



Scholes (Holmfirth) Junior and Infants Maths Curriculum Statement

Introduction

This document outlines the purpose, nature and management of the teaching and learning of maths in our school. It reflects the views of all the current teaching staff and was drawn up as part of whole-staff INSET training. It has the full agreement of all subject leaders. The implementation of the subject is the responsibility of all staff in school and will be monitored by the SLT and subject leader(s). An action plan is linked to this curriculum area in order to develop the subject within our changing school.

The Nature of Maths

Mathematics is a universal language that helps us to understand the world; it is a core part of the curriculum. As well as teaching about numbers, shapes, statistics and patterns, it provides important tools for work in areas such as physics, architecture, medicine and business. It helps learners to develop logical and methodical thinking, to focus and to solve a wide range of mathematical problems. At Scholes Junior and Infant School, we want our children to be independent, reflective thinkers whose skills not only liberate them in maths but also support them across the curriculum and in their lives. We aim to give the best and in doing so, make a difference to every child. Success in mathematics leads to many opportunities for further study and employment and provides pupils with vital life skills.

Intent

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

Mathematics is an interconnected subject in which pupils need to be able to move fluently between representations of mathematical ideas. The programmes of study are, by necessity, organised into distinct domains, but we want our pupils to make rich connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems. They should also apply their mathematical knowledge to science and other subjects.

Communicative

We aspire for our children to be able to articulate their mathematical thinking. Lessons are driven through the development of verbal reasoning and their expansion and use of mathematical vocabulary. Through this, they show mathematical knowledge and conceptual understanding.

This is demonstrated through:

- Questioning by teachers and pupils
- Use of sentence stems
- Partner and group discussions
- Explaining and reasoning through verbal and written work
- Mathematically rich vocabulary used by teachers and pupils

We ensure that pupils reflect back and have a good understanding of mathematical vocabulary taught in previous year groups within every unit. Concepts are revisited progressively which ensures that pupils have a solid vocabulary and knowledge base on which to build. Pupils can then progress by learning and applying the new vocabulary from within the unit, whilst using the previously gained knowledge. Daily maths lessons also have a 'quick maths' sessions which allow pupils to retrieve previously taught vocabulary.

Local

Our children learn from a high-quality mathematics education which provides them with '**a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject.**' (Primary National Curriculum 2014) We want our children to recognise and understand relationships and patterns in numbers in the world around them and to use mathematics as a tool beyond the daily mathematics lesson and the classroom. This is achieved through the links and connections that we make within the community and the environment around us. One example of this is the monthly community coffee mornings that we hold at Scholes Methodist Chapel where pupils in Year 6 handle money in a real-life setting.

Enriched

Maths links directly with the STEM subjects; therefore, where appropriate, projects are designed to allow the children to apply their knowledge and skills to real-life problems and situations. High quality investigations can also be used. These types of activities are planned when teachers are confident that pupils have the skills needed to apply them successfully. We also have a Times Table Rock Star Day which involves a range of practical maths activities and a STEM week.

Ambitious

All areas of our maths curriculum are ambitious for all children. The curriculum is adapted, designed and developed to challenge all pupils. We have adopted White Rose Maths because it provides full coverage of the national curriculum; the units are well-sequenced and suitably ambitious. We use the planning as a starting point from which teachers can build a rich, exciting, relevant, and varied maths curriculum. Questions are carefully selected to ensure all pupils have the opportunity to make progress and teacher expectations are high.

Remembered

Daily 'quick maths' sessions provide opportunities for pupils to revisit concepts, apply their knowledge and retrieve key facts and methods. Pupils also complete a weekly topical arithmetic task, which provides opportunities for pupils to apply learning from the current and previous year groups. As well as this, some reasoning and problem-solving questions on intelligent practice sheets also incorporate different concepts, for example, long multiplication in Year 5 can be linked to area calculations.

Implementation

Our maths curriculum is taught using the mastery approach. All pupils are exposed to a combination of fluency, reasoning and problem-solving questions using concrete, pictorial then abstract representations. This builds foundations, enabling pupils to understand and apply skills taught in a range of contexts. Our aim is to develop a culture of deep understanding, which builds confidence and competence in maths. We are also working alongside the Yorkshire and Humberside Maths Hub to further embed the mastery curriculum.

Daily Starter/Quick Maths:

Lessons start with a short retrieval task which aims to improve recall of key facts, sharpen arithmetic or revisit a concept that has already been taught.

Main Lesson:

Children are given the opportunity to master maths skills through a combination of fluency, problem solving and reasoning tasks. Intelligent practice sheets are carefully designed to secure conceptual understanding and to develop sophisticated mathematical thinking. Activities support pupils on their mathematical journey, deepening their understanding and enabling them to uncover patterns and operations in a more meaningful, structured way.

Organisation and Planning

We currently use the White Rose Maths blocks; however, this is only a starting point and planning is reflective and designed to meet the needs of individual classes. Teachers also use the Ready to Progress document to identify potential gaps and ensure that the foundations for new learning are in place.

Continuity and Progression

This is achieved through the White Rose Maths planning.

Cross Curricular Links

There are many natural links with maths across the curriculum. Teachers make these links where appropriate to focus and provide opportunities for application of the desired learning objective.

Examples of links are as follows:

- Data collection and interpretation links are made with the science and geography curriculums.
- History links are made with the concept of chronology – this includes time lines of events within a topic as well as different eras of historical importance.
- Geographical links are established in physical geography, for example, grid references.
- Design Technology makes links with measurement, spatial awareness and budgeting.

Resources

School has a wide range of resources for maths. Some of these are kept in a central resource area. The different phases across school have their own supply of manipulatives that are essential to learning; these resources are available in individual classrooms.

Inclusion

Teachers set high expectations for all pupils. They use diagnostic assessments to plan challenging work for all, including:

- More able pupils
- Pupils with low prior attainment
- Pupils from disadvantaged backgrounds
- Pupils with SEN
- Pupils with English as an additional language (EAL)

Teachers will plan lessons so that pupils with SEN and/or disabilities can access learning objectives and ensure that there are no barriers to any pupil achieving and making progress. The curriculum is adapted, designed and developed to meet the needs of pupils with SEND, developing their knowledge, skills and abilities to apply what they know and can do with increasing fluency and independence. Work is scaffolded as appropriate to pupils' needs, and is designed to be challenging for all children, but support is there for them to experience success. Children are encouraged to use concrete resources to understand and embed mathematical skills. They are also exposed to a variety of pictorial representations to deepen understanding. The use of manipulatives also supports less able pupils so that the vast majority of pupils can move through a concept at the same speed.

Teachers will also take account of the needs of pupils whose first language is not English. Lessons will be planned so that teaching opportunities help pupils to develop their English, and to support pupils to take part in all subjects.

Impact

The over-riding objective of our maths curriculum is to enable children to secure a deep understanding of the subject. This is evident in many ways:

- The recollection of the times table.
- Positive and resilient attitude towards mathematics and an awareness of the fascination of mathematics.
- Showing confidence in believing that they will achieve.
- Achievement of objectives (expected standard) for year group.
- Flexibility and fluidity to move between different contexts and representations of maths.
- 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 are able to discuss their reasoning, focusing on how they know using what they know to support their learning.

Recording and Assessment

All children record work in their maths books. From Years 1 to 6, intelligent practice sheets are stuck into the front of their books and the corresponding answers are recorded alongside any working out. In Key Stage 2, quick maths work is recorded in the back of books.

Children are regularly assessed through targeted questioning in lessons and through the outcome of activities completed in lesson time. Planning is then adapted to respond to the children's needs. At the end of each unit, all children complete an end of unit White Rose Maths assessment.

In Years 2 to 6, children sit a Testbase assessment. It is a formal assessment that aims to support teachers in making accurate judgements about the progress each child has made. In Year 1, the children are given a formal assessment in the summer term

Monitoring

Monitoring of Maths at Scholes School is carried out in a variety of ways. These include:

- Work scrutiny to explore specific, pre-discussed aspects of teaching – coverage, scaffolding, balance of fluency, reasoning and problem-solving.
- Observations where appropriate – these are usually linked to SIP requirements or Performance Management objectives
- Peer observations are encouraged for staff to explore teaching styles and activities in a less formal way than observation
- Pupil discussions may be used to gain insight to attitudes towards maths.