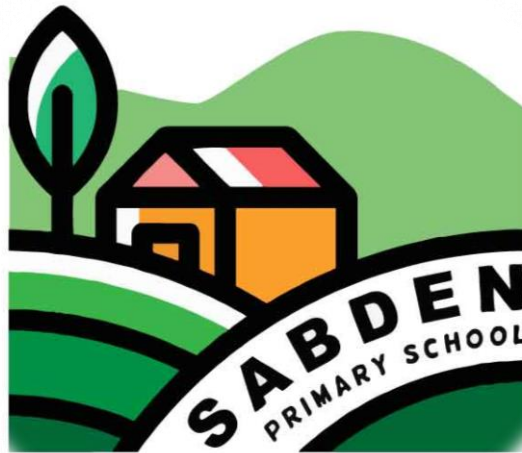


Mathematics Policy  
Sabden Primary School



School Vision and Curriculum statement

Our Vision is to inspire an enjoyment for mathematics through positive attitudes, curiosity and discovery. Our aim is to equip all our pupils with a high-quality mathematics education that excites and engages them and develops confident, skilled mathematicians who understand that maths is a fundamental part of everyday life and the world we live in. The language of mathematics is international, the beauty and power of maths are integral to the world around us. As a school, we focus on mastering maths. This means our children acquire and achieve a deep, long-term, secure and adaptable understanding of the subject. Becoming fluent in the fundamentals of mathematics, with regular and challenging problems, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately. We aim for our children to RESPECT maths, be RESILIENT in maths and be CHALLENGED by maths.

Intent for mathematics

At Sabden, maths is given a high priority. We believe mathematics is an important part of children's development throughout school, right from an early age. We intend to deliver a curriculum which:

- Allows children to be a part of creative and engaging lessons that will give them a range of opportunities to explore mathematics.
- Gives each pupil a chance to believe in themselves as mathematicians and develop the power of resilience and perseverance when faced with mathematical challenges.
- Recognises that mathematics underpins much of our daily lives and therefore is of paramount importance, in order that children aspire and become successful in the next stages of their learning.

- Engages all children and entitles them to the same quality of teaching and learning opportunities, striving to achieve their potential.
- Makes rich connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems.
- Provides equal opportunities for children to apply their mathematical knowledge to other subjects (cross-curricular links).
- Is in line with the expectations in the National Curriculum 2014.

### Aims of the Curriculum

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.

At Sabden Primary School these aims are developed in tandem with each other. However, a key focus in every lesson is deep conceptual understanding, and it is from this that children will build their fluency, their ability to reason and apply this understanding when solving problems.

### Curriculum Organisation

At Sabden Primary School we use the Red Rose Mastery Maths Scheme (*in Years 1-6*) and have selected this because it is sequenced coherently across and within year groups. Children revisit topics on a termly basis building on their prior learning and moving towards clear end of year expectations. The key components of place value and calculation are explicitly taught and learned in each term. These topics are interspersed with other areas of the mathematics curriculum such as measurement including time and money, statistics and geometry. This allows children to apply their number knowledge in different contexts to build strong connections within mathematics and appreciate the subject's relevance to real life. It also supports children in transferring their learning to long term memory in order to unconsciously recall and apply it in different situations, including in different curriculum subjects.

In Early Years, the curriculum is based on the Lancashire Key Learning for Reception. This provides end of year expectations for the whole mathematics curriculum to ensure children are ready to access the National Curriculum in Year 1. This learning is organised into progressive steps that build a coherent sequence of learning across the year. It begins in the autumn term with children being immersed in the numbers 1-10 through the Numberland approach in which children develop a deep understanding of each number, including composition and how these numbers relate to each other.

The expectation is that all children will move through the content of our curriculum (in all Key Stages) at broadly the same pace. We maintain high expectations of all children and provide support and challenge as appropriate throughout all lessons and sequences of learning.

In some circumstances, children may follow a separate curriculum based on individual needs that would be detailed in their Individual Education Plans or EHCPs. However, this curriculum would still mirror the coherent and progressive sequences of learning for the other children in a different year group.

The mathematics curriculum is enriched at Sabden Primary School through various events, including: Forest School activities as well as other special events such as World Maths Day on the 14<sup>th</sup> March each year and Maths Week England

### **Curriculum Implementation**

Mathematics is learned discretely through daily lessons in all year groups and is then applied across the curriculum and in continuous provision in EYFS.

A typical lesson in Years 1 to 6 following the Red Rose Mastery Maths Scheme would involve:

- a Starter activity to allow children to revisit, practise and refine previously learned content to support long term memory retention as well as developing children's mathematical fluency
- an Initial Problem in which children are introduced to the learning through a context. The children discuss how their existing knowledge can be applied to the context. Ideas and approaches are shared where misconceptions are identified and addressed, and effective approaches are shared and learned by the whole class
- Guided Learning that is interactive through the use of effective questioning that leads children to identify for themselves how to be successful with the learning. This is supported through the use of both conceptual and procedural variation and short tasks for the children to complete before moving on to the next step in learning
- an Independent Learning Task for the children to apply the learning from the guided parts. This task includes questions that build children's understanding and fluency and will also involve different elements of reasoning and solving problems.
- a Deeper Learning Task is included to allow some children to take their understanding to even greater depth than what would be expected. These tasks are often in the form of more complex reasoning or non-routine problem solving questions.
- throughout the lesson, children's thinking is supported and extended through the deliberate use of questioning by the adults.

A variety of approaches are used within our lessons including practical exploration, group discussion, paired work and individual work.

In Early Years, mathematics lessons consist of a short taught element to the whole class. This will be very practical, playful and involve a considerable amount of discussion including questions such as What can you see? What do you notice? Why do you think that happens? What would happen if...?

Children will then be given opportunities in continuous provision to apply this learning in different ways. Mathematics is also experienced through many daily routines and the adults take advantage of all the opportunities for mathematical learning in such activities as registration, snack time and tidying up.

### **Impact**

- Children demonstrate a quick recall of facts and procedures. This includes the recollection of the times table.

- Children show confidence in believing that they will achieve.
- Each child achieves objectives (expected standard) for year group.
- They have flexibility and fluidity to move between different contexts and representations of maths.
- They have the chance to develop the ability to recognise relationships and make connections in maths lessons.
- Mathematical concepts or skills are mastered when a child can show it in multiple ways, using the mathematical language to explain their ideas, and can independently apply the concept to new problems in unfamiliar situations.
- Children show a high level of pride in the presentation and understanding of the work.
- Children show fluency, accuracy, efficiency, flexibility and automaticity when completing and talking about their maths work.

### Planning

The planning of the curriculum is organised in three phases:

- **long term planning** is demonstrated through the yearly overviews which show the organisation of the mathematics topics across the year for each year group, and the coverage and progression of knowledge, skills and understanding;
- **medium term planning** is demonstrated through the half termly overviews which reveal the progression of knowledge, skills and understanding within each topic, including where learning is revisited in Starters for year groups using the Red Rose Mastery Maths Scheme;
- **short term planning** is demonstrated through the teachers' lesson plans which explain how children will build on their existing understanding with the new learning specified as focused learning objectives for each given lesson. Teachers using the Red Rose Mastery Maths Scheme are expected to annotate the Lesson Plans and/or Teaching Tool notes to personalise the lesson for the children in their class.

In EYFS the medium-term plans take the form of sequences of learning that are organised into 'Big Ideas' which are then broken down into learning steps which also reference additional learning opportunities.

### Formative Assessment

Teachers use their professional judgement to decide what children need to learn and when to move on to the next step of learning. Formative assessment (or responsive teaching) is a key feature of the mathematics lessons. Teachers use effective questioning to determine the extent of children's understanding before deciding on what the children need next (support, extension, next step). Same day intervention is carried out when formative assessment identifies the need.

### Summative Assessment

Children are assessed at the end of each term using teacher assessment supported by an arithmetic and a reasoning test. This allows teachers to check children's progress towards meeting the end of year expectations and organise further support where this is necessary. At the end of each half term, there are 'Learning Checks' that consist of a range of questions based on what the children have learned in that half term. These allow teachers to assess the children's understanding away from the point of teaching and to see how well the learning has been stored in the long-term memory.

### Professional Development of Staff and Use of Resources

All staff using the Red Rose Mastery Maths Scheme have had training on the scheme and understand the principles of teaching for mastery and how to apply the scheme appropriately with their class. In all classes the mathematics learning is reliant on practical and visual approaches, and the links between these and the abstract representations. At ... School we are committed to ensuring all our staff are equipped and supported to deliver consistent high quality learning experiences for our children.

### Equal Opportunities

All children have equal opportunities to reach their full potential across the maths curriculum, regardless of their race, gender, cultural background, and ability, or of any physical or sensory disability.

### Inclusion

(eg. EAL/SEN/PPG/Provision for HA)

All pupils are entitled to access the maths curriculum at a level appropriate to their needs. To ensure inclusion, teachers use a range of strategies. Independent tasks, as well as teaching, are also well-adapted to ensure full accessibility, as well as to provide appropriate challenge to different groups of learners. Teachers work collaboratively to best meet the needs of individuals within their classes. Class teachers use support staff to provide targeted support and peer-buddying is encouraged to ensure that identified children are able to make progress in each curriculum area, according to their full potential.

Some children experience learning difficulties, which affect their progress in maths. Class teachers inform the SENDCO/head teacher if they are concerned that a child may have underlying learning difficulties. Some children then receive SEN support.

### Role of the Subject Leader

The role of the subject leader in maths is to coordinate the teaching of maths across all phases of the school. This is in order to secure high quality maths provision for every child, including good teaching and learning, effective use of resources and the highest standards of achievement for all. The Subject Leader's responsibilities are in line with the Subject Leader Policy:

- To ensure a high profile for the subject
- To analyse termly assessments and report standards to HT and governors.
- To carry out regular monitoring with feedback and support given
- To ensure a full range of relevant and effective resources are available to enhance and support learning
- To model the teaching of maths
- To report on the quality of learning and provision in maths to governors and the HT.
- To monitor planning and oversee the teaching of maths
- To lead further improvement in and development of the subject as informed by effective subject overview and suggestion of CPD
- To ensure that the maths curriculum has a positive effect on all pupils, including those who are disadvantaged or have low attainment

- To liaise with external providers and lead the implementation of such at Sabden.

### Parents

We recognise how crucial the home/school link is for supporting children to have the highest standards of achievement in maths. At the start of each academic year the maths standards of the year group are explained through the home learning pack shared at parents' evening, as well as further meetings throughout the year to support parents to understand new initiatives where required. Children are also required to work on their number bonds in Reception and Y1, and later develop their understanding of multiplication and division facts to  $12 \times 12$ , supplemented through Times Tables Rockstars. We, at Sabden, actively encourage the involvement of families and the wider community to help support the teaching of Maths.

Policy agreed: September 2023

Policy review date: September 2025