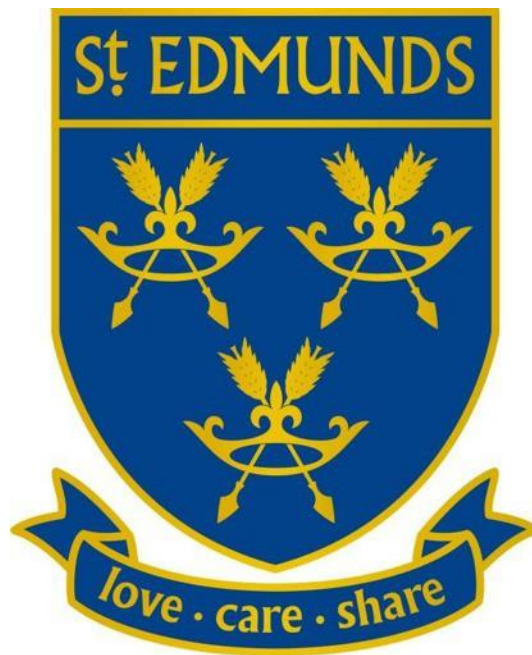


# St Edmund's Catholic Primary School



## Mathematics Policy

**November 2020**

The policy below has been reviewed in light of the Covid-19 pandemic. Amendments will be numbered and listed at the bottom of the document.

# **ST EDMUNDS CATHOLIC PRIMARY SCHOOL**

## **MATHEMATICS POLICY**

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### **Introduction and aims:**

This policy outlines the teaching, organisation and management of mathematics at St Edmunds Catholic Primary School.

The purpose of mathematics in our school is to develop:

- a positive attitude towards mathematics and an awareness of the relevance of mathematics in the real world
- confidence and competence in mathematical knowledge, concepts and skills
- an ability to solve problems, to reason, to think logically and work systematically and accurately
- initiative and an ability to work both independently and in cooperation with others
- an ability to communicate mathematics
- an ability to use and apply mathematics across the curriculum and in real life
- an understanding of mathematics through a process of enquiry and experiment
- a deep conceptual understanding and long-term retention of the concepts taught, using the CPA (concrete, pictorial, abstract) approach to teaching and learning

### **Legislative requirements and non-statutory guidance**

This policy is written with reference to:

The National Curriculum Primary programmes of Study for KS1 and KS2.

The Inspire Maths Programme of Study (Oxford Owl).

### **Roles and responsibilities**

#### **Subject Leader**

The mathematics subject leader will be expected to

- ensure the Inspire Maths programme and concrete, pictorial, abstract approach (CPA) is

embedded throughout the school

- prepare, organise and provide school based INSET meetings, workshops and staff meetings
- assist with the monitoring of teaching and planning and analysis of SATs results and other assessment data
- liaise with staff in school – working alongside them giving guidance and support
- introduce, organise and maintain the school's mathematics resources
- take responsibility for own professional development by attending courses and keeping up-to-date with current developments within mathematics education
- liaise with mathematics subject leaders in other schools through attendance at local network meetings
- to provide an example to the school by taking a lead in teaching mathematics
- ensuring equality of opportunity for all pupils
- maintaining contacts beyond school with numeracy consultants, advisory staff and other outside agencies
- Be aware of strengths and weaknesses within mathematics in the school. Liaise with Head and Deputy to address issues and identify training needs
- Report, as required, to the Governing Body Curriculum Committee on standards and developments in mathematics
- Review and update the policy and teaching guidelines as required
- Demonstrate expertise in mathematics and be familiar with sources of guidance and information to support colleagues

#### **The Head teacher and Senior Leadership Team (SLT)**

The Head teacher and SLT will review all curriculum policies every two years and through monitoring and assessment procedures will look at the strategic overview of how this policy is being implemented.

#### **The governing board**

Curriculum governors will review this mathematics policy in conjunction with the Head teacher and monitor the policy's effectiveness.

#### **Teachers**

Teachers will ensure that their planning and teaching reflects the practice and procedures outlined within this policy, having regard also to the progression of skills map.

### **Curriculum planning**

## **Organisation**

Each class teacher is responsible for the mathematics in their class in consultation with, and guidance from, the mathematics subject leader. Each class teacher will provide 4 or 5 dedicated mathematics lessons each week, which may vary in length but will usually last for 45 minutes in Key Stage One and 50 to 60 minutes in Key Stage Two. Teachers of EYFS ensure the children learn through a mixture of adult led activities and child initiated activities both inside and outside of the classroom.

## **Planning**

### **Early Years Foundation Stage**

Development Matters and the Early Learning Goals (Number, Shape Space & Measure) provide the longer term planning for mathematics taught in reception, with planning being taken from the Inspire Maths EYFS online materials where possible. The *Numicon Firm Foundations* starter pack is used to support teaching, learning, and the planning of free-flow activities.

### **Key Stage One and Two**

The National Curriculum for Mathematics 2014 provides the longer-term planning for the mathematics taught in Years 1-6. These year groups use the planning materials and resources from the Inspire Maths scheme (see below) to deliver the National Curriculum.

## **Teaching and Learning**

### **Inspire Maths**

Following the success of the scheme 'My Pals are Here' in Singapore, the school has chosen to use the UK version of the programme, Inspire Maths, to deliver the National Curriculum for KS1 and 2.

In accordance with the statutory requirements of the Mathematics National Curriculum for KS1 and 2, we want children to develop their conceptual understanding; be fluent; reason and be able to solve routine and non-routine problems. To support this, we have invested heavily in concrete manipulatives, which enable all children to explore and explain the abstract nature of mathematics. We also encourage drawings, including the use of bar models. This concrete, pictorial and abstract approach, underpinned by research, is proven to be a very effective way of supporting long-term retention of mathematical concepts; the Inspire Maths materials enable us to embed this pedagogy effectively in our classrooms.

### **Resources**

Each classroom has its own maths resources, suitable for concrete experiences. In addition to these, there are many centrally stored resources available for use across the whole school (1). There should also be a working wall area within every classroom that the children can access.

### **Homework**

It is our school policy to provide parents and carers with opportunities to work with their children at home. These activities may only be brief, but are valuable in consolidating the learning that has taken place during the school week in mathematics lessons. Activities are sent home to children in years 1 to 6 on a weekly basis using the online platform *Mymaths*; in EYFS, these activities are set on Google Classroom.

## **Assessment**

### **Assessment and Record Keeping**

Teachers make regular assessments of each child's progress and record these systematically.

Children's class work is assessed frequently through

- regular marking (see below)
- analysing errors
- questioning
- discussion
- plenaries

This is used to inform future planning and teaching. Lessons are adapted and short term planning is evaluated and annotated in light of these assessments.

Summative assessments are made termly through the use of tests in Years 1 to 6 (one reasoning and one arithmetic paper per term, though this may vary in Year 2 and Year 6, where children are preparing for their SATs exams). Marks from these tests, along with teacher knowledge gained during mathematics lessons, are used to maintain records of children's progress using the online platform Scholarpack.

### **Marking**

Marking of children's work is essential to ensure they make further progress. All work is marked in line with the school's marking policy, and includes verbal feedback and next steps. Children are encouraged to self-assess their work where appropriate.

### **Inclusion and Equal Opportunities**

The daily mathematics lessons are inclusive for all pupils with special educational needs. The Inspire Maths scheme uses the concrete, pictorial and abstract (CPA) approach to teaching and learning. This approach, underpinned by research (as stated above) supports all children, including those with SEND, to retain the concepts that they have been taught and to gain a deeper understanding of them.

The Inspire Maths scheme also advocates the use of mixed-ability pairs within the classroom. Class teachers carefully select pairs of children to work together where the attainment gap is not too large, but where one can support the other. The higher-achieving child has the opportunity to deepen their understanding by explaining it to a lower-achieving peer; the lower-achieving child benefits from having their work explained to them. This also supports children with SEND or who are lower-achieving to believe that they are capable in maths; keeping children in fixed groups can create fixed mindsets which are damaging to their progress. This is an approach which is also underpinned by research.

Where necessary, some groups of children a high level of need are taught from a different curriculum than that of their year group. Where this is the case, teachers as much a possible use the Inspire materials and pedagogy to direct the teaching and learning within their classroom.

Within the daily mathematics lesson teachers must ensure that there are activities that provide appropriate challenges for children who are higher achievers in mathematics. Examples of this include:

- The use of the Inspire materials themselves, which use perceptual variation to ensure that children are exposed to a range of problems
- Children being challenged to create their own problems
- The use of White Rose extension tasks

## **Monitoring and Evaluation**

The subject leader will take responsibility for monitoring the effectiveness of this policy in school practice on a day to day basis, taking part in monitoring of their subject through learning walks, book scrutinises, observations, moderations and discussions with children and class teachers throughout the year (2).

The Head teacher and SLT will meet with subject leaders to evaluate the impact of this policy and identify actions to remedy any problems arising.

### **Covid-19 Amendments (November 2020)**

- 1) In light of the Covid-19 pandemic, resources that belong to a particular year group need to be kept in their bubbles, while those resources that are shared will need to be disinfected before being passed on to a different year group.**
- 2) Due to the pandemic, learning walks, observations and scrutinies are not taking place at present as staff are not permitted to mix between bubbles.**

This policy is to be reviewed in November 2022.

