



## Stanley St Andrew's Church of England Primary School

### Curriculum Policy for Maths

As a church school we believe that every person, every child, and every adult is unique and special with God given gifts and talents which is our job to nurture and cherish.

#### The Nature of Mathematics

Mathematics provides a way of viewing and making sense of the real world. Mathematics can be used to describe, to illustrate, to predict and to explain. The usefulness of mathematics is unquestioned, but the skills and knowledge should be imparted to children through meaningful and relevant activities.

“Numeracy is a key life skill. Without basic numeracy skills our children will be disadvantaged throughout life.” (National Numeracy Strategy).

“The aim of the Primary Framework for mathematics is to support and increase all children’s access to excellent teaching, leading to exciting and successful learning,” (Primary Framework).

We believe that **everyone** in the school community can contribute to improving numeracy.

#### Aims and Objectives of Mathematics

Mathematics provides a way of viewing and making sense of the real world. Mathematics can be used to describe, to illustrate, to interpret, to predict and to explain.

The utility of mathematics is unquestioned, the skills and knowledge should be embedded in purposeful activities.

It is the entitlement of every child to be given access with appropriate differentiation, to the knowledge and the skills, which are critical to success not only at school but also throughout life.

Numeracy is a proficiency, which involves confidence and competence with numbers and measures. It requires an understanding of the number system, a repertoire of computational skills and an inclination and ability to solve number problems in a variety of contexts. Numeracy also demands practical understanding of the ways in which information is gathered by counting and measuring, and is presented

in graphs, diagrams, charts and tables. The Primary Framework for Mathematics illustrates the intended range and balance of work to make sure that pupils become properly numerate.

Numerate primary pupils should

- Have a sense of the size of a number and where it fits in the number system
- Know by heart number facts such as number bonds, multiplication tables, doubles and halves
- Use what they know by heart to figure out answers mentally
- Calculate accurately and efficiently, both mentally and with pencil and paper, drawing on a range of calculation strategies (refer to Calculations Policy)
- Recognise when it is appropriate to use a calculator, and be able to do so effectively
- Make sense of number problems, including non-routine problems, and recognise the operations needed to solve them
- Explain their methods and reasoning using correct mathematical terms
- Judge whether their answers are reasonable and have strategies for checking them where necessary
- Suggest suitable units for measuring, and make sensible estimates of measurements and
- Explain and make predictions from the numbers in graphs, diagrams, charts and tables.

We will aim to foster the ability in every child to understand and use mathematics purposefully, creatively and imaginatively and with confidence and enjoyment. We aim to provide pupils with a supportive atmosphere in which to develop their mathematical skills so that they may:

- Develop a positive attitude to mathematics
- Develop imagination, initiative, and flexibility of the mind
- Develop the skills of working systematically, independently and co-operatively.

## **IMPLEMENTATION**

The teaching objectives from Reception to Year 6 in the 'Primary Framework' will be used to plan appropriate provision and ensure high expectations are set. Differentiation and progression are built into teaching. Speaking and listening are an integral part of all Numeracy lessons, with the correct use of vocabulary being crucial to learning.

### **Organisation within the curriculum**

Work and activities in all classrooms reflect and imaginative, purposeful, confident and creative use of Mathematics across the curriculum.

The school has adopted Whiterose for planning purposes, which offers single and mixed age planning with a multitude of resources.

At the Foundation Stage, teachers use baseline assessments to form numeracy groups. Objectives for planning are taken from both the Early Years Foundation Profile and Whiterose. At Key Stages 1 and

2 pupils are taught in maths groups within their classroom, which are organised as a result of ongoing assessment. Challenging opportunities are provided for pupils, depending upon their age and ability, to work in a variety of ways, which include:

- Individual and group work
- Practical, investigational and problem solving activities
- Oral, written and mental work
- Using calculators appropriately
- Using books, computers, mathematical and other concrete apparatus as a resource
- Regular mental maths tests and regular testing of number bonds and multiplication facts
- Using the outside environment as a base for learning

### **Learning environment**

Throughout the school we stimulate children's interest and curiosity in numeracy by:

- Sharing our interest and enthusiasm for maths with them
- Relating mathematics to everyday life, thus making it real for them
- Having targets, objectives and teaching points on display and used by the children
- Provision of posters and mathematical equipment accessible around the school

### **Organisation/cross-curricular issues**

- There is a dedicated Numeracy time for all classes.
- There are opportunities for Numeracy in cross-curricular activities, such as science, D&T, Geography and History, and links are drawn upon by talking about them frequently in both maths and other subjects.
- The use of concrete resources are essential, allowing the structure of maths to be understood more deeply and avoid misconceptions.
- Weekly problem solving lessons are undertaken to promote resilience, independence and ability to think for themselves.
- Times tables are taught to develop fluency in applying their maths knowledge and improve working memory.

### **Support Staff**

Teaching Assistants have a clear understanding of their role in the lesson and are included in numeracy staff training. Teaching Assistants will work with small groups and named individuals through consultation and direction of the class teacher. The support of all parents/guardians is welcomed in helping their child/ren to achieve specific targets in mathematics e.g. learning number facts, practical activities such as baking and shopping at home, or with activities in and around the home, or with activities in and around the home.

Targets are set termly throughout the school and parental support is encouraged in order to achieve these.

## **Foundation Stage**

Through practical activities, children become familiar with sorting, matching, ordering, sequencing and counting concepts which form the basis of early mathematics. As they use their developing mathematical understanding to solve problems, children are helped to use the vocabulary of mathematics, identifying objects by shape, position, size, volume and number.

Songs, games and picture books help children become aware of number sequences. Children are taught how to use simple mathematical operations such as addition and subtraction. Teaching Assistants have an important role in supporting numeracy teaching and learning whether working with specific individuals, or groups.

## **Continuity and Progression**

- Whiterose provides a continuous scheme of work
- Teaching objectives show progression over time
- Children are taught to appropriate teaching objectives
- Information and work is shared and passed on
- Progression is ensured between Key Stages

## **Assessment, Recording and Target Setting**

- Monitoring and assessment in numeracy helps us to support pupils in their learning. Evidence is then used to inform planning, teaching, grouping and reporting
- We use the 'Foundation Stage Profile' to provide us with a 'starting point' against which all future progress can be charted
- Each child is assessed half termly and Whiterose excel documents completed to inform target setting, through class work and formal assessment sheets. The information is then uploaded to Integris for tracking purposes.
- As teachers we carry out continuous assessment of each child's progress in all aspects of the Maths curriculum.
- The children 'self-assess' at the end of every lesson, which helps teachers identify the children's response to their learning.

## **Equal Opportunities**

Teacher's weekly plans are taken from Whiterose and will indicate where and when necessary, how activities are adapted or extended to cater for children of differing ability. Children may be grouped in such a way that these abilities can be best catered for and this may involve the pupils being taught by another member of staff other than the classroom teacher.

Every effort is made to ensure that activities are as equally interesting and accessible to both boys and girls. Teachers strive to avoid any bias according to a child's sex, ethnic origin, disability or social background in accordance with procedures outlined by Derbyshire County Council.

## **Special Educational Needs/Gifted and Talented**

To ensure that each child has the opportunity to succeed and reach their potential, we plan and differentiate for groups and individuals according to their needs and targets. (see policy documents for SEN and Equal Opportunities).

### **Parental and Community Involvement**

We encourage parents to:

- Work with their children on numeracy tasks provided by the school on a weekly basis, consisting of interactive games and/or worksheets
- Include their children in tasks involving counting and measurement
- Help children to learn their tables
- Share games with their children
- Highlight the relationships of maths to 'real life' situations

### **Resources**

- The Primary Framework for Mathematics outlines the learning objectives that are used to formulate planning
- Whiterose provides lesson plans, resources and assessment.
- A variety of ICT resources for mathematics are used in each class
- Espresso, Purple Mash, Active Learn and White Rose are available as a teaching tool and as a resource for individual work

### **Review**

This policy was compiled by our Subject Lead for Maths Miss Price in July 2021.

This policy will be reviewed in July 2023.