



**Signed:**

Policy date: September 2018.

Review date: September 2020

**Mathematics Policy**

This policy outlines the teaching, organisation and management of mathematics at Seaton Delaval First School. The school's policy for mathematics is based upon the National Curriculum 2014, developing fluency, reasoning and problem solving. The implementation of this policy is the responsibility of all teaching staff.

**OBJECTIVES**

Each child should be able to think and solve mathematical problems using the appropriate skills, concepts and knowledge. We aim to provide the children with an enjoyable, interactive, practical experience of mathematics which will meet their individual needs and be useful in everyday life.

We aim to pursue high academic standards through the provision of a broad and balanced curriculum which

- . serves the needs of all children
- . motivates children to have high expectations and self-esteem
- . stimulates and challenges
- . involves practical and first hand experiences
- . is continuous and progressive
- . has built in monitoring, evaluation and review procedures
- . makes pupils aware of mathematics beyond the classroom
- . supports a mastery approach to learning and teaching

Teachers should develop pupils' numeracy and mathematical reasoning in all subjects so that they understand and appreciate the importance of mathematics.

The national curriculum for mathematics aims to ensure that all pupils:

- . 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.

The principal focus of mathematics teaching in key stage 1 is to ensure that pupils develop confidence and mental fluency with whole numbers, counting and place value. This should involve working with numerals, words and the four operations, including with practical resources.

At this stage, pupils should develop their ability to recognise, describe, draw, compare and sort different shapes and use the related vocabulary. Teaching should also involve using a range of measures to describe and compare different quantities such as length, mass, capacity/volume, time and money.

By the end of year 2, pupils should know the number bonds to 20 and be precise in using and understanding place value. An emphasis on practice at this early stage will aid fluency. Pupils should read and spell mathematical vocabulary, at a level consistent with their increasing word reading and spelling knowledge at key stage 1.

The principal focus of mathematics teaching in lower key stage 2 is to ensure that pupils become increasingly fluent with whole numbers and the four operations, including number facts and the concept of place value. This should ensure that pupils develop efficient written and mental methods and perform calculations accurately with increasingly large whole numbers.

At this stage, pupils should develop their ability to solve a range of problems, including with simple fractions and decimal place value. Teaching should also ensure that pupils draw with increasing accuracy and develop mathematical reasoning so they can analyse shapes and their properties, and confidently describe the relationships between them. It should ensure that they can use measuring instruments with accuracy and make connections between measure and number.

By the end of year 4, pupils should have memorised their multiplication tables up to and including the 12x multiplication table and show precision and fluency in their work.

Pupils should read and spell mathematical vocabulary correctly and confidently, using their growing word reading knowledge and their knowledge of spelling.

### **Equal Opportunity**

We are committed to providing a teaching environment conducive to learning. Each child is valued, respected and challenged regardless of ability, race, gender, religion, social background, culture or disability.

## **TEACHING MATHEMATICS**

### **Organisation**

Mathematics is taught with an emphasis on practical, hands-on activities. Where possible it will be taught through other subjects. This will allow children to use and apply their mathematical skills in useful contexts. Daily lessons will vary in length from 45 minutes in Key Stage 1 to 60 minutes in Key Stage 2. EYFS pupils will have a maths lesson or activity every day. This will prepare them for a dedicated maths lesson in Year 1.

Lessons will consist of a CLIC session developing mental calculation strategies and counting, followed by a main teaching/learning focus. There will be a balance between whole-class work, group teaching and individual work, with differentiated activities. The development of Speaking and Listening skills will be an integral part of every daily lesson.

### **Parental involvement**

An important part of Mathematics teaching is to involve parents. Through open days, discussions with class teachers and written communications we aim to help parents understand the emphasis on mental work and the strategies we use in the teaching of Mathematics. Parents are encouraged to support learning at home through homework activities. Number facts are sent home for each child to learn and parents are encouraged to support their children in gaining multiplication reward badges.

### **Homework**

Daily mathematics lessons will provide opportunities for children to practice and consolidate their skills and knowledge, develop and extend their techniques and strategies, and to prepare for future learning. These may be extended through out-of-class activities or homework at the discretion of the teacher.

## **SCHOOL AND CLASS ORGANISATION**

### **Planning**

Long-term planning is taken from the National Curriculum which outlines yearly teaching programmes and key objectives from Reception to Year 6. Planning will be based upon White Rose Maths Hub materials and will be in blocks. Short-term plans are weekly detail lesson objectives, tasks, activities and grouping of children for the lesson. They will include notes on resources, key vocabulary, assessment for learning opportunities, cross-curricular links, the role of other adults and strategies to promote Speaking and Listening, or development and collaborative work. A separate CLIC plan is produced to focus on counting/ learn its facts/its nothing new/ calculation.

### **Assessment**

Assessment is an integral part of Mathematics teaching and is used to inform planning. Assessment will be carried out using the following criteria:

\*AFL

\*informal observations

\*oral questioning

\*problem solving activities

\*written assessment

\*formal tests include Year 2 SATs, and optional Year 3 and 4. These test results are used to set individual and year group targets. Each child's progress is recorded on the school tracking system. Progress is recorded formally each half term.

### **Presentation**

Pupils will work in squared exercise books and write one digit per square. Each day pupils will begin a new page. The presentation policy will be followed. Have a go books can be used for jotting and working out.

### **More able pupils**

We will meet the needs of more able pupils through:

.differentiated work which challenges the individual

. appropriate questioning

. intervention challenge groups

. using mastery materials from NCETM

### **Pupils with special educational needs**

Seaton Delaval First School is an inclusive school. We meet the needs of children with SEN by

- . including all pupils in the daily mathematics lesson at a differentiated level
- . individualised programmes for pupils whose difficulties are severe or complex
- . ensuring support staff deliver quality intervention and support

### **Resources**

Classes are resourced with equipment for the objectives to be taught. Resources are constantly evaluated and updated.

### **Computing**

Technology will be used to support teaching and motivate children's learning. Pupils will experience interactive teaching programmes using interactive whiteboards, software packages and mathematical games. Technology will involve the computer, I Pads and audio-visual aids.