



Springfield Infant School and Nursery Maths Policy

Springfield is a Rights Respecting School.

Article 3- The best interests of the child must be a top priority in all actions concerning children.

Article 28 – Every child has the right to an education.

Rationale

Springfield Infant School is a Rights Respecting School and we embrace the ethos and beliefs of the United Nations Convention on the Rights of the Child. Every child has the right to an education and children should have the freedom of expression.

Mathematics is a tool for life. To function in society, we all need to be able to communicate mathematically. We must ensure that the children in our care leave Springfield with high standards of numeracy as well as literacy.

Aims

At Springfield, we aim to inspire all children to have a love of mathematics and to develop Number Sense and Fluency*. We also specifically aim to:

- Establish a culture of high achievement for all.
- Provide a challenging and engaging curriculum for all.
- Provide rigorous assessment and tracking of the progress of pupils.
- Provide high quality teaching and learning classroom experiences.
- Provide high quality regular teaching development at the whole school and at an individual level.

** Number Sense and Fluency – flexibility with numbers, able to operate with numbers, spot errors, have an intuitive feeling for maths and to be able to problem solve.*

Our objectives are to:

- Develop a positive approach to the learning of mathematics by providing challenge, personal attainment and a sense of achievement.
Article 29 – Education must develop every child's personality, talents and abilities to the full.
- Create confident children who are able to express, question and discuss ideas when undertaking activities.
- Develop mathematical reasoning skills, explain, and apply understanding to a range of mathematical areas.
- Develop mathematical fluency and deeper understanding through 'concrete-pictorial-abstract' teaching strategies.
- Develop skills of mental arithmetic in order to support and enhance mental calculations, check answers and foster an understanding of the relationships in mathematics.
- Use practical and investigative approaches where possible in order to strengthen understanding of pattern and relationships.
- Use mathematics to explore everyday situations and to communicate with others.
- Develop mathematical vocabulary and the use of equipment appropriately.
- Involve and inform parents and carers of strategies to help their children.
Article 18 – Both parents share responsibility for bringing up their child and should always consider what is best for the child.

The Curriculum

At Springfield we believe that through the mathematics curriculum children should develop knowledge and understanding of mathematical skills and 8 key mathematical habits.

The 8 key mathematical habits include pattern 'sniffing', inventing, visualising, experimenting, describing, tinkering, conjecturing and generalising.

Mathematics is a core subject in the National Curriculum, and we use the National Curriculum as the basis for implementing the statutory requirements of the Programme of Study for mathematics. It provides detailed information of what skills and strategies need to be taught, together with details of the key objectives for each year.

At Springfield, we deliver a curriculum that requires the children to think mathematically, question and reason. We provide opportunities for the children to explain their thinking and reasoning and challenge ideas through exploration and investigation. We ensure that our learners experience mathematical concepts in a range of contexts. This enables children to have a greater level understanding. The children will learn to problem solve and draw upon taught strategies to support them with this.

Medium term plans, are created using DfE ready to progress document coupled with the curriculum prioritisation resources from NCTEM. These resources align together to form a well-sequenced curriculum, which focuses on learning being retained by focusing on units for a longer period of time so that learning can be embedded. Retrieval tasks and activities take place daily to make sure 'long term maths connections are made.' They ensure an appropriate balance and distribution of work across each term.

Furthermore, we use ideas and resources from The White Rose Hub, Target Tracker, NCTEM for a Mastery curriculum and from the National Curriculum, to bolster our maths teaching and learning further. These give details of the main teaching objectives for each term.

Weekly plans give the specific learning objectives for each lesson and give details of how the lesson will be taught, including information about differentiation and specific children, use of computing, success criteria and resourcing. Class teachers to meet the needs of the children in their class and adapt plans accordingly.

Cross-Curricular Links

Mathematics is taught as a discrete subject to ensure that a full range of skills are taught and that there are sufficient opportunities for problem solving and investigation. However, cross-curricular links bring maths to life and children learn maths skills best at the point when they are needed, in meaningful, relevant contexts.

For example patterning skills and knowledge of symmetry is used in art, timelines are drawn in history, maths through the context of stories and books, measuring is used in DT and almost every scientific investigation or experiment is likely to require one or more of the mathematical skills of classifying, counting, measuring, calculating, estimating and recording in tables and graphs.

Teaching and Learning

Class teachers deliver the curriculum. In all classes, learning is differentiated in order to give appropriate levels of work to each ability group. Problem solving activities are planned to be 'low threshold, high ceiling' ensuring access and progression for all. Furthermore, reasoning and challenge are part of the 'daily diet' of mathematics learning at Springfield. Where

appropriate, groups or individual children are supported by Teaching Assistants and Learning Support Assistants, sometimes in the classroom, sometimes in the Shared Area. More able children are taught in the class and stretched through differentiated group work and extra challenge. When working with the whole class, teachers will target questions towards the more able to further develop their thinking. Differentiation is based upon levels in independency with mathematical thinking and application – greater independence = greater mastery.

Monitoring Progress and Attainment

Assessment for learning and assessment of learning take place in order to assess what has been learned and to inform the next stage of planning. Assessment is most effective when:

- Teachers are clear about what children know, understand and can do.
- Children know what they are learning, what they have achieved and how they can improve.
- Children are provided with opportunities to reflect and talk about their learning and progress against targets.
- Teachers use a range of assessment methods – observing, asking questions, pupil voice, listening, assessing pieces of work, retrieval activities and testing.
- Teachers use the results of assessment to decide what to do next.
- All pupils are set ambitious targets and are supported in striving towards them.

Target Tracker is the assessment used to record electronically children's progress at Springfield. Assessments are entered into the Tracker half-termly. This allows teachers and leaders to note regularly, which children are not making expected progress. An analysis is made to inform planning and interventions. At Springfield, we are continually assessing our children to ensure they are receiving the correct provision and identifying progress or any further needs. Maths learning and progress against the curriculum objectives is also part of our in-school and locality moderation process.

During teacher's PPA sessions, which occur fortnightly, teacher's will spend time planning collaboratively, so that planning, learning and progress is a shared responsibility. All adults working with the children have a shared accountability of the children's progress and outcomes in maths.

Moreover, during PPA sessions, teachers will moderate and look at maths books and learning together. This ensures that the children are receiving a consistent maths learning experience.

Intervention

Springfield's high priority given to maths is reflected in extra provision provided for all children who do not make expected progress. This includes interventions in class and a range of additional interventions over and above what the class teacher plans for e.g.

- 1:1 and small groups
- Basic Skills support
- SNAP maths

Article 29 – Education must develop every child's personality, talents and abilities to the full.

Children with Special Educational Needs may have EHCPs or ILP's that take into account the targets set for individual children and teachers keep these objectives in mind when planning work. Teaching assistants provide further support for groups or individual children and work collaboratively with the class teacher. Teachers' plans not only provide activities to support

children who find mathematics challenging, but also appropriate challenges for children who are high achievers in mathematics. Children with EAL are also supported in a variety of ways with particular reference to mathematical vocabulary development. For example, picture cues might be necessary.

Home learning

At Springfield, we aim to provide parents and carers with opportunities to support their children's learning at home. Homework activities sent home to reinforce and extend concepts taught in class. (See homework policy for frequency and content expectations)

Article 18 – Both parents share responsibility for bringing up their child and should always consider what is best for the child.

Parents are considered as partners in their child's learning and receive regular communications to support their children's mathematics skills. These include:

- Regular parent's evenings, which give them verbal and written information on their child's progress and their maths targets for the future.
- Termly curriculum newsletters informing the parents on the areas of the maths curriculum that are being covered.
- A termly report, which states the children's progress and attainment in the core subjects, including maths.
- Opportunities to look at the children's maths work during 'book looks.'
- Meetings to inform YR parents on how we teach mathematics and how they can help.
- Providing links to relevant Maths websites through the school website.
- Invitations to Maths Days, enrichment activities and to lessons.

Policy Review

The maths curriculum team is responsible for monitoring and keeping this policy up to date. Part of their role is to keep up to date with research, good practice, and advice from the LA and department for education and changes to statutory requirements.

Autumn 2021