Springcroft Primary School

Mathematics Policy

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Author/owner: Springcroft Primary School
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Approved	Signature	Date

Our Mission Statement:
The place to learn, the place to succeed, the place to make friends, the place to grow.

Contents:

Statement of intent

At Springcroft Primary School, we intend to teach a rich, balanced and progressive curriculum, recognising that Maths is not only a key skill within school but a life skill for the future. Therefore, we provide a curriculum with a strong focus on fluency, reasoning and problem solving which challenges and meets the needs of all children, enabling them to become confident, competent and fluent mathematicians. This allows children to make better sense of the world around them by making connections between mathematics and everyday life.

The structure of the mathematics curriculum across school shows clear progression in line with age related expectations. Children explore mathematical skills and knowledge in depth in order to gain a secure understanding of the subject matter. A concrete, pictorial, abstract (CPA) approach provides children with a clear structure in which they can develop their depth of understanding of mathematical concepts. All children have access to a range of mathematical resources that they may select and use independently. Children are encouraged to talk like mathematicians, using mathematical vocabulary to explain their reasoning and methods. Furthermore, they are taught to solve problems by thinking logically and working systematically and accurately.

We aim to ensure that mathematics is a high-profile subject which children view positively and with a 'Can Do' attitude. We relate the teaching of Mathematics to our school's core values of Resilience, Collective Responsibility, Integrity and Creativity.

<u>Through the teaching of Maths, we aim to:</u>

- Inspire and engage all children as mathematicians.
- Develop a positive attitude towards maths and an understanding of the relevance of maths in the real world.
- Develop an ability to solve problems and think logically to work systematically and accurately.
- Enable children to work both independently and in cooperation with others.
- Further develop fluency, competence and confidence in pupils' maths knowledge so that knowledge and skills can be recalled and applied with fluency and accuracy.
- Nurture a curiosity and appreciation of the creative aspects of maths and how maths can be used and applied in other subjects.

1. Legal framework

This policy has due regard to statutory guidance including, but not limited to, the following:

- DfE (2021) 'National curriculum in England: Mathematics programmes of study'
- DfE (2023) 'Early years foundation stage statutory framework: For group and school-based providers'
- DfE (2021) 'Teaching mathematics in primary schools'

2. Roles and responsibilities

The subject leader is responsible for:

- Preparing policy documents, curriculum plans and schemes of work for the subject.
- Reviewing changes to the national curriculum and advising on their implementation.
- Monitoring the learning and teaching of maths, providing support for staff where necessary.
- Ensuring the continuity and progression from year group to year group.
- Encouraging staff to provide effective learning opportunities for pupils.
- Helping to develop colleagues' expertise in the subject.
- Organising the deployment of resources and carrying out an audit of all maths-related resources.
- Liaising with teachers across all phases.
- Communicating developments in the subject to all teaching staff.
- Leading staff meetings and providing staff members with the appropriate training.
- Organising, providing and monitoring CPD opportunities in the subject.
- Ensuring common standards are met for recording and assessing pupil performance.
- Advising on the contribution of maths to other curriculum areas, including cross-curricular and extra-curricular activities.
- Utilising assessment data and setting new priorities for the development of maths in subsequent years.

The classroom teacher is responsible for:

- Acting in accordance with this policy.
- Ensuring progression of pupils' mathematical skills, with due regard to the national curriculum.
- Planning lessons effectively, ensuring a range of teaching methods are used to cover the content of the national curriculum.
- Liaising with the subject leader about key topics, resources and support for individual pupils.
- Monitoring the progress of pupils in their class and reporting this on an annual basis to parents.
- Reporting any concerns regarding the teaching of the subject to the subject leader or a member of the SLT.
- Undertaking any training that is necessary in order to effectively teach the subject.

The SENCO is responsible for:

- Liaising with the subject leader in order to implement and develop maths throughout the school.
- Organising and providing training for staff regarding the maths curriculum for pupils with SEND.
- Advising staff how best to support pupils' needs.
- Advising staff on the inclusion of mathematical objectives in pupils' individual education plans.
- Advising staff on the use of teaching assistants in order to meet pupils' needs.

3. Early years provision

Activities and experiences for pupils will be based on the seven areas of learning and development, as outlined in the DfE's 'Early Years Foundation Stage Statutory Framework.' Planning for Maths lessons is supported by the White Rose Medium Term plans for EYFS Mathematics and NCETM's Mastering Number Programme. On a daily basis, Maths is readily accessible through continuous provision.

Activities will provide pupils with the opportunity to develop and improve their skills in counting, understanding and using numbers, calculating simple addition and subtraction problems, and describing shapes, spaces and measurements.

All activities will adhere to the objectives set out in the framework.

Children will be taught how to:

- Count confidently.
- Develop a deep understanding of the numbers to 10.
- Understand the relationship between the numbers to 10 and the patterns within those numbers.
- Develop a secure base knowledge and vocabulary from which mastery of mathematics is built.

- Develop their spatial reasoning skills across all areas of mathematics including shape, space and measures.
- Develop positive attitudes and interests in mathematics.
- Look for patterns and relationships.
- Spot connections.
- Talk to adults and peers about what they notice and not be afraid to make mistakes.

Teaching staff will utilise the early learning goals (ELGs), which summarise the knowledge, skills and understanding that all children should have gained by the end of the EYFS. For the ELG for numbers, children at the expected level of development will:

- Have a deep understanding of numbers to 10, including the composition of each number.
- Subitise (recognise quantities without counting) up to 5.
- Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts.
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For the ELG for numerical patterns, children at the expected level of development will:

- Verbally count beyond 20, recognising the pattern of the counting system.
- Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity.
- Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.

4.The school curriculum

Mathematics is a core subject of the National Curriculum. The National Curriculum sets out year-by-year programmes of study for Key Stages 1 and 2. This ensures continuity and progression in the teaching of mathematics. At Springcroft Primary School, our Maths curriculum is supported by the 'White Rose Scheme of Work. Our Maths curriculum is 'scheme-supported' rather than 'scheme-led,' whereby we use the White Rose small steps as a starting point and adapt these to meet the needs of our children. We have adopted and embedded a Concrete, Pictorial and Abstract approach with daily opportunities for retrieval in all Maths lessons.

Times Tables

In the Primary National Curriculum for Maths, times tables up to 12 x 12 are something which children are required to know and understand by the end of Year 4.

When it comes to times tables, speed and accuracy are important. Our expectations for children to be fluent in times tables is:

Year 2: **2**, **5** and **10**
Year 3: 2, **3**, **4**, 5, **8** and 10
Year 4: 2, 3, 4, 5, **6**, **7**, 8, **9**, **11**, **12**
Year 5: all facts to 12 x 12
Year 6: all facts to 12 x 12

5. Teaching and learning

Pupils will be taught to understand and use mathematical vocabulary.
Pupils will undertake independent work, and have the opportunity to work in groups and discuss work with fellow classmates.

The classroom teacher, in collaboration with the subject leader, will ensure that the needs of all pupils are met by:

- Setting tasks which can have a variety of responses.
- Using adaptive teaching and scaffolding.
- Setting tasks to ensure that all children are supported and challenged.
- Deploying support staff to ensure that pupils are effectively supported.

A maths mastery approach is taken to teaching the curriculum, in which fluency comes from deep knowledge and practice. This means that structured questioning is used to ensure that pupils develop fluent technical proficiency and think deeply about the underpinning mathematical concepts.

Opportunities for verbal and written reasoning are carefully and regularly planned; written reasoning activities are recorded in books. We ensure that all children have the opportunity to reason and problem-solve on a regular basis.

6. Planning

Throughout the school, maths is taught as a discrete lesson and as part of cross-curricular themes when appropriate. All staff are made aware of how to plan maths lessons and where to access the necessary planning documents.

Documents and resources include:

1. National Curriculum programme of study for each year group
2. White Rose Maths online subscription
3. TT Rockstars subscription for Year 2 to Year 6
4. Springcroft Calculation Policy
5. My Maths online subscription
6. 'I can see reasoning' Gareth Metcalfe resources
7. NCETM Maths Mastery resources
8. A range of concrete resources including rekenreks in KS1
9. Topical resources
10. Fluent in 5
11. Pinpoint
12. NCETM Mastering Number scheme

Whilst there is no expectation for written lesson plans, teachers will plan and prepare their lessons using Activ Inspire or teacher-made PowerPoints. Every Maths lesson will begin with a bespoke retrieval practice 'Do Now,' consisting of 4 or 5 questions that will consolidate their previous learning and address any 'gaps' in learning that have been identified by the teacher. At Springcroft, we recognise that repetition and revisiting learning is vital to children retaining knowledge. All lessons will have clear learning objectives, which are shared and reviewed with pupils.

Mastering Number

In addition to the daily Maths lesson, EYFS and KS1 receive 5 additional short, daily sessions following the NCETM Mastering Number project. This project aims to secure firm foundations in the development of good number sense for all children from Reception through to Year 1 and Year 2. The aim over time is that children will leave KS1 with fluency in calculation and a confidence and flexibility with number. Attention is given to key knowledge and understanding needed in Reception classes, and progression through KS1 to support success in the future.
Children in Years 4 and 5 also access the programme, which concentrates on multiplication and division. Knowledge of multiplication and division and its applications forms the single most important aspect of the KS2 curriculum and is the gateway to success at secondary school. This project enables pupils in Years 4 and 5 to develop fluency in multiplication and division facts, and a confidence and flexibility with number that exemplifies good number sense.

Homework

Homework will be set on a regular basis and will build on lesson objectives that have been taught previously. This may be completed online using 'MyMaths.'

7. Assessment and reporting

Pupils will be assessed and their progression recorded in line with the school's Assessment Policy.

The progress and development of pupils within the EYFS is assessed against the early learning goals outlined in the 'Statutory framework for the early years foundation stage'.

Children's ability in Maths is continually assessed by all teachers through formative assessment opportunities such as discussions and feedback. Formative assessment enables teachers to identify pupils' understanding and inform their immediate lesson planning. At the end of each unit of learning, children undertake a short assessment. The results are recorded and analysed to inform future planning and next steps. In addition, there are three planned summative assessment points throughout the year. These assessments include White Rose termly assessments, NFER assessments and statutory end of key stage tests. All information gathered is triangulated to form a true reflection of every child's attainment and progress.
Standardised tests will be used once a year, towards the end of the academic year, to measure each pupil's attainment in all areas of maths. These results will be compared with an 'average' for all pupils of that age. In addition, in Year 4, children undertake the statutory Multiplication Tables Check.

Parents will receive a written report about their child's progress at the end of the academic year. This will include information on the pupil's attitude towards maths, understanding of mathematical terminology, investigatory skills and the knowledge levels they have achieved.
Verbal reports will be provided at parent-teacher meetings during the autumn and spring terms.

The progress of pupils with SEND will be monitored by the SENCO.

8. Equal opportunities

All pupils will have equal access to the maths curriculum.

The school aims to provide academically more able pupils with the opportunity to extend their mathematic thinking through extension activities such as problem solving, investigative work and research of a mathematic nature.

We aim to ensure all children have access to lessons, make progress and enjoy learning. During short term planning, teachers consider the needs of those children who:

- Require access to smaller steps or simplified objectives
- Require extension or challenges
- Need support to access the language aspects of maths
- Have a sensory, physical or emotional issue

Teachers use their knowledge of children and the class to direct questioning appropriately, model aspects of mathematics and provide suitable resources. Furthermore, teachers pre-empt misconceptions and ensure that children are aware of these.

9. Monitoring and review

This policy will be reviewed on a biannual basis by the subject leader.
The subject leader will monitor teaching and learning in the subject, ensuring that the content of the national curriculum is covered across all phases of pupils' education.
A named member of the governing body is briefed to oversee the teaching of mathematics and meets regularly with the subject leader to review progress.
Any changes made to this policy will be communicated to all teaching staff.