



Firs School Mathematics Policy

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DISTRIBUTION

Please note that 2 copies of this policy are printed as standard and distributed to the following areas.

- 1) Y3 cupboard
- 2) The School Office

This policy can be viewed on the school website at <http://www.firsschool.net/parent-area/school-policies>
The electronic version of this document is also available direct using the URL printed on this document.

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1. RATIONALE

The purpose of this policy is to support school improvement and the raising of standards of achievement, and attainment, for all our pupils.

This policy intends to:

- make clear our vision of the curriculum subject of Mathematics as part of teaching and learning at The Firs School
- provide clear guidelines for the implementation of the policy
- make transparent the procedures in place for monitoring and evaluating Mathematics
- define clear responsibilities in relation to Mathematics
- provide clear definitions and purposes for the teaching of Mathematics

We are committed to providing effective learning opportunities for all pupils and apply the three principles for inclusion to planning and teaching:

1. Suitable learning challenges will be set for all pupils with the aim of maximising achievement for all pupils at an appropriate level for each individual.
2. Teachers will respond appropriately to pupils' diverse learning needs and be aware of the needs of differing genders, special educational needs, disability, as well as different cultural, social and ethnic backgrounds.
3. We are committed to the principle of equality of opportunity and this will be reflected in the curriculum offered to pupils and in the conduct of staff and pupils.
4. The fundamental British Values of democracy, the rule of law, individual liberty and mutual respect and tolerance of those with different faiths and beliefs are a full part of every area of the curriculum and school life.

The assessment and recording of Mathematics is part of the overall assessment of the child and should be seen alongside all the other areas of development. Assessment in Mathematics reflects the general principles and procedures laid down in the school's assessment policy. This also contains details of the reporting and marking procedures within the Firs School.

2. MATHEMATICS CURRICULUM

At The Firs we base our Mathematics Curriculum delivery upon the English National Curriculum and use the following documents to inform our planning:

First4Maths at <https://first4mathsacademy.co.uk/>

Schemes of work provided by F4M can be found at [Planning overviews](#)

Access to the online videos to support planning can be found at <https://first4mathsacademy.co.uk/> and accessed by an individual's log in.

National curriculum in England - updated 28 September 2021

[National curriculum in England: mathematics programmes of study - GOV.UK](#)

The statutory framework for the early years foundation stage - updated 03 September 2021

[Early years foundation stage \(EYFS\) statutory framework - GOV.UK](#)

The early years foundation stage profile - updated 10 October 2022

[Early years foundation stage profile handbook - GOV.UK](#)

Our lessons for Reception, Key Stage 1 and 2 use First4Maths planning frameworks and Academy videos and teachers may supplement the planning with resources to supplement and resource questions.. Mathematics contributes to many subjects within the primary

curriculum and opportunities will be sought to draw mathematical experience out of a wide range of activities. This will give pupils the opportunities to apply and use Mathematics in real contexts.

We endeavour at all times to set work that is challenging, motivating and encourages the pupils to talk about what they have been doing.

The scope of the Mathematics curriculum is wide and encompasses the development of the pupils' ability to:

- apply their mathematical knowledge to solve problems, including those with real-life contexts, by choosing the appropriate operations
- estimate the approximate size of the answer to check the reasonableness of their calculations
- leave primary school with an efficient, reliable, compact written method of calculation for each operation
- develop a range of mental calculations strategies, aided by informal jottings where necessary
- be confident in the fundamentals of Maths and be able to reason mathematically
- understand the importance of mathematical skills in everyday life

3. EYFS

The Early Years Foundation Stage curriculum is followed to ensure continuity & progression from entering Nursery, into Kindergarten and FS1 before moving on to Reception Class and then through to the Maths National Curriculum in KS1 & KS2.

The Early Years Foundation Stage Curriculum is divided into prime & specific areas of learning & development. Mathematics is one of the four specific areas building on and developed through the prime areas of PSED, PD and CAL. Pupils learn mathematical skills, fluency and problem solving skills through a multitude of practical play based activities and seek to master them in many different ways. They revisit all areas regularly during the year to ensure they have a good understanding of mathematical concepts.

Pupils learn about the following skills and concepts which lie within the Early Learning Goals:

Sorting Activities

- Sort by colour, size, shape and type
- Select own criteria for sorting

Counting

- Count sets of objects reliably
- Estimate sets of objects
- Use a number line correctly
- Put numbers in the right order
- Repeat patterns using numbers
- Use ordinal numbers, e.g. first, second, third.
- Count in twos, fives and tens

Addition and Subtraction

- Know one more/one less, from 1-5, then 1-10, eventually to 20.
- Count on and back from a given number within 20
- Use +, -, = signs
- Know some number bonds e.g. $5 = 5+0$, $4+1$, $3+2$, $2+3$, $1+4$, $0+5$.
- Real life problem solving

Shape and Space

- Explore the properties of 3D shapes – cones, cylinders, cubes, cuboids, spheres
- Explore the properties of 2D shapes – circles, triangles, squares, rectangles

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- Describe shapes and recognise them in the environment
- Repeat and create patterns using objects and shapes
- Use positional words (above, below, under, next to, between)

Measures

- Use language to compare measures (long/longer short/shorter tall/taller high/higher low/lower wide/wider narrow/narrower)
- Compare without measuring
- Estimate and order
- Explore which container holds more/ less.

Time

- Know the days of the week
- Sequence the days of the week verbally
- Name the months and seasons of the year
- Know the time (o'clock)
- Begin to use the language for half past.
- Sequence events

Money

- Recognise coins to £2
- Add, subtract and give change up to 10 pence

4. RESPONSIBILITY

The Mathematics Subject Leader is responsible for improving the standards of teaching and learning in Mathematics through:

- Monitoring and evaluating Mathematics across the school
- Regular lesson observations/learning walks of all class teachers to ensure they are carrying out the aims of the Mathematics curriculum **and following the First4Maths Academy's planning unless otherwise agreed**
- A regular work scrutiny of pupils' books/work
- Monitoring of teacher planning and marking
- Learning Review meetings
- Provision of Mathematics (including Intervention and Support programmes)
- Evaluating the quality of the Learning Environment
- Analysing data and tracking pupil progress and attainment
- Supporting colleagues in their CPD
- Purchasing and organising resources
- Keeping up to date with recent Mathematics developments
- Informing SLT of actions arising from monitoring
- Reporting to the Headteacher on the progress of Mathematics
- Visiting other schools and forming professional links to develop professional knowledge and understanding

5. RESOURCES

- The majority of the Mathematics planning is based on First4Maths planning and linked to other relevant plans such as White Rose and resources accessed from a range of sites such as twinkl.
- EYFS plan **using First4Maths Academy which is based on** Development Matters Statements and the Early Learning Goals with some reference to schemes for continuity and to ensure coverage.

- The school has purchased the comprehensive calculation policy for KS1, lower KS2 and Upper KS2 This can be found on this [link](#).
- Appropriate exercise books and mathematical equipment can be found in each classroom and also in the school central mathematical store
- Each academic year the Maths Subject leader will give a proposed list of new resources to the Head teacher. Decisions are made regarding expenditure in consultation with staff and SLT/Directors. Priorities are established through review of the school development plan, the Mathematics development plan and The Firs Priorities 2015-2020 and requests from staff. Resources are then purchased on the basis of this information.
- Numbots and TTRockstars to develop fluency of 4 operations in school and at home and during SODA with a focus on times tables in KS2.

APPENDIX 1 – CALCULATION POLICY

The Firs school has purchased the calculator policy from First4Maths to ensure that all mental and written methods explained and explored within the planning matches those outlined in the calculation policy. This can be found on this [link](#).

This policy outlines both the mental and written methods that should be taught from Year 1 to Year 6, taking into account concrete, pictorial and abstract methods.

The policy has been written according to the National Curriculum 2014 and the written calculations for all four operations.

The document builds on the interconnectedness of mathematics and outlines the progression for addition, subtraction, multiplication and division across year groups and key stages.

Pupils should secure mental strategies across the four number operations. Progression in such strategies can be found in the two documents seen in this [link](#). Pupils are encouraged to look carefully at the calculation and decide which strategy they should use. Pupils should explain and reason as to why they have chosen a strategy and whether it is the most efficient.

The formal written methods should be introduced with caution. Calculations that require a written method should be presented to the pupils with models and images, such as place value counters, etc. should be used to ensure pupils have a conceptual understanding of the written method and that it is not a process that the pupils use for every type of calculation regardless of whether it can be completed mentally or mentally with jotting i.e. the number line.

For the purpose of developing understanding there may be occasions when examples that can be completed mentally may be shown as a written method purely to develop understanding of the method. This needs to be made very clear to pupils and when they are practising the methods, appropriate calculations should be used.