



Beaupré
COMMUNITY PRIMARY SCHOOL

Mathematics Policy

This policy was approved

October 2019

This policy should be reviewed annually

“Together unlocking the potential of every child, inspiring children, improving lives”

MATHEMATICS POLICY

Please read in conjunction with Calculation Policy (October 2019)

Introduction

Mathematics is important in everyday life therefore it is vital that all children experience a high quality mathematics education to develop their understanding of the world.

At Beaupré Community Primary School, daily 1 hour mathematics lessons give our children the opportunity to develop a unique set of mathematics tools to ensure that our children feel confident in using mathematics in the present day and in future years to come. These tools include logical and mathematical reasoning, problem solving skills and developing their mathematical fluency. We endeavour to ensure that our children develop a healthy, enthusiastic attitude towards mathematics which will stay with them throughout their lives. Through lively and engaging mathematics lessons and across the curriculum, we aim to develop our pupils' enquiring minds which leads to them becoming motivated, confident and capable in order to solve a range of problems today and in the future.

Aims

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.

Teaching and Learning

Early Years Foundation Stage

Children in Rainbow Class follow the Early Years Foundation Stage (EYFS) Curriculum. Mathematics is a specific area of the Foundation Stage and is split into two areas of learning; 'Numbers' and 'Shape, Space and Measures'. Learning the EYFS underpins all future learning by supporting, promoting and developing children's mathematical skills.

Adults within Rainbow Class provide a range of activities that are play based. In their play children learn at their highest level, where they are deep learners. Careful play based learning is planned for and provided through stimulating and challenging inside and outside learning environments, based on children's interests and needs. Children are involved daily in mathematical activities, either through adult directed tasks to teach new skills and concepts, through adult facilitated activities where adults scaffold, model thinking, skills and vocabulary, extending ideas and posing problems, or through free use of the environment and resources to enable children to extend, use and combine their own learning in a unique way.

Key Stage 1 and Key Stage 2

Pupils in Key Stage 1 should be taught to develop confidence and mental fluency with whole numbers, counting and place value. This involves working with numerals, words and the four operations. At this stage, pupils should recognise, develop, draw, compare and sort different shapes and use the related vocabulary. A range of measures should be taught in which pupils can describe and compare different quantities such as length, mass, capacity/volume, time and money. By the end of Year 2, pupils should know their number bonds to 20 and be precise in using place value. Practising this at an early stage will aid fluency.

Pupils in lower Key Stage 2 (Years 3 and 4) should become increasingly fluent with whole numbers and the four operations. Efficient written and mental methods should develop so that children can perform calculations accurately with increasingly large whole numbers. Children should be able to solve a range of problems including involving simple fractions and decimal place value. Analysis of shapes and their properties should be accurate and the use of measuring instruments will ensure that children are measuring accurately and making the link between measure and number. By the end of Year 4, children should have memorised their multiplication tables including the 12 times tables and use these in their work.

Pupils in upper Key Stage 2 (Years 5 and 6) should extend their understanding of the number system and place value to larger integers. Children should make connections between multiplications and divisions with fractions, decimals, percentages and ratio. Pupils should develop their ability to solve a wider range of problems including increasingly complex properties of numbers and arithmetic, and problems demanding efficient written and mental methods of calculation. Pupils are introduced to the language of algebra as a means for solving a variety of problems. Geometry and measures should consolidate and extend knowledge. Children should be able to classify shapes with increasingly complex geometric properties and use the vocabulary that is needed to describe them. By the end of Year 6, pupils should be fluent in written methods for all operations including long and short multiplication and division, and in working with fractions, decimals and percentages.

Assessment

EYFS Assessment

Assessment is ongoing through observations which are recorded and presented through the 'Interactive Learning Diary'. These observations provide assessment opportunities for individual, group and whole class needs, and inform all future planning. Children are involved in a baseline assessment within the first six weeks of entering schools, and assessments are made against the Early Learning Goals at the end of their Reception year.

Summative Assessment

Teachers in KS1 and KS2 assess half termly against the National Curriculum programmes of study for each year group in accordance with our Assessment Schedule. Teachers track against the National Curriculum Programmes of Study in each year group using the following outcomes: U (unable to assess), E (emerging), D (developing), S (secure) and M (mastery). Tests are used at the end of each term to support teachers' assessment. Children in Year 2 and Year 6 carry out end of key stage SATs mathematics tests.

Formative Assessment

Formative assessment consists of oral answers, questioning, self and peer assessment, feedback from marking and responding to marking on a daily basis. This monitoring and assessment feeds into ongoing teacher assessment. Teachers can use this to make adjustments to their daily planning in preparation for the next lesson.

Role of the Mathematics Subject Leader

The Mathematics Leader is responsible for coordinating and leading Mathematics throughout the school. Co-ordinators are expected to:

- Lead by example in the way that they teach in their own classrooms
- Support and offer guidance to all staff in Mathematics.
- Carry out monitoring and feedback through the form of lesson observations, work scrutiny and planning scrutiny
- Ensure teachers are familiar with the National Curriculum and Calculation Policy
- Prepare, organise and lead INSET
- Carry out an annual resource audit and action plan for staff and governors.
- Work co-operatively with the SENDCO to provide advice and support for staff
- Observe colleagues with a view to identify the support that they need
- Attend mathematical briefings to keep up to date with recent government initiatives and developments in mathematics
- Present information to Governors and answer questions when required
- Discuss with the head teacher the progress of implementing the Mathematic Curriculum in school.