



Calder Vale St. John's CE Primary School
Scorton CE Primary School
POLICY FOR MATHEMATICS



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Governor: Mr. J Collinson, Scorton Calder Vale

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.

Using the Programmes of Study from the National Curriculum, the Primary Framework for Teaching Mathematics and the BIG Maths programme it is our aim to develop:

- ✓ Good number sense
- ✓ a positive attitude towards mathematics and an awareness of the fascination of mathematics
- ✓ competence and confidence in mathematical knowledge, concepts and skills
- ✓ an ability to solve problems, to reason, to think logically and to work systematically and accurately.
- ✓ initiative and an ability to work both independently and in cooperation with others
- ✓ an ability to communicate mathematics
- ✓ an ability to use and apply mathematics across the curriculum and in real life
- ✓ an understanding of mathematics through a process of enquiry and experiment

KNOWLEDGE SKILLS AND UNDERSTANDING

At KS1 and KS2 teachers use the Primary Framework for Teaching Mathematics to ensure that all parts of the National Curriculum Programme of Study are taught.

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 e.g. mental, pencil and paper and using a calculator
- ✓ working with computers as a mathematical tool

SCHEME OF WORK

Our school scheme of work is a working document and as such is composed of ongoing plans produced on a week by week basis. These are taken from the blocked units A, B, C, D, E from the National Primary Framework, supported by the materials from BIG Maths and takes into consideration the needs of our children.

BIG Maths

Teachers will use the BIG Maths materials to support their teaching and the learning of the children.

Progress Drives – These will be used to aid differentiation and set targets

Daily CLIC sessions (**C**ounting, **L**earn its, **I**t's nothing new & **C**alculations) will underpin the children's acquisition of good 'number sense'

Weekly CLIC & 'Beat That!' challenges will be carried out.



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CROSS CURRICULAR ISSUES

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

PLANNING AND ORGANISATION

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

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

- ❖ A daily maths lesson that will normally take the form of a 45-60 minutes but sometimes will be taught in a longer block, for example during a special maths week. Staff also plan opportunities to consolidate maths learning through other subjects, for example plotting graphs and reading data in science.
- ❖ As part of the daily maths lesson, a 20 min 'CLIC' session will be taught
- ❖ A clear focus on direct, instructional teaching and interactive oral work with the whole class and groups
- ❖ An emphasis on mental calculation

Planning is collected at regular intervals by the headteacher and monitored by the mathematics co coordinator.

Teachers of the Reception class base their teaching on objectives in the *Early Years Foundation Stage Framework*; this ensures that they are working towards the 'Early Learning Goals for Problem Solving, Reasoning and Numeracy'. Towards the end of Reception teachers 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 45-minute lesson.

INCLUSION

We aim to provide for all children so that they achieve as highly as they can in mathematics according to their individual abilities in order to enable their future life opportunities. We will identify which pupils or groups of pupils are under-achieving and take steps to improve their attainment. Gifted children will be identified and suitable learning challenges provided. Pupils identified with SEN have work differentiated.

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).

Where applicable children's IEPs incorporate suitable objectives from the NNS Framework and teachers keep these objectives in mind when planning work.

When additional support staff are available to support groups or individual children they work collaboratively with the class teacher. They are provided with copies of planning to ensure they are aware of the objective of the lesson. Feedback is completed with the class teacher and support staff at the end of each lesson. This may be written or verbal.

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.

In the daily mathematics lesson we can support children with English as an additional language in a variety of ways, e.g. repeating instructions, speaking clearly, emphasising key words, using picture cues, playing mathematical games, encouraging children to join in counting, chanting, finger games, rhymes etc.

PUPIL'S RECORD 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. *Progression through calculations of addition, subtraction, multiplication and division are included in the Appendices.*

Exercise Books for Recording

It is school policy that the following pattern is used, although it is recognised that this will not suit every child and therefore is at the class teacher's discretion.

- ✓ KS1: plain exercise books moving to 1cm squares when considered appropriate
- ✓ Year 3: 1 cm squares
- ✓ Year 4: 1 cm squares – gradual move to 7 mm squares when individual children are ready
- ✓ 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

Work in mathematics can generate a great deal of marking and it is recognised that it is not always desirable to mark every piece of work. The children themselves can mark exercises which involve routine practice with support and guidance from the teacher. Children in Years 5 and 6 are encouraged to check computational exercises with a calculator when appropriate. This can foster independence in the children, who can seek help if they are unable to locate and correct their errors.

The quality of marking is crucial. A simple 'X' is of little assistance to a child unless accompanied by an indication of where the error occurred, together with an explanation of what went wrong. 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 (for more detail see the School Marking Policy).

ASSESSMENT AND RECORD KEEPING

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

Informal assessments – these are done through discussion or observation of the child as and when the class teacher feels it is appropriate. This information may be recorded in weekly planning or through annotation of the child's work.

Formal Written Tests

Teachers use the supplement of examples in the framework to plan assessment activities towards the end of each half term. This may take the form of a levelled question or short written test. The work set, combined with a scrutiny of children's recorded work over the previous weeks, helps to review how well children have taken in the topics taught and identifies any remaining misconceptions.

Termly Evaluation

The evaluation of termly plans shows what has been taught and what has yet to be learned. This serves as a class record of progress. The teacher may wish to make notes on individual children whose progress differs markedly from the rest of the class, and the reasons for it. These notes are particularly useful when a child changes school or preparing end of year reports.

Termly assessments are recorded on APP record sheets. These allow the class teacher to identify areas of concern or strength for individual children and therefore assist in the target setting process.

Formal Assessment

In the summer term the children are formally assessed as part of the School's Assessment Policy. The analysis of these formal tests in Years 2 -6 allows the mathematics co-ordinator and class teachers to identify targets for the year group, class or individual pupil.

REPORTING TO PARENTS

A short written report with a statement of each child's progress and effort is completed and sent to parents in the Autumn and Spring terms.

Full written reports are completed before the end of the summer term and parents are given opportunity to discuss their child's progress on two separate occasions.

Teachers use the information gathered from their half termly assessments and APP recording sheets to help them comment on individual children's progress.

COLLECTING EVIDENCE

Children's work is kept for the year they are in school and any piece of work used as evidence for APP is annotated.

A copy of examples of children's work at each level 1-5 is kept in a file in the staffroom. This allows staff to compare standards in the file with those of children in their class.

PARENTAL INVOLVEMENT

- ❖ Parents are invited into school twice yearly to look at their children's work.
- ❖ Parents' workshops are held to ensure parents understand the methods children use for mathematics in school.
- ❖ Parents are welcomed into school to work alongside teachers in the daily mathematics lesson. This is an open invitation given in the class topic leaflet each term.
- ❖ When significant changes have been/are made to the mathematics curriculum parents are invited to a meeting or sent information

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 e.g. 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.
- Support from additional adults may be provided for children to ensure they can access the lesson or to enable gifted and talented pupils to make further progress.

MONITORING AND EVALUATION

The mathematics coordinator is released regularly from his/her classroom in order to work alongside other teachers. 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.

STAFFING AND RESOURCES

Practical Resources

All teachers should organise an area within the classroom dedicated to mathematics resources. This area is easily accessible to all children and allows them to become familiar with all resources.

An up-to-date list of resources can be found at each school.

Staff are able to request new, replacement or additional resources each year.

THE GOVERNING BODY

The maths governor is invited to visit the school to talk with teachers and when possible, take part in some daily mathematics lessons. The maths governor reports back to the curriculum committee on a regular basis

HOMEWORK

It is our school policy to provide parents and carers with opportunities to work with their children at home.

These activities may only be brief, but are valuable in promoting children's learning in mathematics.

Activities are sent home on a regular basis (see the separate school Homework Policy) and take the form of number games and tasks in Key stage 1 with some formal exercises for older children or activities to support work done in school. The activities may be paper based. Learning facts or interactive online tasks and challenges, for example using 'Sumdog'

Please note: Appendices in a separate document/folder.