Sheering C of E Primary School

Maths Policy

This policy was shared and discussed by staff and by governors (P&C meeting) on 3rd February and ratified at the Full Governing Body meeting in March.

Date: February 2016
Review date: October 2017

Sheering School

Maths Policy

Introduction

This policy outlines the teaching and learning of mathematics at Sheering School. At Sheering School we use the Busy Ant Maths course which ensures complete coverage of the 2014 Primary National Curriculum for Mathematics. Teachers tailor this course to the specific needs of the individual learners within their classes.

Aims

Throughout the teaching of maths we aim to enable children to achieve to the best of their ability and to allow them to enjoy making discoveries about mathematics. We believe in supporting children to be confident in their use of mathematics and enabling them to develop a positive attitude to the subject. To enable all children to develop their conceptual understanding of maths. To raise the level of attainment for all children. To develop and enhance the children's logical and independent thinking.

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

Curriculum

Foundation Stage

Children in the Foundation Stage will work towards the Early Learning Goals covered in the Mathematics specific area of learning. In Year R they will build on and extend their knowledge by continuing to work towards the Mathematics Early Learning Goals which are Numbers and Shape, Space and Measures.

Numbers

- To count reliably with numbers from one to twenty
- To place the numbers in order and say which number is one more or less than a given number
- To use quantities and objects to add and subtract two single-digit numbers and count on or back to find the answer
- To solve problems involving doubling, halving and sharing

Shape and space and measures

- To use everyday language to talk about size, weight, capacity, position, distance, time and money
- To compare quantities
- To solve problems
- To recognise, create and describe patterns
- To explore the characteristics of everyday objects and shapes and use mathematical language to describe them

These are the Early Learning Goals for Mathematics specific area of learning laid out in the EYFS Profile.

Key Stage 1

Children in key stage 1 will build upon work completed in the Foundation Stage, following the Busy Ant Maths course for Mathematics. The teaching in key stage 1 enables children to develop confidence and mental fluency with whole numbers, counting and place value. Children will work with numerals, words and the 4 operations.

They will be learning to recognise, describe, draw, compare and sort different shapes and use the related vocabulary. They will also be developing their ability to use a range of measures to describe and compare different quantities including length, mass, capacity/volume, time and money. Children will use practical resources to support them with their learning. The key stage 1 curriculum is split into two bands which are further split into the following areas of learning:

Band 1

- Number - number and place value
- Number - addition and subtraction
- Number - multiplication and division
- Number - fractions
- Measurement
- Geometry - properties of shapes
- Geometry - position and direction

Band 2

- Number - number and place value
- Number - addition and subtraction
- Number - multiplication and division
- Number – fractions
- Measurement
- Geometry - properties of shapes
- Geometry - position and direction
- Statistics

Key Stage 2

Lower key stage 2 (Years 3 and 4)
In years 3 and 4 it is expected that children will be working within bands 3 and 4. The focus of maths in lower key stage 2 focuses on ensuring that pupils become increasingly fluent with whole numbers and the 4 operations, including number facts and the concept of place value. This includes ensuring that pupils develop efficient written and mental methods and perform calculations accurately with increasingly large whole numbers. Children will be working to develop their ability to solve problems including working with fractions and decimal place value. Children will be developing their mathematical reasoning meaning that they can analyse shapes and their properties and describe the relationships between them. They will be developing their ability to use a range of measuring instruments with accuracy and will be making links between measure and number.

Band 3

- Number - number and place value
- Number - addition and subtraction
- Number - multiplication and division
- Number – fractions
- Measurement
- Geometry - properties of shapes
- Statistics

Band 4

- Number - number and place value
- Number - addition and subtraction
- Number - multiplication and division
- Number – fractions (including decimals)
- Measurement
- Geometry - properties of shapes
- Geometry - position and direction
- Statistics

Upper key stage 2 (Years 5 and 6)
In upper key stage 2 the focus is on extending the children's understanding of the number system and place value including higher values. The children will also be developing their ability to make connections between multiplication and division with fractions, decimals, percentages and ratio. Children will be developing their ability to solve a wide range of problems. Children will be introduced to the language of algebra as a means of solving problems. Teaching will focus on classifying shapes with increasingly complex geometric properties and they will learn the vocabulary to describe them. By upper key stage 2 children should be fluent in written methods for all 4 operations.

Band 5

- Number - number and place value
- Number - addition and subtraction
- Number - multiplication and division
- Number – fractions (including decimals and percentages)
- Measurement
- Geometry - properties of shapes
- Geometry - position and direction
- Statistics

Band 6

- Number - number and place value
- Number – addition, subtraction, multiplication and division
- Number – fractions (including decimals and percentages)
- Ratio and proportion
- Algebra
- Measurement
- Geometry - properties of shapes
- Geometry - position and direction
- Statistics

Number Enrichment

To enable children to become fluent in the fundamentals of number within mathematics they will attend a Number Enrichment group 4 times a week for 15 minutes. Each member of staff has their own group and the sessions allow children to work in a smaller differentiated group which is tailored to their needs. The sessions will focus on helping children to develop fluency with number facts and concepts.

Organisation

In Reception maths is taught daily with each lesson approximately 30 minutes in length. There will be some directed group and individual tasks as well as learning through play. In Key stage 1 and 2 the children will have daily maths lessons which are approximately 45-60 minutes in length. They will begin with a short 15 minute Number Enrichment session in which the children are split into smaller differentiated groups. The main part of the lesson will begin with a whole class introduction to the objective and then followed by group work with teacher and TA involving focussed activities. At the end of the lesson there will be a plenary revisiting, revising, and reinforcing the lesson objectives with opportunities to extend the children's learning where appropriate.

Planning

Long term and medium term planning are taken from the Busy Ant Maths course. Teachers will then develop their own tailored weekly plans for their maths lessons and Number Enrichment sessions which include the learning objectives being taught as well as the learning activities, resources and key vocabulary for that unit. Plans are monitored by the maths co-ordinator.

Assessment

Assessment is carried out on a day to day basis to inform future plans. The children's work will be marked according to the marking policy and a 'Next Step' will be given to consolidate or extend the children's learning. In addition the end of unit/half term assessments will be used to help identify where children are excelling or need extra support. These assessments inform the teacher's planning of future units. Furthermore the end of half term assessments enable teachers to assess which band the children are working at. Teachers will use the 'Band Tracking Grids' to support their assessments and to identify areas of strength and weakness for individuals, groups and whole cohorts. Each child will have their own personal targets for all aspects of maths in their maths books. The targets will be updated each half term and the targets will be highlighted when they are achieved using a different colour for each term. The key stage 1 and 2 SAT's results will be reported to Parents, LEA and DFEE as required by law.

Links with parents/careers

At the beginning of each unit of work a maths newsletter will be sent home. Each newsletter will inform parents/careers of the specific areas which are being taught as well as; an explanation of the maths concepts and key vocabulary, activities to complete and questions to ask. The newsletters are tailored to the specific bands which the children are working within. Furthermore each child has their own login to Mathletics. Teachers set the specific level which the child is working on and assigns activities weekly to be completed.

Staff will hold regular parent meetings. Written annual reports are sent to parents in the summer term and individual targets for maths are reviewed and set as part of these.

Equal Opportunities

All pupils (regardless of gender, cultural background, class, disability and ability) will have the opportunity to reach the highest possible achievements without making impossible demands on them. All children will be encouraged to value their own and other people's contributions to the development of mathematics. For further details see the School's Equal Opportunities Policy.

Evaluation

There will be an annual whole school review of this policy document.