



Scargill Church of England Primary School

Maths Policy

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The aim of this policy is to refine what Maths looks like at Scargill C of E Primary School, whilst setting out a framework that supports all stakeholders understanding, planning, teaching and assessing Maths.

1 What is Maths?

At Scargill C of E Primary School, we recognise the importance of mathematics throughout each child's everyday and future life. It enables children to understand relationships and patterns in both number and space in the world around them. It is essential to everyday life, critical to science, technology and engineering and necessary for financial literacy and most forms of employment. We intend to give each child the self-confidence and resilience to reach their full potential by ensuring that they have the tools to calculate fluently, reason logically, problem solve and think in abstract ways.

2 Curriculum Intent

When teaching mathematics at Scargill, we intend to provide a curriculum which caters for the needs of all individuals and sets them up with the necessary skills and knowledge for them to become successful in not just in school but in their future working lives. We are embedding a mastery approach throughout school from EYFS, so that the teaching and learning is consistent and will support all pupils with their understanding and retention. Pupils are required to explore maths in depth, using mathematical vocabulary to reason and explain their workings. A wide range of mathematical resources are used and pupils are taught to show their workings in a concrete, pictorial and abstract form wherever suitable. They are taught to explain their choice of methods and develop their mathematical reasoning skills. We encourage resilience and acceptance that struggle is often a necessary step in learning. Our curriculum allows children to better make sense of the world around them relating the pattern between mathematics and everyday life.

3 Curriculum Implementation

At Scargill, we deliver a clear and comprehensive scheme of work in line with the National Curriculum through Power Maths

Teachers reinforce an expectation that all children are capable of achieving high standards in Mathematics. The large majority of children progress through the curriculum content at the same pace. Differentiation is achieved by emphasising deep knowledge and through individual support and same day (wherever possible) intervention. To ensure whole school consistency and progression, the school uses the DfE approved 'Power Maths' scheme which is fully aligned with the White Rose Maths scheme. New concepts are shared within the context of an initial problem, which children are able to discuss in partners. This initial problem-solving activity prompts discussion and reasoning, as well as promoting an awareness of maths in relatable real-life contexts that link to other areas of learning. Children are encouraged to solve problems each day through the use of concrete resources, pictorial representations and abstract thinking (the C-P-A approach). This helps children tackle concepts in a tangible and more comfortable way. Teachers use

careful questions to draw out children's discussions and their reasoning. The class teacher then leads children through strategies for solving the problem, including those already discussed. Children then progress to their independent work, where each question varies one small element to move children on in their thinking. Children complete intelligent practice independently, ending in a 'Reflect' section where children reveal the depth of their understanding before moving on to more complex related problems. Concrete resources are frequently used to complement this part of the lesson. Mathematical topics are taught in blocks, to enable the achievement of 'mastery' over time. Each lesson phase provides the means to achieve greater depth, with children who are quick to grasp new content being offered rich and sophisticated problems, as well as exploratory, investigative tasks, within the lesson as appropriate.

4. Subject content: Reception

Foundation Stage plan Maths sessions to match the objectives/early learning goals referenced in the Early Years Foundation Stage (EYFS) which has been devised by staff termly into our Reception scheme of work. Children are taught Maths using the online Power Maths resources. Maths contributes to a child's personal and social development. Counting songs foster a child's mathematical ability and songs from different cultures increase a child's knowledge and understanding of the world.

5. Suitable content: Key Stage 1 & 2

As acknowledged by the National Centre for Excellence in the Teaching of Mathematics (NCETM) and the Maths Hub programme – 'The use of well-designed and tested textbooks is critical for the successful implementation of teaching for mastery. A good textbook is both an aid for the teacher in planning lessons and for the children during lessons and working on their own.' Through Years 1 to 6 we use a coherent programme of high-quality materials and exercises, which are structured with great care to build deep conceptual knowledge alongside developing procedural fluency. Our KS1 and KS2 teachers use resources from the DfE approved Power Maths series. In Key Stage 1, the textbooks are not used as the screen-based resources are more effective. This scheme is aligned with the 2014 National Curriculum. The Power Maths textbooks are arranged in chapters and, over the course of the academic year, all units of the 2014 National Curriculum are covered. There is no requirement for any formal planning due to the nature of this approach, however teachers are free to plan and source activities and additional tasks which offer support and also provide further challenge for children who are able to progress further in their learning. Lessons in both key stages follow the same sequence. In KS1 -and possibly KS2- the teacher might use 'mini-plenaries' to explain each question during the children's completion of the practice book and also to check children's understanding before they complete the next question. This ensures that all children are able to complete the task with confidence.

As we have mixed-age classes at Scargill, Power Maths lessons are taught in individual year groups in different teaching groups. Year 1 are currently taught as

one group by one teacher with two teaching assistants. All the years from Year 2 upwards are taught as two single-age classes.

6 Curriculum Impact

At Scargill, we have the following aims for our Maths curriculum

- Children are happy learners who talk enthusiastically about their learning and eager to further their progress in maths
- The impact of 'mastery' and the emphasis on accurate use of mathematical language is evident during class/pupil discussions
- Children's fluency in number is evident in our proven track record of high success in arithmetic
- More consistent teaching practices that are well-known to be more effective for pupil progress long term, evident across school
- Cross-school moderation highlights the high level of challenge for all ability groups, evident throughout topics through reasoning and problem-solving activities

7 Assessment and Recording

At Scargill C of E Primary School, we believe that assessment is an integral part of the teaching process as it allows staff to identify how secure pupil's knowledge is whilst checking that the intended curriculum has been sufficiently covered.

Assessment for learning is an on-going, continuous throughout the planning, teaching and learning cycle. Assessment is achieved through observation of children during Maths sessions, and recorded using the school's whole-class assessment documents as per the assessment policy. Individual lessons are assessed using the school's marking policy and whole class assessment sheets are filled in, and every half term KS1 & 2 classes complete NTS tests to assess their development and identify areas of need. The results of these are used to inform teachers who may choose to implement SHINE interventions based on areas of need.

8 Equal Opportunities

At Scargill C of E Primary School, we are committed to providing a teaching environment which ensures all children are provided with the same learning opportunities regardless of their social classes, gender, culture, race, special educational needs or disabilities (SEND). As a school, we promote and maintain a positive ethos whereby children demonstrate positive attitudes towards each other. Resources and support for specific individuals are carefully considered and planned for, to ensure that activities are provided at an appropriate level of challenge.

9 Inclusion

Staff at Scargill are committed to ensuring the active participation and progress of all children in their learning. All children will be given equal opportunities to achieve their best possible standard, whatever their current attainment and irrespective of

gender, ethnic, social or cultural background, home language or any other aspect that could affect their participation or the progress of which they are capable.

With a mastery approach, differentiation occurs in the support and intervention provided to different children, not in the topics taught, particularly at earlier stages. The National Curriculum states: 'Children who grasp concepts rapidly should be challenged through being offered rich and sophisticated problems before any acceleration through new content. Those who are not sufficiently fluent with earlier material should consolidate their understanding, including through additional practice, before moving on.' There is little differentiation in the content taught but the questioning and scaffolding individual children receive in class as they work through problems will differ, with higher attainers challenged through more demanding problems, which deepen their knowledge of the same content before acceleration onto new content. Children's difficulties and misconceptions are identified through immediate formative assessment and addressed with rapid intervention – commonly through individual or small group support later the same day.

Although the expectation is that the majority of children will move through the programmes of study at broadly the same pace, the 2014 National Curriculum states: 'Decisions about when to progress should always be based on the security of children's understanding and their readiness to progress to the next stage.' In exceptional circumstances, if a child's needs are best met by following an alternative plan, including coverage of the content from a previous year, arrangements are made so that a child can access another year's work, and this will be shared with relevant staff and communicated to parents at SEND reviews and parent meetings.

10 Roles and Responsibilities

The subject leader's role and responsibilities are:

- To establish a secure profile of Maths across the school
- To monitor lessons, planning and oversee the teaching of Maths
- To ensure that there are a full range of relevant and effective resources to enhance and support Maths learning
- To replace and acquire new and sufficient resources to support colleagues deliver the desired Maths curriculum
- To assist colleagues in the planning, delivering and assessing of Maths lessons
- To ensure that progression of key Maths knowledge and skills throughout school are effectively planned for
- To keep informed of developments in the teaching and learning of Maths
- To lead CPD sessions to help and support colleagues deliver Maths lessons

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