# Sherwood Primary School

# Mathematics Policy

January 2021

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## Sherwood Curriculum Rationale

We aim to provide a creative and challenging curriculum that inspires our children and prepares them for life in a culturally diverse and ever-changing world. High expectations, inclusive approaches and excellent teaching will form the basis of all our work. Our pupils will have the opportunity to explore, ask questions, discover and become resilient, independent learners. Our Curriculum will prepare our children for life-long learning.

Inspire • Explore • Achieve

## Sherwood Values

Teaching and Learning at Sherwood Primary School is underpinned by six core values.

The 6 Sherwood Core-Values are:

- Honesty
- Perseverance
- Respect
- Adventurous
- Aspiration
- Independence

Alongside our core values, we also promote the fundamental British values of democracy, the rule of law, individual liberty, mutual respect and tolerance of those with different faiths and beliefs across the curriculum.

## Purpose of study

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

Mathematics is important in everyday life. It is integral to all aspects of life and with this in mind we endeavour to ensure that children develop a healthy and enthusiastic attitude towards mathematics that will stay with them.

## Rationale

All school policies form a corporate, public and accountable statement of intent. As a primary school it is very important to create an agreed whole school approach of which staff, children, parents, governors and other agencies have a clear understanding. This policy is the formal statement of intent for mathematics. It reflects the essential part that mathematics plays in the education of our pupils. It is important that a positive attitude towards mathematics is encouraged amongst all our pupils in order to foster self-confidence and a sense of achievement. The policy also facilitates how we, as a school, meet the legal requirements of recent Education Acts and National Curriculum requirements.

## Scope

This statement of policy relates to all pupils, staff, parents and governors of Sherwood Primary School. The age range of pupils from 4-11 must be acknowledged in the creation of policy and the development of the mathematics curriculum.

## Principles

The principles of Sherwood Primary School for Mathematics are:

- policy and provision are evaluated and reviewed regularly.
- resources of time, people and equipment are planned, budgeted for and detailed when appropriate in the SDP.
- the governing body of Sherwood Primary School discharge their statutory responsibility with regard to Mathematics
- cross curricular links will be highlighted where appropriate
- planning of Mathematics ensures continuity and progression across all year groups and key stages

## Aims

Although relating specifically to mathematics our aims for the subject are also in line with the school's general aims.

We aim to provide the pupils with a Mathematics curriculum, which will produce individuals who are numerate, literate, creative, independent, inquisitive, enquiring and confident. We also aim to provide a stimulating environment and adequate resources so that pupils can develop their mathematical skills to their full potential. 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 National Curriculum 2014, Lancashire KLIPS (Key Learning Indicators of Performance) and the Primary Framework for Teaching Mathematics it is our aim to develop:

- a positive attitude towards and an appetite for challenging mathematics;
- competence and confidence in mathematical knowledge, concepts and fluency of skills;
- an ability to solve problems, to reason, to think logically and to work systematically and accurately, selecting the efficient skills and approaches;
- initiative and an ability to work both independently and in co-operation with others;
- an ability to communicate mathematics;
- an ability to use and apply mathematics across the curriculum and in real life (enrichment opportunities); and
- an understanding of mathematics through a process of enquiry and experiment.

## Provision

Pupils are provided with a variety of opportunities to develop and extend their Mathematical skills in and across each phase of education.

The teaching of mathematics at Sherwood Primary School provides opportunities for:

- group work
- paired work
- whole class teaching
- individual work

Pupils engage in:

- the development of mental strategies
- written methods
- practical and investigational work
- problem solving
- mathematical discussion
- consolidation of basic skills and number facts

At Sherwood Primary School we recognise the importance of establishing a secure foundation in mental calculation and recall of number facts before standard written methods are introduced. We use the Mathematical Vocabulary Book when planning to help determine the appropriate terminology to use in our teaching and children are expected to use it in their verbal and written explanations.

Mathematics contributes to many subjects and it is important the children are given opportunities to apply and use Mathematics in real contexts.

We endeavour at all times to set work that is challenging, motivating and encourages the pupils to talk about what they have been doing.

## Early Years

Mathematics involves providing children with opportunities to develop and improve their skills in counting, understanding and using numbers, calculating simple addition and subtraction problems; and to describe shapes, spaces, and measure.

**Numbers:** children count reliably with numbers from 1 to 20, place them in order and say which number is one more or one less than a given number. Using quantities and objects, they add and subtract two single-digit numbers and count on or back to find the answer. They solve problems, including doubling, halving and sharing.

**Shape, space and measures:** children use everyday language to talk about size, weight, capacity, position, distance, time and money to compare quantities and objects and to solve problems. They recognise, create and describe patterns. They explore characteristics of everyday objects and shapes and use mathematical language to describe them

## Key Stage 1

The principal focus of mathematics teaching in key stage 1 is to ensure that pupils develop confidence and mental fluency with whole numbers, counting and place value. This should involve working with numerals, words and the four operations, including with practical resources [for example, concrete objects and measuring tools]. At this stage, pupils should develop their ability to recognise, describe, draw, compare and sort different shapes and use the related vocabulary. Teaching should also involve using a range of measures to describe and compare different quantities such as length, mass, capacity/volume, time and money. By the end of year 2, pupils should know the number bonds to 20 and be precise in using and understanding place value. An emphasis on practice at this early stage will aid fluency. Pupils should read and spell mathematical vocabulary, at a level consistent with their increasing word reading and spelling knowledge at key stage 1.

## Lower Key Stage 2 (Years 3 and 4)

The principal focus of mathematics teaching in lower key stage 2 is to ensure that pupils become increasingly fluent with whole numbers and the four operations, including number facts and the concept of place value. This should ensure that pupils develop efficient written and mental methods and perform calculations accurately with increasingly large whole numbers. At this stage, pupils should develop their ability to solve a range of problems, including with simple fractions and decimal place value. Teaching should also ensure that pupils draw with increasing accuracy and develop mathematical reasoning so they can analyse shapes and their properties, and confidently describe the relationships between them. It should ensure that they can use measuring instruments with accuracy and make connections between measure and number. By the end of year 4, pupils should have memorised their multiplication tables up to and including the 12-multiplication table and show precision and fluency in their work. Pupils should read and spell mathematical vocabulary correctly and confidently, using their growing word reading knowledge and their knowledge of spelling.

## Upper Key Stage 2 (Year 5 and 6)

The principal focus of mathematics teaching in upper key stage 2 is to ensure that pupils extend their understanding of the number system and place value to include larger integers. This should develop the connections that pupils make between multiplication and division with fractions, decimals, percentages and ratio. At this stage, pupils should develop their ability to solve a wider range of problems, including increasingly complex properties of numbers and arithmetic, and problems demanding efficient written and mental methods of calculation. With this foundation in arithmetic, pupils are introduced to the language of algebra as a means for solving a variety of problems. Teaching in geometry and measures should consolidate and extend knowledge developed in number. Teaching should also ensure that pupils classify shapes with increasingly complex geometric properties and that they learn the vocabulary they need to describe them. By the end of year 6, pupils should be fluent in written methods for all four operations, including long multiplication and division, and in working with fractions, decimals and percentages. Pupils should read, spell and pronounce mathematical vocabulary correctly.

## Assessment

Assessment is regarded as an integral part of teaching and learning and is a continuous process. It is the responsibility of the class teacher to assess all pupils in their class.

In our school we are continually assessing our pupils and recording their progress. We see assessment as an integral part of the teaching process and 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.

Information for assessment will be gathered in various ways: by talking to the children, observing their work, marking their work, half termly assessments, use of assessment lessons and cards etc. Teachers will use these assessments to plan further work, and to inform pupils of their targets/next steps in learning.

Children in Years 2 and 6 undertake SATs, with optional SATs for Years 3, 4 and 5.

## Role of Subject Leader

The Mathematics Subject Leader is responsible for co-ordinating mathematics through the school. This includes:

- ensuring continuity and progression from year group to year group
- providing all members of staff with guidelines and a scheme of work to show how aims are to be achieved and how the variety of all aspects of mathematics is to be taught
- advising on training to staff where appropriate. This will be in line with the needs identified in the Development Plan and within the confines of the school budget
- advising and supporting colleagues in the implementation and assessment of mathematics throughout the school
- assisting with requisition and maintenance of resources required for the teaching of mathematics. Again, this will be within the confines of the school budget
- ensuring that high standards are attained within the subject

## Role of Class Teacher

- to ensure progression in the acquisition of mathematical skills with due regard to the National Curriculum for Mathematics 2014
- to develop and update skills, knowledge and understanding of Mathematics
- to identify inset needs in Mathematics and take advantage of training opportunities
- to keep appropriate on-going records
- to plan effectively for Mathematics (with year group partners), liaising with Subject Leader when necessary.
- to use a variety of schemes to keep their lessons lively, engaging and to deliver high-quality mathematics
- to inform parents of pupils' progress, achievements and attainment

- to determine how much time is needed on a particular subject area for the children to become competent and master the skill being taught

## Equal Opportunities

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

All children have equal access to the curriculum regardless of their gender, ability (including gifted children) or ethnicity. This is monitored by analysing pupil performance throughout the school to ensure that there is no disparity between groups.

## SEND

All children are provided with equal access to the mathematics curriculum. Through our mathematics teaching, we provide learning opportunities that enable all pupils to make good progress. All children will have their specific needs met through differentiated work in conjunction with targets. TA support time is planned for and provided in relation to identified needs for individuals and groups. We provide learning opportunities matched to the needs of children with Special Educational Needs and we take into account the targets set for individual children in their Individual Education Plans, Learning Plans and Education, Health, Care Plans.

## Monitoring

The mathematic Subject Leader is released occasionally from their classrooms 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 Subject Leader 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. Books, planning, displays and intervention achievement and pitching regularly monitored.

## Parental Involvement

At Sherwood school we encourage parents to be involved by:

- inviting them into school twice yearly (Autumn and Spring) to discuss the progress of their child
- encouraging parents to discuss their child's progress at any mutually convenient time by arrangement with the teacher involved
- circulating information via termly newsletters when significant changes have been/are made to the mathematics curriculum
- inviting parents of Year 6 pupils to a meeting in the Spring term on supporting their children with SATs

- inviting parents of Year 2 pupils to a meeting in the Spring term on supporting their children with SATs
- encouraging parents to help in classrooms
- regular updates on the school website under the 'Our Curriculum > Mathematics' tab
- meetings in school to discuss new concepts and how parents can best support their child(ren)

## Governing Body Involvement

At Sherwood School we have an identified governor for Maths who is invited to attend relevant school INSET and talk to the subject leader when possible. Governors are invited to meet Subject Leaders termly and to report back to the Governing Body after each meeting with the Subject Leader.

## Homework and Remote Learning

Homework is set weekly in line with the school's Homework Policy. Tasks are uploaded onto the Class Pages on the School's Website and children are expected to complete the activities within a set time. Mathematical activities could consolidate work that the children have been completing in class either through a worksheet or a practical activity. School also pays an annual subscription for an online platform 'Mathletics'. All children have an individual login and tasks can be set for whole class, groups or individuals to fit around the learning that the children have been covering in class.

When working Remotely, due to a period of isolation and extended absence, children will have a dialogue with their teacher and teaching assistants through a platform called 'SeeSaw'. This enables the children to send in their completed work for approval by the teacher. The teacher can then give constructed advice and feedback to the child in line with the school's Marking and Feedback Policy.

## Approval

Approval date: January 2021

Review date: January 2024

Signed (Headteacher):

Signed (On behalf of the Governing Body):