



## ST ANDREWS CE PRIMARY SCHOOL

### Maths Policy

At St Andrew's CE Primary School, we aim to bring children to a place where they can realise their full potential. Our Christian values are the foundation of all we do and each one is a facet of the central value, love, which 'always protects, always trusts, always hopes, always perseveres.' (1 Corinthians 13:7)

This Policy reflects St. Andrew's Church of England Primary School's Christian ethos and mission statement. It was written with our Christian values of Creativity and Wisdom in mind

#### Introduction:

This policy outlines the teaching, organisation and management of mathematics taught and learnt at St. Andrew's CE Primary School. The school's policy for mathematics is based on the requirements of the National Curriculum 2014. It has been drawn up as result of staff discussion and has full agreement of the Governing Body. The implementation of this policy is the responsibility of all the teaching staff.

#### The Nature Of Mathematics:

The National Curriculum 2014 states that Mathematics is:

Essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. A high quality mathematics education therefore provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject.

Mathematics is a tool for everyday life. It is a whole network of concepts and relationships which provide a way of viewing and making sense of the world. It is used to analyse and communicate information and ideas and to tackle a range of practical tasks and real life problems. It also provides the materials and means for creating new imaginative worlds to explore.

#### Aims and Objectives

Using the Programmes of Study from the National Curriculum 2014, it is our aim for all children to:

**become fluent in the fundamentals of mathematics**, so that they:

- have a well-developed sense of number values
- know by heart key number facts, e.g. times-tables and related division facts, number bonds – in line with the latest programmes of study
- apply knowledge of the above to work out connected facts

**reason mathematically**, so that they:

- are able to follow a line of enquiry
- provide generalisations and proof of findings around their investigations
- are able to justify their thinking, e.g. as to why a particularly calculation strategy is the most efficient

**solve problems by applying their understanding of mathematics**, so that they:

- encounter a variety of both routine and non-routine problems
- are able to select specific maths skills and/or operations
- persevere with a line of enquiry, breaking down increasingly complex problems into a series of smaller steps

We want children to enjoy maths and feel confident using it across the curriculum and in life outside of education.

## **Planning**

In Foundation Stage, Key Stage 1 and 2 teachers plan for the teaching of mathematics using the National Curriculum 2014, St. Andrew's CE Primary School's Calculation Policy and White Rose Maths Hub Schemes of Learning. In addition to these documents, Foundation Stage use the Early Learning Goals.

Teachers adapt each mathematical unit to the needs of their class and can use a range of materials when planning their units of work and weekly lessons, such as Primary Stars and the NCETM maths mastery materials. However, all the objectives for lessons come from The White Rose Maths Hub scheme of work.

Teachers plan a mastery approach to mathematics. This involves:

- teaching the whole class together and learning about the same mathematical ideas
- small steps in learning
- using a variety of models and images
- using a concrete, pictorial, abstract approach
- teaching specific vocabulary, as outlined in the Calculation Policy and White Rose Maths Hub.
- collaborative talk, partner talk
- teachers modelling problem solving using meta cognition
- encouraging the children to see patterns and make connections
- encouraging children to compare methods of calculation and problem solving
- helping the children to become fluent with their number facts and times tables
- valuing misconceptions and errors as a next step in learning
- creating a positive classroom environment for teaching maths

Where possible, teachers make links between subjects to provide experiences that enrich learning and to consolidate and apply the skills that the children have learnt in a variety of contexts.

Reasoning and Problem solving is included in the daily lesson plans. In Years One and Two, the children reason orally in every lesson. In addition to this, in Key Stage Two, children discuss and write one reasoning and problem solving question each week in more detail, recording their thinking in their maths books.

## **Teaching and Learning**

To provide adequate time for developing mathematical skills each class teacher provides a daily mathematics lessons, lasting between 45 and 60 minutes.

In the Foundation Stage mathematics is taught through a range of learning contexts with shorter focused activities. Towards the end of Foundation Stage teachers aim to draw the elements of a daily mathematics lesson together so that by the time children make the transition into Year 1 they are familiar with the 45 minute lesson.

From Year 1, all pupils will have a dedicated daily mathematics lesson every day. Within these lessons there will be a good balance between whole-class work, group teaching and individual practice.

## A Typical Lesson

A typical 45 to 60 minute lesson in Years 1 to 6 might be structured like as follows:

- Oral work and mental calculation. This will involve whole-class work to rehearse, sharpen and develop mental and oral skills.
- The main teaching activity. This will include both teaching input and pupil activities and a balance between whole-class, grouped, paired and individual work.
- A plenary. This will involve work with the whole class to address misconceptions, identify progress, summarise key facts, to make links to other work and to discuss next steps.

Wherever possible, Teaching Assistants work in class, supporting all ability groups, specific individuals or groups of children, ensuring that work is matched to the needs of the child.

### **Times tables**

From Year Two onwards, children are taught times tables, using a variety of methods, including through the use of counting sticks. Children are tested weekly on their times tables in Key Stage Two, and we aim to help children become fluent with their tables recall.

### **Recording of Pupils' Work**

There are occasions when it is not necessary to record mathematics in a permanent form, but there are also occasions when it is both quick and convenient to carry out written calculations. It is also important to record aspects of mathematical investigations. Children are taught a variety of methods for recording their work and they are encouraged and helped to use the most appropriate and convenient method of recording for themselves.

All children are encouraged to work tidily and neatly when recording their actual answers but jottings may take any form and are important evidence for the teacher.

The school has developed a policy for written calculation which is available to all teachers, teaching assistants and parents and may be located on the school's website [www.st-andrews.oxon.sch.uk](http://www.st-andrews.oxon.sch.uk)

### **Links between mathematics and other subjects**

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 allow children to begin to use and apply mathematics in real contexts.

### **Resources**

Mathematics resources are held centrally in Manser resource cupboard and in classrooms.

### **Assessment**

Assessment of pupil work and progress is on-going by the class teacher and informs future planning. Teachers mark work in mathematics in line with the school marking policy. EYFS teachers use EYFS Development Matters and the Early Learning Goals to assess children's progress.

Teachers use National Curriculum 2014 year group objectives to track pupil progress. Teachers and pupils review progress at the three assessment points during the academic year and children are assessed as 'Emerging, Expected, Exceeding' against the year group objectives.

Teachers use this information to inform planning for groups and individual pupils, and to set targets. Children are encouraged to self and peer-assess their work during lessons (and over the course of a unit) in order to develop their learning skills and use of mathematical language.

In the core subjects, statutory assessments are made at the end of Foundation Stage and end of Key Stage 1 and 2.

Parent/teacher discussions are held in the Autumn and Spring terms and parents receive a mid-year progress report and an annual report at the end of the year.

There are three assessment points for maths for teachers in KS1 and KS2 each academic year. Teachers use these to monitor pupil progress and update each child's attainment on the Oxfordshire Pupil Tracker (OPT). Following these assessment points, pupil progress meetings are held to discuss any pupils of concern.

Each topic that is studied in Key Stages One and Two, is preceded by a cold assessment and ends with a hot assessment, which helps to inform planning and pupil progress. In Key Stage one, this may consist of a teacher working with a small group and scribing the children's answers. In Key Stage Two, the children all record their ideas on paper.

### **Principles of Mathematics Assessment**

Mathematics is a connected body of knowledge so assessment in maths looks for pupils making connections and demonstrating relational understanding.

Activity is not enough; it is the sense that we make of it that matters. Making sense of the maths means going beyond 'doing'; it comes from conceptual understanding of the structure of the mathematics, which leads to generalising.

Children need opportunities to work at the edge of their understanding in order to demonstrate fully what they do understand and what they need to learn next: this will involve children struggling and getting things wrong. In mathematics at St Andrew's, teachers and pupils value misconceptions and use them as teaching points. We have a philosophy of 'not yet' with mathematics to encourage a growth mindset.

Unless opportunities are provided for children to make decisions, make connections and explain their thinking it will not be possible to make judgements: 'getting it right' is necessary but not sufficient.

Assessment includes observation and dialogue and is a necessary part of every lesson.

Assessment feedback inspires greater effort and a belief that, through hard work and practice, more can be achieved. Assessment occurs throughout lessons.

### **Equal Opportunities**

All teaching and non-teaching staff at St Andrew's CE Primary School are responsible for ensuring that all children, irrespective of gender, ability, ethnic origin and social circumstances, have access to the whole curriculum and make the greatest possible progress. All children have equal access to the mathematics curriculum and its teaching and learning throughout any one year. Day-to-day monitoring of the mathematics policy, and the provision of equal opportunities in Mathematics, is the responsibility of the class teacher.

Special Educational Needs Within the daily mathematics lesson teachers aim to provide activities to support children who find mathematics difficult. Children with SEN are taught within the daily mathematics lesson and are supported to access learning in all lessons, except in extreme circumstances. Where applicable, Pupil Learning Plans include suitable objectives from the National

Curriculum and White Rose scheme of learning, and teachers keep these objectives in mind when planning work.

When support staff are available to support groups or individual children, they work collaboratively with the class teacher. The teaching assistant or support teacher liaises with the class teacher when appropriate to inform evaluations, assessment and future planning.

Early Morning Interventions (EMI) with teaching assistants is used to pre-teach maths and to help targeted pupils to consolidate methods and concepts.

### **More Able, Gifted and Talented**

More able children in mathematics will be taught with their own class and extended through tasks which require them to explain their thinking. Teachers plan using a 'top down' approach to ensure that the more able are challenged and the expectations are high for all children.

Differentiation may be by outcome, support, resource or sometimes by the lesson input that is given to different groups by the teacher or a teaching assistant.

Children who have been identified as more able, gifted and talented are given opportunities to extend their learning through tasks, such as acting as a teacher to other children, explaining their reasoning to the class, and devising questions of their own that relate to the objectives of a lesson. We create opportunities for them to work collaboratively to develop higher order thinking skills. External challenges and competitions for gifted and talented children are organised where possible and appropriate.

### **Homework**

All classes receive maths homework each week. In EYFS and Key Stage 1 this will often take the form of games or key number facts to learn.

In Key Stage 2 children may be given either a mental, written or problem-solving activity to complete. Children from Years 2 – 6 are also given multiplication and division facts to learn each week.

### **Roles and Responsibilities**

See subject leader job description.

### **Thame Partnership**

The Thame Partnership of Schools provides CPD opportunities for staff and opportunities for children to develop their understanding and enjoyment of maths. The moderation of maths through the Thame Partnership underpins the internal judgements of the teachers when assessing children's work.

The Thame Partnership Maths network is currently led by the Maths Leader at St. Andrew's CE Primary School.

### **Evaluation**

Evaluation and review of the policy for mathematics and any schemes of work take place regularly. The whole staff works together to suggest any changes or adaptations of policy which are then discussed and if necessary, the policy document is amended. Throughout the year, staff are encouraged to feedback information and ideas. This may include comments on work the children are undertaking, comments on the availability and suitability of resources and any other relevant comments about the overall structure of the Mathematics Scheme of Work

**Review**

This policy will be reviewed every three years or in the light of changes to legal requirements.

**Signed:** .....

**Signed:** ..... **Chair of Governors**

**Date:**           **February 2024**

**Review Date:** **February 2027**