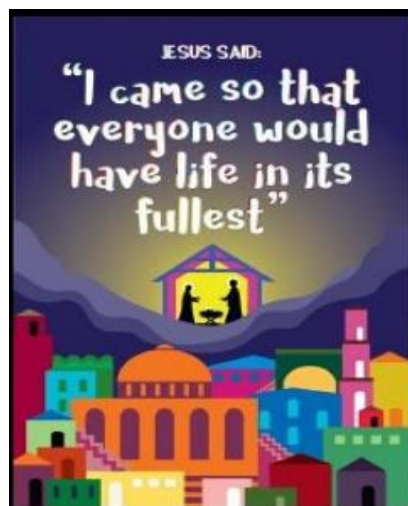




St. Luke's CE Primary School

Where children *flourish*, are *happy* and *succeed*. Living their life to the full.

Believe and Achieve



Working together to be happy; to flourish; to succeed through our Christian Values of friendship, love, patience, forgiveness, trust and respect.

***“I have come that they may have life and have it to the full.”
John 10:10***

ST LUKE'S C.E. PRIMARY SCHOOL

POLICY FOR MATHEMATICS - 2019

Mathematics at St Luke's is geared towards enabling each pupil to develop within their capabilities; not only the maths skills and understanding required for later life, but also an enthusiasm and fascination about maths itself.

Mathematics equips pupils with a uniquely powerful set of tools to understand and change the world. The tools include logical reasoning, looking for patterns, problem solving skills and the ability to think and analyse in abstract ways.

Mathematics is part of everyday life. Learning mathematics is about the acquisition of concepts. It is an active process where children bring their previous experiences to bear in new situations. They need a variety of concrete experiences in order to develop mathematical thinking. Children build up concepts at different rates and these needs to be constantly reinforced throughout their education.

AIMS

We are continually aiming to raise the standards of achievement of the pupils at St Luke's. In our school we aim:

1. To develop a positive attitude to Mathematics.
2. To make mathematics an interesting subject.
3. To develop children's confidence.
4. To understand maths through a range of learning styles.
5. To transfer mathematical knowledge to other situations.
6. To develop persistence and perseverance.
7. To achieve high standards.

OBJECTIVES

Our children will learn:

1. To develop the appropriate use of mathematical language effectively and confidently.
2. To develop an understanding of mathematical pattern.
3. To recognise mathematical relationships.
4. To develop and learn mathematical strategies.
5. To solve problems practically in number, measurement and spatially.
6. To develop the ability to estimate and approximate.
7. To learn the skill of measurement.
8. To be able to use diagrams, graphs and charts including time tables.
9. To record in a clear and meaningful way.
10. To develop a range of mental calculation skills and use them confidently in different settings.
11. To develop their conceptual understanding of mathematical topics.
12. To use manipulatives – models and images, practical equipment – to aid their learning.

ROLE OF THE MATHS CO-ORDINATOR

The role of the co-ordinator should include the following:

- a) responsibility for the monitoring and evaluation of the success of maths within the school and report progress to the Head teacher and Governors
- b) acting as an adviser and in-service organiser for other members of staff
- c) be a point of reference for all staff and teaching assistants
- d) responsibility to keep up to date through attending in-service courses and reporting back to staff
- e) responsible for advising and ordering maths resources
- f) responsible for analysing assessment data to identify areas for development
- g) to keep up to date with developments in Maths Education and disseminate information to colleagues
- h) to have input for mathematics within the School Improvement Plan

SCHOOL POLICY

Teachers teach the whole class together in the Maths lesson, with oral and mental work featuring strongly in each lesson. 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.

Here at St Luke's staff follow the National Curriculum Mathematics programmes of study and the Power Maths scheme of work. This published scheme, as well as a range of other resources, is used to assist staff to ensure coverage of the National Curriculum. All children will progress through this clear framework with work to match and extend their learning needs.

TEACHING & LEARNING STYLES

During each lesson teachers should spend as much time as possible in direct teaching and questioning of the whole class, a group of pupils or individuals. Good direct teaching is achieved by balancing different elements:

- | | |
|--------------------------------|---------------------------------|
| a) Directing | e) questioning and discussing |
| b) Instructing | f) consolidating |
| c) Demonstrating | g) evaluating pupils' responses |
| d) Explaining and illustrating | h) summarising. |

MATHEMATICAL EXPERIENCES

Children will experience a wide range of learning styles, including listening, discussing, practical work, oral work, practice of skills and routines, investigative work and problem solving. Within each lesson children are provided with opportunities to reason, apply and problem solve. Time is also allocated to practising basic number skills.

TIMES TABLE ROCKSTARS

Children are given the opportunity each day to work on their times table skills. The use of the online Rockstars programme enables children to improve their times table recall speed, as well as reinforce their division facts. Teachers will select each week which times tables they would like individual children to work on, as a result of analysing scores collated.

MATHS PASSPORTS

Within each year group maths passports are used as a strategy for improving children's mental maths skills. These are used both at home and within maths lessons. Each key mental maths objective from the 2014 UK National Curriculum has been identified and made into a target, providing a whole school approach to promoting and enhancing mathematics in our school. Parents are able to support their child at home in meeting their targets.

CLASSROOM MANAGEMENT

Resources are clearly labelled and made readily available to the pupils in order not only to ease demands on the teachers' time but to encourage the children to become independent learners.

METHODS OF RECORDING

The purposes for which pupils record their work include:

- a) to help in clarifying their own thinking
- b) to act as a note for future reference
- c) to communicate with others
- d) to provide evidence of their work in mathematics.

ASSESSMENT

At St Luke's we are continually assessing our pupils 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 pupils, thus benefiting the pupils and ensuring progress.

There is a need to identify and assess all pupils' knowledge, understanding and skills. On-going assessment will inform planning to meet children's learning needs. The mode of assessment in mathematics depends on what is being assessed:

- a) Knowledge (i.e. facts) questioning, listening, formal tables tests, investigations, games.
- b) Skills – marking, formal testing, investigations and games.
- c) Understanding - questioning discussing, observing and listening.

Post learning tasks, at the end of each unit taught, are used to inform the teacher.

Assessment must be used to aid matching children to the task and to inform expectations, when to move pupils on etc.

The use of the Assessment for Learning is in place throughout the school. At the beginning of each new learning intention, identification of the Success Criteria is highlighted and referred to throughout the unit as an aid to children's learning. Please refer to the 'Teaching for Learning' policy.

Teachers summatively assess the children half termly, using the Power Maths assessment tasks. This information is then recorded on Target Tracker. Target Tracker is used to identify the levels children are working at. Same day interventions are planned for children who have been identified as needing extra support after an objective taught.

MARKING

Work in mathematics generates a great deal of marking (especially in the latter years of Primary School) and it is not always desirable for a teacher to mark every piece of work produced in fine detail. Exercises involving routine practise might be marked by the pupils themselves and overseen by the teacher. Marking should be diagnostic as required, provide for the next step and always be supportive (ideally through conversation with the child). Please refer to the school's marking policy for further information.

SPECIAL NEEDS / DIFFERENTIATION

All children are entitled to a broad balance of mathematics. Those children with special needs will have worked planned for them, by the class teacher, which is appropriate to the level they are working at. Same day intervention groups are planned for some children and these are provided when appropriate.

EQUAL OPPORTUNITIES

All children irrespective of race or gender will receive a high quality of mathematical experiences, which will enhance self-esteem, skills, knowledge and personal satisfaction.

DISPLAY

Mathematics displays celebrate achievement and act as an aid to work in progress and as a stimulus for mathematical activity. Teachers should provide these where opportunities arise. Please refer to the 'Teaching for Learning' policy.

LINKS WITH OTHER CURRICULUM AREAS

Mathematics contributes to many subjects of the primary curriculum, often in practical ways. Activities such as recording the growth of a plant, measuring temperature and rainfall, can provide data or starting points for discussion in your mathematics lesson as well as opportunities in real contexts.

The key to making the most of all these opportunities is to identify the mathematical possibilities across the curriculum at the planning stage. Attention should be drawn to the links between subjects by talking frequently about them, both in mathematics and in other

lessons. Teachers use the Cornerstones planning to make links to Maths within the foundation subjects. These links will also be evident on topic boards in all classrooms.

Computing is a key part of teaching Mathematics. Computing is used in various ways to support teaching in maths and to motivate children's learning. Each classroom utilises a range of hardware and software that is relevant to moving the children's learning forward.

The Computing equipment in school is also used as a key learning resource in Maths. Children will apply and use Mathematics in a variety of ways when they solve problems using Computing. For example they will:

- Collect and classify data, enter in into handling data software, produce graphs and tables and interpret and explain their results.
- Draw on their abilities to manipulate numbers and identify patterns and relationships when using computer models and simulation.
- Demonstrate control when operation using floor robots
- Use calculators to reinforce number concepts
- Use online mathematics programmes to aid learning and reinforce concepts and understanding

INSET

The school will continue to develop teachers improved understanding of the ' Mathematics programmes of study: key stages 1 and 2' in England, using the training materials already provided and getting assistance when appropriate from the LEA. Teachers will also attend any courses that are relevant to them.

EVALUATION

At the end of the year the co-ordinator and staff will review and evaluate the maths taught throughout the year. Evaluating should take into account: -

- Pupil achievements – Targets achieved
- Personal Capabilities
- Coverage of the National Numeracy Strategy
- Staff development
- Analysis of teachers planning
- Review of records.