

St. Francesca Cabrini Primary School

# Mathematics Policy



*‘Education of the Heart’*

*Respect-Love-Trust-Prayer-Excellence*



# ST FRANCESCA CABRINI PRIMARY SCHOOL

## MATHEMATICS POLICY

### Introduction

St Francesca Cabrini Primary School provides a stimulating and exciting learning environment in which children want to be active learners and thrive because they feel happy, safe and secure. There is a calm, focussed atmosphere across the school in which children are challenged and have the confidence to reach their potential. Children are at the centre of everything that is achieved and our core values permeate their mathematical learning, as our teaching practice is centred round our core values - 'education of the heart' addressing the needs of the 'whole' child.

Our children are expected to be well-behaved, polite and courteous, show respect for others and value diversity. We aim to create an inclusive and motivating environment in which they are excited to learn. They will be expected to always do their best and set themselves high standards. Pupils, staff and parents will work in partnership in order for all children to achieve their best. Our children are encouraged to have an enquiring and inquisitive mind. They are taught the importance of perseverance in the face of challenge and understand that making mistakes is part of the learning process.

### Overview

Key Features that will be explained in this policy document:

- Aims and objectives
- National Expectations for Attainment and Achievement
- Teaching and Learning
- Planning and lesson structuring
- Marking and feedback
- Use of peer and self-assessment
- Home learning
- Assessment, analysis and target setting
- Intervention and inclusion
- Reporting to parents
- Early Years Foundation Stage (EYFS)
- Monitoring and evaluation
- Resources
- Staff development

### Other relevant Policies: Calculation Policy

#### Aims and objectives

At St Francesca Cabrini Primary School we provide a consistent whole school approach to teaching and learning in Mathematics across the curriculum. We follow Southwark planning guidance across all age phases and have a whole school Calculation Policy that has been developed with Southwark lead practitioners. Our objective is to equip children with the Mathematical skills, knowledge and understanding that will enable them to continue to learn and therefore succeed in their chosen future path.

Our aims are:

- to promote enjoyment, confidence and enthusiasm for learning through practical activity, exploration, discussion and practise;
- to provide appropriate support and challenge for all in order to ensure that children meet their potential;
- to develop their ability to solve problems through decision-making and reasoning in a range of contexts;
- to promote fluency, confidence and competence with numbers, the number system and calculation;
- to give them the opportunity to explore features of measures, geometry and statistics; and develop skills in working with these in a range of contexts;
- to help them recognise the importance of Mathematics in everyday life.

### **National Expectations for Attainment and Achievement**

At the **end of Key Stage One** children are assessed by their teachers using National Teacher Assessment Frameworks for mathematics. Generally children will be described as either working towards the expected standard; working at the expected standard; or working at greater depth within the expected standard with most children working at the expected standard. Few children will not be working at this level and therefore will be assessed using the Pre-KS1 assessment framework which describes children as having the foundations for the expected standard.

At the **end of Key Stage Two** children are assessed by their teachers using National Teacher Assessment Frameworks for mathematics and by their performance in a set of national tests which are externally marked. Both the teacher assessments and the tests (through conversion of their raw score into a standardised score) will identify the children as either working towards the expected standard; working at the expected standard or working at greater depth within the expected standard with most children working at the expected standard. Again they may be occasion when a particular child is not working at the level of the expected standard and will be assessed using the Pre – KS2 assessment framework. A child working at this level would not sit the national tests.

### **Teaching and Learning**

#### **Planning and lesson structuring**

The National Curriculum (2014) provides a programme of study for Mathematics as it does for all subjects. The programmes of study are separated into year groups and within the year groups into content domains e.g. number – number and place value. Each domain has statutory requirements and notes and guidance – identified as non-statutory.

St Francesca Cabrini School adhere to the National Curriculum programs of study. We use the STAR tracking, assessment and assessing tool developed by Southwark to track pupil progress. We recognise that lessons can, and should be, structured in a variety of ways with consideration of what best suits the concept(s) being explored the main priority. What is fundamental is that our teaching staff structure their lessons in ways that provide children with opportunities to review their learning regularly, as research shows the regular review embeds learning more securely and enables teachers to identify misconception quickly. The use of AfL (Assessment for Learning) techniques further supports pupil learning in a summative way build the picture for more formal assessments every term (current internal tracking and assessment cycle; December, March and June).

The National Curriculum (2014) place emphasis on three key aims:

- “become **fluent** in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
- **reason mathematically** by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language
- can **solve problems** by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions”. (Department for Education 2013)

Therefore there is an expectation that however teachers at St Francesca Cabrini School structure their individual lessons, over time, children will consistently have the opportunity to work in a range of ways in order to develop these three skills.

### **Marking and feedback**

Teachers are expected to ensure that mathematics work is marked in line with the school’s Marking Policy. Marking may be carried out by someone other than the teacher, for example, a teaching assistant or a child; however it is the responsibility of the teacher to be aware of the how children have done and use this to inform their future planning. Good quality marking will provide children with information about how they have achieved their personal targets, group targets or what they have done well and where they need to improve. In maths children will also be challenged to try the next step and/or answer a question which is intended to probe their understanding further through reasoning or problem solving. Children are given the time to respond to marking either at the start of the day (early work) or start of the next lesson. In some cases feedback about children’s work and learning will be given verbally– this is particularly true in situations when children have worked with an adult or as part of group on a practical task. Verbal feedback should provide children with the same information as written.

### **Use of peer and self-assessment**

At St Francesca Cabrini School pupils are regularly asked to reflect and comment on their own learning. In Maths this may occur at the end of a lesson or activity when children are asked to assess their performance – what they felt confident about, struggled with or what they need to do next. It can also happen earlier in the lesson when children may be asked to decide on the level of support they require or level of challenge that they are going to work at – in these instances it is the responsibility of the teacher to ensure that children make appropriate decisions. Teachers are encouraged to plan for and use various AfL techniques e.g. number fans, whiteboards, partner talk etc. in order to assess and evaluate the mathematical learning that is taking place within a lesson. Self-assessment provides teachers with vital information about how children feel about their learning. Children are also asked to comment on the learning of other children. This will take a variety of forms but most commonly as verbal feedback when a child models a method or describes their strategy. In Mathematics peer assessment provides the opportunity for children to recognise the value of different methods and approaches to reaching a solution (as the assessor) and receive positive feedback and support from someone other than a grown-up (as the assessed).

### **Home Learning**

After consultation with all parents in the Spring of 2018, home learning for maths has been clearly structured across the school with the implementation and roll-out of Mathletics (from Reception onwards) and consists of two key elements: online work linked to current class based learning using year group work books and the learning/revision of number facts ready for informal assessment in school. Where appropriate some parents may be asked to complete additional work with their child in order to help the reach age-related expectations. Homework books have a daily/weekly mathematical focus and multiplication tables are practised and learnt across Key Stage 2.

### **Assessment, analysis and target setting**

It is a statutory requirement that children are formally assessed at the end of the Foundation Stage and Key Stages One and Two. The results of these assessments are reported to parents, the Local Authority and the DfE.

At St Francesca Cabrini School we assess children's progress in Mathematics continuously. Teachers use their observations, and those of their TAs, from daily lessons, marking, work in focus groups and informal tests to monitor the progress of all children against mathematics statements from STAR (Southwark Tracking System) which is in line with national expectations for each national curriculum year group.

Pupils are assessed termly against the expectations/expected progress for that term. Teachers plan assessment tasks which may include formal testing using past test papers or use an online tool via Mathletics or Test Base in order to assess pupil progress.

Pupils are tracked termly using the in-house tracking and monitoring system based on STAR. This detailed evidence base provides information to inform teacher's future planning and identify individual, group and class strengths and gaps. It forms the basis of discussion at termly Pupil Progress Reviews held between teacher, assessment lead, deputy headteacher and, where appropriate, SENCo. PPRs are used to identify children making greater or less than expected progress and thereby inform the provision of appropriate intervention.

### **Intervention and inclusion**

All children receive quality first teaching for Mathematics on a daily basis and activities are differentiated accordingly – challenge and support for all children at the right level is an expectation at St Francesca Cabrini School.

Children identified as needing additional support in order to meet age related expectations will do so in a variety of ways, these include: targeted focus group sessions within lessons taken by the teacher or teaching assistant; small group intervention sessions outside of maths lessons and/or one to one intervention sessions. As identified, all intervention work is planned for using close analysis of assessments and evidence.

Children identified as 'more able' will also have targeted focus group work planned for them, as well as appropriately differentiated activities as part of the everyday mathematics lessons.

Additional targeted maths sessions outside of the classroom with a specialist maths teacher will be planned for in discussion with the class teacher and the maths coordinator.

We strive hard to meet the needs of those pupils with special educational needs, those with disabilities, those who are gifted and talented, and those learning English as an additional language. For further details, see individual whole-school policies: Special Educational Needs (SEND 2016) and Equal Opportunities.

### **Reporting to parents**

Parents will formally receive information about their child's performance in Mathematics three times a year; at the autumn and spring terms' Parent Consultation Evenings and in the annual written report at the end of the academic year. Parents will be told their child's current level of attainment, progress made, areas of strength and weakness and next steps for development at these meetings and will be furnished with end of year expectations for each curriculum year group, as well as individual pupil targets. Parent workshops are held in the Autumn term for pupils in EYFS and Year 6 explaining approaches to mathematical learning at St Francesca Cabrini School and preparation for statutory assessments. Teachers may contact parents – and vice versa - to talk about a child's progress at other times if appropriate.

### **Early Years Foundation Stage**

The Early Years Foundation Stage (EYFS) Framework sets the standards that all Early Years providers must meet in order to ensure that children learn and develop well. The learning and development requirements cover: the areas of learning and development which must shape activities and experiences, the early learning goals that providers must help children work towards; and assessment arrangements for measuring progress.

There are seven areas of learning and development of which Mathematics is one, described as a 'specific area'. Maths is then split into two sub-areas: number and shape, space and measure "Mathematics involves providing children with the opportunities to develop and improve their skills in counting, understanding and using numbers, calculating simple addition and subtraction problems; and to describe shapes, spaces and measures." (Department for Education 2012)

At St Francesca Cabrini School Mathematics in the EYFS is implemented through planned, purposeful play and through a mix of adult-led and child initiated activity. Our teachers strive to ensure that the balance between adult-led and child initiated activity is suited to the needs and maturity of the children; and changes as appropriate across the course of their Reception class year. Simple home learning tasks, such as playing number games, will be set when appropriate.

### **Monitoring and evaluation**

Mathematics is monitored by the Head teacher, Deputy Head (also the subject leader) and SLT/SMT. Having identified priorities for the development of Mathematics at St Francesca Cabrini School, the subject leader constructs an action plan that forms part of the School Development Plan. This will identify monitoring activities, stating clearly what is to be monitored and how this will take place e.g. classroom observation, planning scrutiny, work sampling and pupil interviews. Work scrutiny is the most regular form of monitoring and is carried out by the SLT as a group or individually as senior managers or lead teachers. Monitoring should evaluate the impact of previous actions within the subject, identify issues and next steps.

### **Resources**

St Francesca Cabrini School is well resourced for teaching and learning in Mathematics. Basic everyday concrete resources are kept in classrooms while less frequently used ones, such as shape and measures equipment, are kept in the maths cupboard on the first floor.

Teachers have access to a wide variety of software and recommended websites, including Mathematics to use in their lessons. All classes have access to a wide range of Maths games which support the reinforcement of basic skills. Teachers are encouraged to bring "new finds" to the attention of the subject leader and other staff.

### **Staff development**

The SLT and the subject leader actively researches ways to develop the teaching of mathematics at St Francesca Cabrini School and thereby raise the standards of teaching and performance of pupils.

Supported by SLT and the subject leader, teachers are expected to keep up to date with curriculum developments, resources and materials that are available. They are encouraged and supported in the continuous development of their subject knowledge, range of teaching strategies and use of different pedagogy. Training needs are identified as a result of whole school monitoring and evaluation, performance management and through induction programmes. These will be reflected in the School Development Plan when needed. Additional adults who are involved in supporting learning and/or deliver intervention programmes will receive appropriate training.

**Ratified by the Governing body: 4.1.2021**

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