Maths Policy

St Luke's Primary School

'Love God. Love your neighbour as yourself: be the Good Samaritan. Luke 10:25-37

Reviewed by: Bisi Damolekun (Maths Leader)

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St Luke's C of E Primary School

Mathematics Policy

Love God. Love your neighbour as yourself: be the Good Samaritan.

Luke 10: 25-37

Curriculum Rationale

- To teach mathematics daily as required according to the National Curriculum, with the key recommendations being:
  - ❖ Problem solving the basis of all teaching.
  - ❖ Children to become fluent in number facts.
  - ❖ An emphasis on teaching for children to attain mastery of tricky concepts.
- To have high expectations of all of our children, in order to raise and maintain attainment and achievement. This includes encouraging children to develop self-confidence and take pleasure in their mathematical experiences.
- To allow all children equal access to maths regardless of gender, ability, creed, or ethnic origin and encourage children to share their mathematical knowledge from their diverse cultural backgrounds.
- To recognise that the maths curriculum provides children with one of the basic tools for life, thus enabling them to cope with mathematics in the real world.
- To ensure coverage of the National Curriculum and the maths early Learning goals.
- To develop young leaders in mathematics

Curriculum Roll-out

Early Years

in the Early Years, children are supported in developing their understanding of problem solving, reasoning and numeracy which is made up of: numbers and shape, spaces and measures.
Using the White Rose Maths scheme, Children are given opportunities to develop mathematical understanding through stories, activities, songs, games and imaginative play. Children are encouraged to discover new words and mathematical ideas and opportunities are given for children to use the indoor and outdoor environment. (See Early Years curriculum)
Assessment in the Foundation Stage is ongoing throughout the year. At the end of Reception, children are assessed against the Foundation Stage Profile.

Equal Opportunities

Staff should ensure that all children have equal opportunities to succeed in maths. We should ensure that the resource materials we use include manipulatives and images, which enhance scaffolding and are motivating to all children. Classroom presentation and organisation should represent the achievements of children of all abilities.

More Able Pupils

Pupils who are working at a greater depth in mathematics are added to our More Able register. Teachers are expected to provide enriching extension activities for these pupils. These are challenging and most often involve problem solving. These lead to or go beyond mastery in the subject area. The maths coordinator gives additional support to pupils in some classes who are working at a greater depth.

Planning

St Luke's strongly supports all aspects of the National Curriculum including the Early Years Curriculum and we work constantly to implement them. The White Rose Maths scheme is used for our planning, for which we use agreed planning formats.

Medium Term Planning

The electronic version of the Framework provides help with planning, teaching and assessment. It supports the development of medium-term planning of teaching sequences that build learning over time.
Each year of key stage 1 and 2 is structured around units of work, with each unit drawing on the main mathematical strands.

Maths coverage

Each class teacher has a copy of the maths scheme of work which covers the National Curriculum and early years learning. Each time an objective is taught, the class teacher dates it.

Monitoring Plans

The maths coordinator monitors all plans to ensure that there is adequate coverage in each class. Children's recorded work will also be monitored to ensure that their work matches the dates from the maths coverage.

Class Management

Each teacher should teach a daily maths lesson. In Key Stage 1 a typical maths lesson lasts 45 minutes, whilst at Key Stage 2 this will rise to at least an hour. In addition to this there are shorter 10 -15-minute rapid intervention sessions, booster lessons and other opportunities to teach and develop mathematical skills.

Lessons should include opportunities to sharpen mental arithmetical skills, practise calculations and problem solving. Maths should also be taught as part of other subjects to make it meaningful to children.

Groups

At St Luke's there is a big emphasis on whole class and group teaching in our maths lessons. Wherever possible, we aim to ensure the class are working together. When setting work for groups and individuals we will ensure the work is suitable with deeper problem-solving activities for higher achieving children and adequate support for struggling children. Booster classes are held for some children in year 5 and all children in year 6.

Display

Each classroom should have a display in the maths area, which should be interactive and encourage children to experiment with mathematical concepts. Maths work should be displayed prominently in classrooms and around the school. Mathematical vocabulary should form part of these displays and reference is regularly made to this vocabulary by both pupils and staff.

Books and recording

Exercise books as well as individual workbooks are used. Children are encouraged to show working out, and to learn from and correct mistakes.

Teaching Strategies

At St Luke's we recognise that there is no single method of teaching maths. We believe that for children to receive a varied mathematical curriculum, we need to use a broad and balanced teaching approach. This will include the following methods: whole class, individual and group work (a group being defined as two or more children), mental, practical, written and oral work. Problem solving is at the heart of all lessons.

At all times the teaching should be purposeful. This will include:

1. Whole class lessons, with mostly direct teaching, but also time to practise and refine arithmetical and problem-solving skills and time to discuss and comprehend newly learnt concepts.
2. Having a clear focus for each lesson, where the learning objectives are shared with the children.
3. Ensuring the lessons maintain good and appropriate pace but allowing sufficient time for children to absorb and understand concepts. Allowing for different learning styles with different types of activities throughout the week.
4. Linking work to children's existing knowledge and making maths purposeful, interesting and fun.
5. Using a range of teaching strategies.

6. Mathematical discussions including questioning and explaining between the teacher and the children as well as among the children themselves.
7. The use of correct mathematical vocabulary by the teacher, to refine the children's mathematical language.
8. Giving children time to discuss their work and develop their own strategies and methods of computation, and be able to verbalise as well as record their strategies.
9. Giving feedback to pupils on how they are progressing and what they need to do to improve, in accordance with the marking policy.
10. Making use of manipulatives like cubes and base ten apparatus to help children to absorb and understand new concepts.

At St Luke's, we follow a monitoring cycle whereby the maths co-ordinator or other member of the senior leadership team will observe each teacher teaching maths at least once in the school year.
Once a year, a maths day takes place which consists of a series of workshops, investigations, a maths quiz etc

Assessment
We recognise assessment as a channel of constantly informing our planning, in addition to noting the achievements of the children in our school. Therefore, our assessments are both formative and summative. Effective assessment will be achieved by:

1. Marking of written work and formal tasks. We use marking codes as outlined in the marking policy.
2. Teacher and TA observations whilst children are engaged in activities.
3. On-the-spot comments by the teacher or TA to a group or individual to extend, limit or change direction of the given task.
4. Deeper questioning of a child, group or class to find out whether children have mastered topics.

Formative Assessments
Teachers assess the children on an ongoing basis through the use of questioning, marking, talk partners and using mini whiteboards.

Summative Assessments
Children are tested 3 times a year in line with the National Curriculum using the NFER scheme.
This includes reasoning and arithmetic tests. They are also tested regularly on their times tables. When the class teacher is confident that a child knows a particular times table, it is recorded in an assessment file.

Resources
Each classroom has a supply of mathematical resources, some of which is differentiated by year group. The resources should be accessible to the children. Each teacher should be aware of the resources in their room and keep them well

organised and labelled in a clearly defined area. Children should be encouraged to be responsible for, and make careful use of all equipment.
Some specific equipment is stored in a central location in a stock room.

Information and Communications Technology

ICT includes the use of computers and iPads as well as audio-visual aids (audio tapes, video/TV broadcasts) and calculators. We recognise the importance of using such resources well. We endeavour to use ICT to support the teaching and learning of all the strands of the maths curriculum where appropriate. Interactive whiteboards are used in all classrooms where children can engage in interactive activities to support the lesson objective. Teachers ensure that computers and iPads are used in a constructive way in maths lessons. In line with the National Curriculum, there is a limited use of calculators in upper key stage 2 for supporting number work, working with larger numbers, challenging questions or extending children's understanding of place value.

Homework

Maths homework is often part of homework done by children and is a feature of the school's commitment towards raising standards further. Parents are supported wherever possible in order to be fully participant in helping their child at home. We carefully track the frequency of children returning maths homework (which may include times tables practice) and discuss concerns with parents. Towards the end of Key Stage 2 there may be an increase in the content of maths homework.

Parental Involvement

We recognise the contribution and support that parents can provide to encourage learning and understanding in maths work. The mathematics in everyday tasks should be made explicit, so that parents can recognise their own invaluable contributions. We aim to keep parents informed of maths work at St Luke's and how they can support their children in maths work at home. From time to time we organise maths workshops for parents.
Regular parent's meetings will inform parents of their child's progress in maths.
Annual reports to parents will continue to provide an overview of their child's progress.

Curriculum Outcome

Our maths curriculum equips pupils with both the knowledge and understanding of mathematical concepts along with essential recording, thinking and problem-solving skills. It is intended to gives them a sound background for learning maths in secondary school as well as basic numeracy skills for adult life.

We record the impact of our curriculum using

- Images and videos of the children's practical learning.
- Meeting with children in the maths group, finding out about their learning of maths (pupil voice) and organising mathematical related projects that the children can take part in.

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- Verbal feedback during the course of lessons
- Regular book looks which provide opportunities to discuss and develop activities.
- Lesson observations including discussion with children in lessons.
- End of unit assessment tests and SATs tests at the end of Key stage 2.
- Feedback from ex pupils who have gone on to study courses related to mathematics at higher levels.