottings should be present in all children's books. It is also important that children make estimations before carrying out calculations and use inverse operations to check their work. Comments on children's work should, whenever possible, include pointers towards improved performance and further challenge as well as personal praise for accuracy and effort. We use the P.E.N. strategy (Praise, Error, Next) when appropriate.
- 8.2** Teachers use a Numeracy Marking Key designed to be more child friendly and more streamlined and focused on actions and outcomes.

## **9 Resources**

- 9.1** There is 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. Teachers must ensure that resources are returned promptly to the resource area after use in class. 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.

## **10 Involving Parents**

- 10.1** We value the support that parents give to the children at St Luke's School. However we are aware that since the implementation of The Primary Strategy, parents are less confident with the methods of calculation that we use at school. We aim to include parents in their child's mathematical education by:
- Setting individual targets termly for children and sharing these with parents.
  - Keeping parents fully informed of developments in mathematics via leaflets and meetings.
  - Running mathematical workshops.
  - Discussing children's individual progress at parents' meetings.
  - Producing an annual written report.
  - Sending each parent a 'Calculations' booklet which gives examples of the strategies we use in school.
  - Contacting parents promptly if their child is experiencing significant difficulties in this subject.

## **11 Monitoring and review**

- 11.1** Monitoring of the standards of children's work and of the quality of teaching in mathematics is the responsibility of the mathematics subject leader. The work of the mathematics subject leader also involves supporting colleagues in the teaching of mathematics, being informed about current developments in the subject, and providing a strategic lead and direction for the subject in the school. The mathematics subject leader gives the headteacher a co-ordinator's report twice a year in which s/he evaluates strengths and weaknesses in the subject and indicates areas for further improvement. The headteacher allocates regular management time to the mathematics subject leader so that s/he can review samples of children's work and undertake lesson observations of mathematics teaching across the school. A named member of the school's governing body is briefed to oversee the teaching of numeracy. This governor meets regularly with the subject leader to review progress.

