



## Maths Policy

This policy sets out the approach to teaching and learning maths at Fleet Primary School. The separate Calculation Policy explains in detail how we teach addition, subtraction, multiplication and division throughout the key stages.

### **Our aims:**

Through our teaching and the school environment, we aim to develop:

- Competence in a wide range of mathematical skills, knowledge and concepts
- The confidence and resilience to tackle increasingly complex mathematical tasks
- The ability to apply understanding and skills to a variety of tasks
- Problem-solving and investigative skills, such as working systematically and logically, using trial and improvement, making and testing conjectures, and generalising
- A positive attitude towards mathematics, valuing the subject and approaching it with enthusiasm, using real-life contexts and cross-curricular links where possible
- The ability to learn both independently and in collaboration with others and to communicate mathematically

### **Planning**

KS1 and KS2 teachers use the Camden Journey Planner as an overview of objectives to be covered within a year group and as a guide as to the progression and links within and across areas of maths. At Fleet, we do not follow a prescribed scheme of work for mathematics, rather teachers have access to a variety of quality resources to support their planning, namely Hamilton Trust, White Rose Mastery materials and NCETM Professional Development materials. This enables teachers to tailor their lessons to their classes' needs and to pull the most effective resources from across the materials. However, teachers are required to follow the Fleet Calculation Policy to ensure consistency and appropriate progression when teaching calculation methods.

In accordance with the Statutory Framework for the Early Years Foundation Stage (2017), class teachers of the Early Years Foundation Stage provide opportunities for all children to develop their understanding of problem solving, reasoning and numeracy through both child- and teacher-initiated activities as appropriate for the stage of development of each child. Both Nursery and Reception classes have specifically designated areas for the development of problem solving, reasoning and numeracy where children can choose to go in order to develop their own knowledge and understanding of this area of the curriculum. Alongside this, EYFS teachers lead carpet sessions with a mathematical focus, supported by adult-led small-group activities.

The National Curriculum (2014) aims for mathematics are that all children are fluent in the fundamentals of mathematics, can reason mathematically and are able to solve problems by applying their mathematical skill and knowledge. Therefore, our approach to mathematics teaching aims to cover all these aspects. Key number facts and maths skills are taught explicitly and frequently practised. Teachers promote reasoning by providing opportunity within maths tasks, modelling the process and ensuring a classroom environment where rich mathematical talk is valued and encouraged e.g. asking for full sentence answers and rich, targeted questioning.



## Maths Policy

Teachers aim to teach a lesson with a problem-solving focus once per week. Where possible, the task should relate to the current unit of maths being taught, although the focus for said lesson should be on developing problem-solving skills (such as working systematically, trial and improvement, visualising and pattern-spotting), rather than complex number operations.

Teachers save their lesson smart notes in to the Planning folder weekly to reflect their teaching and complete a termly curriculum tracker detail objectives covered.

### **Lesson structure**

In years 1 – 6, It is expected that maths is taught every day where possible, but at least four times a week. Maths lessons should be between 40 and 60 minutes, depending on pupils' age. In addition, regular practice of key number facts such as times tables and number bonds should take place to secure learning of these facts. From Y2 upwards, each lesson begins with four context-free calculations which review prior learning in order to practice and secure key methods. In Early Years, there is a daily carpet session with a maths focus along with supporting play and adult-led activities. Mathematical understanding is incorporated into role-play as much as possible as well, with adults modelling counting items out, adding sets, taking items away etc.

Lessons should provide opportunity for developing a range of skills day to day: mental and written calculation; independent and group learning; calculation and application of skill to contexts. Lessons at Fleet will often be multi-part, with new concepts being taught in small steps to support understanding and prevent misconceptions being overlooked. Teachers are encouraged to adjust their teaching within lessons and from one lesson to the next depending on the understanding of the class – dialling back or progressing more quickly as needed.

Concrete manipulatives and visual images are a key part of teaching and learning mathematics at Fleet. We believe the concrete-pictorial-abstract method greatly supports children's understanding and progression, supporting their ability to make connections and develop mathematical talk and reasoning. The Fleet Calculation Policy details the progression within areas of maths and which resources and language to use to aid understanding and ensure consistency. Mathematical talk is a key element of lessons and should be modelled and supported throughout lessons. Key vocabulary or stem sentences should be displayed and referred to.

### **Marking, feedback and assessment**

Teachers should mark pupils' learning after each lesson, in accordance with the Marking and Assessment Policy. Daily marking is an essential element in the planning and assessment cycle: it enables teachers to assess pupils' understanding and should inform their planning of the next lesson. It also provides pupils with feedback on their attainment in the lesson and enables any mistakes to be identified and rectified swiftly.

Teachers should also aim to provide feedback - verbal and/or written – within lessons. It is expected that teachers formatively assess pupils' understanding within lessons in order to address



## Maths Policy

misconceptions, maximise the opportunity for 'teachable moments' and provide extra challenge or support as needed.

In EYFS, baseline assessments are conducted in the first 6 weeks and progress is monitored closely throughout the year. EYFS practitioners observe and interact with the children, making notes on the children's understanding. This enables them to make informed judgements about the children's achievements and decide on the next steps in learning, referring to the Early Learning Goals. These observations inform assessment, alongside occasional directed tasks. Records are kept on Classroom Monitor and analysed by the Early Years Lead (Beth Cleine).

From Y2 upwards, children sit a weekly speed test to support and motivate their learning of key number facts (we call this 'Fleet Facts'). Children's results are logged on a whole-school spreadsheet so that the class teachers, Maths Lead and SLT can monitor progress and identify any need for intervention. Teachers may also choose to set arithmetic tests and other quizzes as an assessment tool. All children complete a PUMA test once a term from Y1 onwards, to enable teachers to assess understanding and plan accordingly.

Children's attainment is monitored through Classroom Monitor online tracking system. Every term, class teachers meet with Senior Leadership Team to review pupils' progress and discuss any concerns/agree additional action to be taken. Also, termly reports are written detailing children's targets in mathematics and these are shared and discussed with parents during parents' evening.

### **Professional Development**

The Maths Subject Leader and Senior Leadership Team review and address the professional development needs of all staff. The Maths Subject Leader attends termly Camden training and feeds back to school staff. Regular INSET training is delivered by the Maths Subject Leader to teaching staff, and to support staff as needed. Teachers and support staff may also attend external training when applicable. Teachers also have the option to attend a Joint Professional Development group through the school's membership to Camden Maths Hub.

### **Learning environment**

Every classroom is expected to have a Maths Working Wall which displays resources, images, vocabulary etc to support children's learning and understanding. These displays should be updated regularly to reflect the current learning objectives and, where suitable, include examples of children's learning. Resources and equipment (such as number squares, counting beads, Numicon) should be stored neatly and accessibly in each classroom and children should have access to these as needed. Additional equipment is stored in the centralised maths cupboards.

Maths learning is celebrated and valued on the Maths display in the Office block; it displays maths learning from across the school, usually with a particular focus e.g. Maths in Art. There is also a display board celebrating the children's progress in learning their key number facts. The 'Fleet Facts' board is partitioned into different stages and children's names are displayed on the stage they are currently working on (e.g. Stage 4 is 2, 5 and 10 times tables). Opportunities for cross-curricular or



## Maths Policy

informal mathematics should be sought and utilised, in order to encourage an understanding of the value of mathematics and to reinforce learning.

### **Equal opportunities and differentiation**

We incorporate mathematics into a wide range of cross-curricular subjects and seek to take advantage of the universality of mathematics. In the daily maths lessons, we support children with English as an additional language in a variety of ways including repeating instructions, emphasising and displaying key words, using visuals, playing mathematical games, encouraging children to join in counting, chanting, finger games and rhymes.

All children should have access to a broad and balanced curriculum. Provision for children with SEN is the responsibility of the class teacher, support staff and SEN Co-ordinator as appropriate. Where applicable, children's Individual Education Plans (IEPs) incorporate suitable objectives from the National Curriculum and teachers keep these objectives in mind when planning work.

Teachers assess the individual needs of children continuously and adjust their teaching to reflect this. Often teachers will differentiate learning through setting tasks which progressively increase in difficulty – 'Mild, Spicy, Hot'. Children, with support, select the right level of challenge for them each lesson; it is important the class culture supports the children to be confident in choosing the right level for them. Worked examples by the teacher in the lesson input demonstrate the difficulty of each level which enables children to choose appropriately. 'Chilli challenges' are set for children who demonstrate secure understanding of the objective and these provide opportunity for the child to work at depth within the year group's objectives. Differing needs may also be met through the resources and equipment used, such as having number lines or counting beads available or having an adult aid at a table to support understanding and focus. However, this support should be fluid and in response to children's needs – teachers and support staff should not always be sat with the same child/children, nor should children always be sat with the same peers.

### **Home learning**

A maths objective is set every week as home learning from Y2 upwards. This objective will have the same focus as that week's in-class learning and is an opportunity for children to practice and consolidate their understanding. In addition, children are expected to practice an appropriate times tables and teachers will converse with parents regarding any other focus areas where appropriate. In Early Years and Y1, teachers will provide parents with an overview of objectives and some ideas to support their children's learning of these at home.

### **Role of Subject Leader**

It is the role of the Mathematics Subject Leader to:

- Ensure continuity of progression in learning across the school and coverage of the National Curriculum and Early Years Foundation Strategy



# Fleet Primary School

## Maths Policy



- Monitor and evaluate the quality and standards of mathematics throughout the school and support teachers when necessary
- Write and evaluate an annual action plan which is part of the school's Development Plan
- Monitor standards of attainment across the school alongside the Head Teacher and Deputy Head Teacher by analysing samples of children's work, planning, teaching and any available data
- Attend courses on the teaching and assessment of Mathematics regularly and keep teachers updated with any developments in policy from the local authority
- Encourage colleagues to attend courses to develop their professional practise in the teaching and assessment of mathematics
- Manage and update resources and equipment
- Review and amend relevant policies
- Advise and support teachers, helping to identify and address areas in which teachers would benefit from further support in their teaching and assessing of mathematics

Policy written by Holly Kingham, October 2018. Updated April 2020.