



Diocese of Norwich  
Education and  
Academies Trust

# **Cawston Church of England Primary Academy**

## **Mathematics Policy**

<b>Policy Type:</b>	<b>School Policy</b>
<b>Approved By:</b>	<b>Local Governing Body</b>
<b>Approval Date:</b>	<b>22 11 16</b>
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<b>Person Responsible:</b>	<b>Mathematics Subject Leader</b>

This Policy should be read with regard to our Equality Duties. Equality is based on the idea of fairness whilst recognising that everyone is different, and diversity is about the ways in which people differ and about recognising that differences are a natural part of society. Cawston C of E Primary Academy expects that all staff and volunteers who come into contact with children and young people treat them as individuals and make them feel respected and valued as an essential part of our commitment to safeguarding children.

This policy develops procedures and good practice within Cawston C of E Primary Academy, to ensure that each person and agency can demonstrate that there is an understanding of the duty to safeguard and promote the welfare of children and young people, including those who are vulnerable. It provides evidence of how this will be implemented within our school and within multi-agency working arrangements.

## **1 Aims and objectives**

**1.1** Mathematics equips pupils with a uniquely powerful set of tools to understand and change the world. These tools include logical reasoning, problem-solving skills and the ability to think in abstract ways. At Cawston C of E Primary Academy we will ensure continuity and progression of a quality education for all our children.

Pupils in our school have an equal entitlement to the curriculum. Cawston C of E Primary Academy follows the National Curriculum by using Maths Makes Sense. This is a learning system designed to teach abstract ideas using concrete objects, exaggerated actions and special vocabulary.

### **1.2 Aims**

We aim to enable all of our pupils to become mathematicians through:

- developing an enthusiasm and fascination for mathematics;
- application of number, abstract thinking and logical reasoning;
- using a consistent, concrete approach to understand abstract concepts;
- the use of IT;
- increasing pupil confidence in mathematics so they are able to express themselves and their ideas using the precise language of mathematics with assurance;
- spiritual, moral, social and cultural development and other cross-curricular application.

### **1.3 Objectives**

- To give pupils the opportunity to experience mathematics in a variety of practical, interesting and challenging ways, where they can work to their full potential, achieve success and therefore enjoy the experience of mathematics.
- To enable the pupils to develop their logical reasoning and abstract thinking through the use of concrete objects, exaggerated actions and special vocabulary.
- To enable pupils to develop their IT skills in the classroom, using IT where appropriate.
- To enable the pupils to improve their communication through learning to express ideas and methods precisely, unambiguously and concisely using correct mathematical vocabulary, both individually and as part of a group.
- To provide opportunities to promote:

- i. spiritual development, through explaining the underlying mathematical principles behind natural forms and patterns in the world around us;
- ii. moral development, by helping pupils recognise how logical reasoning can be used to consider the consequences of particular decisions and choices;
- iii. social development, through helping pupils work together productively on complex mathematical tasks;
- iv. cultural development, through helping pupils appreciate that mathematical thought contributed to the development of our culture, and that mathematicians from many cultures have contributed to the development of modern day mathematics;
- v. Cross-curricular mathematics, through subject that lend themselves to this.

## **2 Teaching and Learning Style**

### **2.1 Ten Big Ideas**

Maths Makes Sense is built around ten Big Ideas which underpin all mathematical learning from age four to eleven. The methods used to teach children the Big Ideas is consistent throughout the Maths Makes Sense Learning system. The ten Big Ideas in Maths Makes Sense are:

1. Addition
2. Subtraction
3. Multiplication
4. Division
5. Equals
6. The symbols speak to you
7. The logic of the language tells you the answer
8. Denomination
9. Ratio
10. Infinity

## **3 Mathematics curriculum and planning**

**3.1** Mathematics is a core subject in the National Curriculum, and we use Maths Makes Sense as the basis for implementing the statutory requirements for mathematics.

**3.2** Lessons are delivered through a cycle of instruction and assessment to ensure that every child succeeds. The cycle consists of Direct Instruction, Guided Practice and Partner Teaching. Partner work is embedded throughout each phase of teaching. Assessment is on-going throughout each lesson to determine at which stage of the cycle each child is at.

Each block is organised over 5 weeks. A different strand is taught on a separate day of the week in Years 1 – 6. In the Early Years Foundation Stage (EYFS) there is a focus on weekly objectives mixing and matching aspects of the Early Learning Goals.

Pupils engage in:

- daily practice – rote learning of number facts;

- the development of mental strategies;
- written methods;
- practical activities

#### **4 The Early Years Foundation Stage**

**4.1** We teach Mathematics (Numbers; and Shape, Space and Measures) in our reception class. As the class is part of the Early Years Foundation Stage of the National Curriculum, we relate the mathematical aspects of the children's work to the development matters set out in the Early Years Foundation Stage Framework (September 2012), which underpins the planning for children aged three to five, supported with weekly objectives from Maths Makes Sense. We give all the children ample opportunity to develop their understanding of numbers, calculation and space, shape and measurement through contextual mathematics and planned, purposeful play, that allow them to enjoy, explore, practise and talk confidently about mathematics.

#### **5 Spiritual, moral, social and cultural development**

**5.1** The teaching of mathematics supports the social development of our children through the way we expect them to work with each other in lessons. Children sit in matched pairs and take turns in practising skills which is embedded throughout the Teaching and Learning.

#### **6 Teaching mathematics to children with special needs**

**6.1** We teach mathematics to all children, whatever their ability. It is part of the academy curriculum policy to provide a broad and balanced education to all children. We provide learning opportunities that are matched to the needs of children with learning difficulties. Work in mathematics takes into account the targets set for individual children in their Assertive Mentoring files, and intervention programmes including Numicon.

#### **7 Assessment and recording**

**7.1** Assessment for Learning (Afl) takes place through marking, pupil progress books and block assessments.

**7.2** We make assessments to measure progress against key targets which helps us plan future work.

**7.3** We use Assertive Mentoring to assess and track pupils progress each half term and send a summative report to parents at the end of the year.

#### **8 Resources**

**8.1** We use Maths Makes Sense to support the teaching of mathematics across the school. All classrooms have a range of appropriate small apparatus, including calculators in Key Stage Two. Mathematical dictionaries and vocabulary lists are available in all classrooms. Larger Mathematical apparatus are available from the central storage area. The library contains a range of books to support children's individual research, as well as a range of picture books to enable teaching of mathematics in context. A range of software is available to support

work with the computers. All classes have interactive whiteboards and a range of software to challenge and stimulate learning in mathematics.

## **9 Monitoring and review**

**9.1** Monitoring of the standards of children's work and of the quality of teaching in mathematics is the responsibility of the mathematics Subject Leader and Headteacher. The work of the mathematics Subject Leader also involves supporting colleagues in the teaching of mathematics, being informed about current developments in the subject, and providing a strategic lead and direction for the subject in the school. The subject leader analyses data from Pupil Asset and RAISEonline to identify children who are falling behind and require intervention, and to identify whole school issues to inform future whole school planning. The mathematics Subject Leader gives the Headteacher an annual summary in which she evaluates strengths and weaknesses in the subject and indicates areas for further improvement. The Subject Leader reviews samples of children's work and undertakes lesson observations of mathematics teaching across the academy. The school's Governing Body is briefed to oversee the teaching of mathematics. The Subject Leader gives an annual report to Governors.

## **10. Parental / carer involvement**

**10.1** Parents/carers are kept informed of their child's progress in mathematics through termly parent/carers consultations. They are given copies of their child's half-termly mathematics targets. Parents/carers are involved in their child's learning through open days and homework. They are informed of the calculation methods their children are using through a detailed booklet, and are invited to attend parent workshops in school.