






St. Stephen's CE Primary School, Tockholes Mathematics Policy

Mathematics is a tool for everyday life. It is a whole network of concepts and relationships which provide a way of viewing and making sense of the world. It is used to analyse and communicate information and ideas and to tackle a range of practical tasks and real life problems. It also provides the materials and means for creating new imaginative worlds to explore.

The National Curriculum for mathematics 2014 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.

SCHOOL POLICY AND THE NATIONAL CURRICULUM

Knowledge Skills and Understanding

At KS1 and KS2 teachers use the National Curriculum 2014 and the Lancashire ngfl to ensure that all parts of the National Curriculum Programme of Study are taught.

Breadth of Study

Through careful planning and preparation we aim to ensure that throughout the school children are given opportunities for:

- √ practical activities and mathematical games
- √ problem solving
- √ individual, group and whole class discussions and activities
- √ open and closed tasks
- √ a range of methods of calculating eg. mental, pencil and paper and using a calculator

√ working with computers as a mathematical tool

Scheme of Work & Key Learning

Our school scheme of work is a working document and as such is composed of ongoing plans produced on a week by week basis. This is developed from the National Curriculum 2014 and takes into consideration the needs of our children. (See Appendix for Key Learning documents for each year group.)

Cross Curricular Issues

Throughout the whole curriculum opportunities exist to extend and promote mathematics. Teachers seek to take advantage of all opportunities.

Teachers' Planning and Organisation

Each class teacher is responsible for the mathematics in their class in consultation with and with guidance from the mathematics coordinator.

The approach to the teaching of mathematics within the school is based on three key principles:

√ **a mathematics lesson every day**

√ **a clear focus on direct, instructional teaching and interactive oral work with the whole class and group**

√ **an emphasis on mental calculation**

Each class organises a daily lesson of 60 minutes for mathematics. This may take any format and no longer needs to follow the three part lesson structure. Within a lesson, direct teaching, guided learning and independent learning will take place.

Lessons are planned using a common planning format and are collected and monitored by the mathematics coordinator or headteacher.

In the Reception year, teaching ensures that children are working towards the 'Early Learning Goals For Mathematical Development'. Towards the end of Reception it is the aim to draw the elements of a daily mathematics lesson together so that by the time children move into Year 1 they are familiar with a 60-minute lesson.

Special Educational Needs

Children with SEN are taught within the daily mathematics lesson and are encouraged to take part when and where possible (please see the section on differentiation).

When additional support staff are available to support groups or individual children they work collaboratively with the class teacher.

Within the daily mathematics lesson teachers not only provide activities to support children who find mathematics difficult but also activities that provide appropriate challenges for children who are high achievers in mathematics.

Equal Opportunities

We incorporate mathematics into a wide range of cross-curricular subjects and seek to take advantage of multi-cultural aspects of mathematics.

Pupils' Records of their Work

There are occasions when it is both quick and convenient to carry out written calculations. It is also important to record aspects of mathematical investigations. Children are taught a variety of methods for recording their work and they are encouraged and helped to use the most appropriate and convenient method of recording.

Children are encouraged to use mental strategies before resorting to a written algorithm.

Exercise Books for Recording

It is school policy that the following pattern is used:

Year 1:	2 cm squares
Year 2:	1 cm squares
Year 3:	1 cm squares
Year 4:	1 cm squares
Year 5:	7 mm squares
Year 6:	7 mm squares

All children are encouraged to work tidily and neatly when recording their work. When using squares one square should be used for each digit.

Marking

The quality of marking is crucial. Marking follows the 'marking and feedback' policy and includes 'next steps' and 'fix it' time.

The children themselves can mark exercises (peer-marking or self-marking) which involve routine practice with support and guidance from the teacher. Where appropriate, children in Years 5 and 6 are encouraged to check computational exercises with a calculator. This can foster independence in the children, who can seek help if they are

unable to locate and correct their errors.

Marking should be both diagnostic and summative and school policy believes that it is best done through conversation with the child but acknowledges that constraints of time do not always allow this.

Assessment and Record Keeping

Teachers are expected to make regular assessment of each child's progress and to record these systematically. The following is the school policy for assessment in mathematics:

Assessment for Learning

Teachers make judgments each and every day about a child's progress and understanding in mathematics. Assessment for Learning is an ongoing process that arises out of the interaction between teaching and learning. It enables teachers to adapt their planning and immediately react if misconceptions occur, or, if needed, extend the learning forward.

Formal Written Tests

At weeks 10, 20 and 30 of the school year, children are tested on their mathematical understanding and are tracked according to the progress they have made. NFER test are used along with Optional SATs for Junior children (this is subject to change due to the new National Curriculum and the abolishment of NC levels)

Reporting to Parents

Reports are completed before the end of the summer term and parents are given opportunity to discuss their child's progress on three separate occasions throughout the school year.

Teachers use the information gathered from summative assessments to help them comment on individual children's progress.

Differentiation

This should always be incorporated into all mathematics lessons and can be done in various ways:

- Stepped Activities which become more difficult and demanding but cater for the less able in the early sections.
- Common Tasks which are open ended activities/investigations where differentiation is by outcome.
- Resourcing which provides a variety of resources depending on abilities eg. Numicon, counters, cubes, 100 squares, number lines, mirrors.

- Grouping according to ability so that the groups can be given different tasks when appropriate. Activities are based on the same theme and usually at no more than three levels.

Monitoring and Evaluation

The mathematics coordinator is released from his/her classroom to work alongside other teachers as and when needed. This time is used to monitor and evaluate the quality and standards of mathematics throughout the school and enables the coordinator to support teachers in their own classrooms.

Opportunities for teachers to review the scheme, policy and published materials are given on a regular basis during staff meetings.

Book and planning scrutinies take place on a regular basis. Planning is checked on a weekly basis by the headteacher and book scrutinies takes place at least twice per half term.

The Governing Body

We have identified a numeracy governor – Mr John Jacklin.

The numeracy governor visits the school termly to talk with teachers and when possible, observes some daily mathematics lessons.

The numeracy governor reports back to the curriculum committee on a regular basis.

Draft policy written by Mrs J. Moss – October 2014