



# MATHEMATICS POLICY

## **Our Mission**

At St. Anne's we aim to be a caring Christian school, within the community where everyone is respected and valued. To be a school where all individuals are encouraged to build on their strengths and aspire to be the best they can be.

## **Our Vision**

Our vision has the promise by Jesus of 'life in all its fullness at its heart. At St Anne's we believe:

- in our children and each other,
- we are uniquely created in the image of God,
- we were made to be awesome,
- that together we are family,
- we were created to live in community,
- in equipping the St Anne's family to be the best we can be,
- in our individual talents and abilities, and
- we can make a difference.

## **Our Values**

At St Anne's CE Primary School, the following core values underpin all that we do. They are reflected in the daily life of the school and our relationships with other:

Respect, Thankfulness, Hope, Forgiveness, Love and Faithfulness.

'...let your light shine before others, that they may see your good deeds and glorify your father in heaven.'

Matthew 5:16

'I thank you because I am awesomely made...' Psalm 139:14

'...I come that they may have life and have it to the full.' John 10:10

## What is the Intent of the Mathematics curriculum at St Anne's?

The Mathematics curriculum equips pupils with the 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. Mathematics is important in everyday life. It is integral to all aspects of life and with this in mind we endeavour to ensure that children develop a healthy and enthusiastic attitude towards mathematics that will stay with them.

The Mathematics National Curriculum 2014 describes what must be taught in each key stage. This ensures continuity and progression in the teaching of mathematics. In early years the curriculum is guided by the Early Learning Goals.

All school policies form a corporate, public and accountable statement of intent. As a primary school it is very important to create an agreed whole school approach of which staff, children, parents, governors and other agencies have a clear understanding. This policy is the formal statement of intent for mathematics. It reflects the essential part that mathematics plays in the education of our pupils. It is important that a positive attitude towards mathematics is encouraged amongst all our pupils in order to foster self-confidence and a sense of achievement. The policy also facilitates how we, as a school, meet the legal requirements of recent Education Acts and National Curriculum Requirements.

This statement of policy relates to all pupils, staff, parents and governors of St. Anne's CE (Aided) Primary School. The age range of pupils from 4-11 must be acknowledged in the creation of a policy and the development of the mathematics curriculum.

The principles of St. Anne's CE (Aided) Primary School for mathematics are:

- policy and provision are evaluated and reviewed regularly
- resources of time, people and equipment are planned, budgeted for and detailed when appropriate in the SDP.
- the governing body of St. Anne's CE (Aided) Primary School discharge their statutory responsibility with regard to mathematics
- cross curricular links will be highlighted where appropriate
- planning of mathematics ensures continuity and progression across all year groups and key stages

Although relating specifically to mathematics our aims for the subject are also in line with the school's general aims.

We aim to provide the pupils with a mathematics curriculum which will produce individuals who are literate, creative, independent, inquisitive, enquiring and confident. We also aim to provide a stimulating environment and adequate resources so that pupils can develop their mathematical skills to their full potential.

Our pupils will:

- have a sense of the size of a number and where it fits into the number system
- know by heart number facts such as number bonds, multiplication tables, doubles and halves
- use what they know by heart to figure out numbers mentally
- calculate accurately and efficiently, both mentally and in writing and paper, drawing on a range of calculation strategies
- make sense of number problems, including non-routine problems, and recognise the operations needed to solve them
- explain their methods and reasoning using correct mathematical terms
- judge whether their answers are reasonable and have strategies for checking them where necessary

- suggest suitable units for measuring and make sensible estimates of measurements
- explain and make predictions from the numbers in graphs, diagrams, charts and tables
- develop spatial awareness and an understanding of the properties of 2D and 3D shapes

## How is the Mathematics Curriculum Implemented at St Anne's?

At St Anne's, pupils are provided with a variety of opportunities to develop and extend their mathematical skills in and across each phase of education.

### **Moving to a mastery led approach to Mathematics at St Anne's.**

Outlined below, is an overview detailing the shift in approach to delivering mathematics at St Anne's. Over the coming years, a mastery focused approach to teaching mathematics will be implemented across the school. This commenced with the start of the 2021-2022 academic year, this approach is supported by both the School Improvement Advisor, Local Authority and the mathematics adviser and Governing Board.

#### Academic year 2021-2022.

Years 1, 2 and 3 will implement Red Rose mathematics as of the beginning of the academic year 2021-2022. Years 4, 5 and 6 will continue to deliver the National Curriculum supported by Lancashire planning materials.

#### Academic year 2022-2023.

Years 1, 2, and 3 will continue to deliver Red Rose mathematics whilst Year 4 will implement this. Years 5 and 6 will continue to deliver Mathematics National Curriculum 2014 Upper Key Stage 2 programme of study (Supported by the Lancashire Mathematics Planning).

#### Academic Year 2023-2024.

Year groups 1 to 5 will be delivering Red Rose Mathematics. Year 6 will complete the Red Rose trial over the academic year, if possible.

	<b>2021-2022</b>	<b>2022-2023</b>	<b>2023-2024</b>
<b>Nursery</b>	EYFS curriculum (Lancashire)		
<b>Reception</b>	EYFS curriculum (Lancashire)		
<b>Year 1</b>	Red Rose	Red Rose	Red Rose
<b>Year 2</b>	Red Rose	Red Rose	Red Rose
<b>Year 3</b>	Red Rose	Red Rose	Red Rose
<b>Year 4</b>	National Curriculum (Lancashire)	Red Rose	Red Rose
<b>Year 5</b>	National Curriculum (Lancashire)	National Curriculum (Lancashire)	Red Rose
<b>Year 6</b>	National Curriculum (Lancashire)	National Curriculum (Lancashire)	National Curriculum (Lancashire)

### **Curriculum design**

All curriculum overviews, planning and progression documents can be found in the mathematics subject leader file and on the T:drive in the Curriculum 2022-2023 folder and are published on the school's website.

### **Teaching sequence**

Lessons will generally include:

- Starter, which generally has an arithmetic (with a single skill) or recall focus.
- Initial problem (linked to the lesson).

- Input/teaching session (Linked to Learning Outcome).
- Guided activity (Teachers and Teaching Assistants determine when children move away from this).
- Independent activity.
- Deeper learning task.
- Self-assessment.
- Intervention – if and when required.

The teaching of mathematics at St. Anne’s CE (Aided) Primary School provides opportunities for:

- group work
- paired work
- whole class teaching
- individual work

Pupils will engage in:

- the development of mental strategies
- written methods
- practical work
- investigational work
- problem solving
- mathematical discussion
- consolidation of basic skills and number facts

At St. Anne’s CE (Aided) Primary School we recognise the importance of establishing a secure foundation in mental calculation and recall of number facts **before** standard written methods are introduced.

### **Planning**

We follow the Mathematics National Curriculum 2014 which is supported with the Lancashire Mathematics Planning and Red Rose Lancashire. Teachers deliver practical, modelling, reasoning, using and applying and challenge phases to the lessons. Teaching will follow the School’s Calculation Policy on mental and written methods of calculation.

We endeavour at all times to set work that is challenging, motivating and encourages all pupils to explain their thoughts and talk about what they have been doing.

### **Early Years**

The Early Years Teachers plan practical mathematics lessons and activities in continuous provision that develop mathematical development. See Curriculum Guidance for the Foundation Stage (Early Learning Goals) and Early Years Overview.

### **Key Stage 1**

See Mathematics National Curriculum 2014 Key Stage 1 programme of study (supported by the Lancashire Red Rose Mastery Mathematics).

### **Key Stage 2**

See Mathematics National Curriculum 2014 Lower Key Stage 2 programme of study (supported by the Lancashire Red Rose Mastery Mathematics).

See Mathematics National Curriculum 2014 Upper Key Stage 2 programme of study (Supported by the Lancashire Mathematics Planning).

## **Assessment**

Assessment is regarded as an integral part of teaching and learning and is a continuous process. It is the responsibility of the class teacher to assess all pupils in their class using the Lancashire KLIPS (Key Learning Indicators of Performance).

In our school we are continually assessing our pupils and recording their progress. We see assessment as an integral part of the teaching process and strive to make our assessment purposeful, allowing us to match the correct level of work to the needs of the pupils, thus benefiting the pupils and ensuring progress.

Information for assessment will be gathered in various ways: by talking to the children, observing their work, marking their work and the use of end of term assessments (Years 1, 2, 3 & 4 Red Rose and Years 5 & 6 Lancashire). This information will be recorded on the KLIP assessment guidelines sheets and will be used to inform future teaching and learning.

## **Intervention**

Intervention programmes and extra support will be identified using assessment. Intervention can be reactive through formative assessment, whereby identified gaps in learning are quickly addressed by the class teacher or Teaching Assistant. In addition to this, and often through summative assessments, intervention is planned for through provision maps and tracked by class teachers and the school SENCO.

## **The role of the Subject Leader**

The Mathematics Subject Leaders are responsible for leading mathematics through the school. This includes:

- ensuring continuity and progression from year group to year group
- providing all members of staff with guidelines and a scheme of work to show how aims are to be achieved and how the variety of all aspects of mathematics is to be taught
- advising on in-service training to staff where appropriate. This will be in line with the needs identified in the Development Plan and within the confines of the school budget
- advising and supporting colleagues in the implementation and assessment of mathematics throughout the school
- assisting with requisition and maintenance of resources required for the teaching of mathematics. Again this will be within the confines of the school budget

## **The role of the Class Teacher**

- to ensure progression in the acquisition of mathematical skills with due regard to the Mathematics National Curriculum 2014 and the school's calculations policy
- to develop and update skills, knowledge and understanding of mathematics
- to identify inset needs in mathematics and take advantage of training opportunities
- to identify misconceptions and gaps in learning and plan intervention strategies to address them
- to keep appropriate on-going records
- to plan effectively for mathematics, liaising with the subject leader when necessary.
- to inform parents of pupils' progress, achievements and attainment.

## **Implementing the use of computing in mathematics.**

Opportunities to use ICT to support teaching and learning in Mathematics will be planned for and used as appropriate. This will include the reading and use of on screen text types. PurpleMash will be used to enhance the mathematics teaching.

## **Equal Opportunities**

We incorporate mathematics into a wide range of cross curricular subjects and seek to take advantage of multicultural aspects of mathematics eg. Islamic patterns in RE. All children have equal access to the curriculum regardless of their gender. This is monitored by analysing pupil performance throughout the school to ensure that there is no disparity between groups. All children are provided with opportunities to aspire to be the best that they can be and to ensure they will receive the cultural capital needed to succeed in life. We aim to provide for all children so that they achieve as highly as they can in Maths and aspire to be their best according to their individual abilities. We will identify which pupils or groups of pupils are under-achieving and take steps to improve their attainment. Gifted children will be identified and suitable learning challenges provided.

### **Parental Involvement**

At St. Anne's CE (Aided) Primary School we encourage parents to be involved by:

- inviting them into school twice yearly to discuss the progress of their child
- inviting parents into school in the summer term to discuss the yearly report
  - inviting parents to curriculum evenings or circulating information via termly newsletters
  - encouraging parents to help in classrooms
  - parents supporting children with homework

### **Governing Board**

At St. Anne's CE (Aided) Primary School, Nicola Cowdery, Vice-Chair of the Governing Board, for mathematics. Termly meetings are arranged for the subject leader and link governor, whereby they discuss matters arising such as; reviewing the mathematics action plan, analysing data etc.

The mathematics governor visits the school termly to talk with the subject leader and when possible observes some mathematics lessons.

The mathematics governor reports back to the curriculum committee/governing board on a regular basis.

### **Intervention Programmes**

Intervention groups are carried out where a group or individual isn't making sufficient progress or has a specific need. The programme used will depend on the needs of the child/group and will be discussed with the subject leader, SENCO and class teacher.

### **How do we measure the Impact of the Mathematics curriculum at St Anne's?**

- The Mathematics curriculum leads to good results which is evidenced in the school's data picture (attainment and progress).
- We endeavour to ensure that children, who are on track to meet age related expectations. This is identified by the year group the child is in and the current level they are attaining – children will be assessed as one of the following
  - o Not on track to meet ARE - PIVATS will be used to track progress.
  - o Not yet on track to achieve year group expectations but could with intervention.
  - o On track to achieve year group expectations.
  - o On track+ - children working at a mastery level.
- Data and teacher assessment is used to identify disadvantaged pupils and pupils with SEND to monitor whether they are acquiring the knowledge and cultural capital they need to succeed in life. If there is a case where this is not sufficient, intervention is put into place for those children to ensure they are aspiring to be the best they can.
- Whole school tracking is used to monitor all children's learning in mathematics.
- PIVATS tracking is used to assess and track children with SEND half termly to ensure the mathematics curriculum is providing the cultural capital needed to succeed in life.
- Pupils' work, in addition to assessment outcomes, will show the quality of the learning in mathematics. This is monitored rigorously by subject leaders.
- Children enjoy mathematics  
Children talk confidently about what they are doing in mathematics
- We expect all children to be equipped for the next stage of their education.

At the end of each term children are formally assessed and along with teacher assessment a judgement is made for that child's ability in maths. This is submitted to the head teacher to enter the data into the whole school tracker.

Years 2 and 6 national tests are compared to local and national schools to indicate St Anne's performance in maths as is Year 4 multiplication check data.

#### **Conclusion:**

This policy also needs to be in line with other school policies and therefore should be read in conjunction with the following school policies:

- o Teaching and Learning Policy
- o Assessment and Record Keeping
- o Responding to pupils' work / Feedback / Marking policy
- o Display policy
- o Special Educational Needs Policy
- o ICT Policy
- o SEND policy
- o Equal Opportunities Policy
- o Health and Safety Policy

## **APPENDIX 1: Non-negotiables**

1. All classes from Year 2 to Year 6 have access to a multiplication square (either on display or as an individual resource)
2. All classes from Y1 to Y6 to display a 'Calculations Wall, showing what calculations in a particular year group should look like (please refer to the calculations policy when making a 'Calculations Wall').
3. All classes from Y1 to Y6 to have a 'Working Wall' which supports learning at the phase the children are learning.
4. The EYFS should be a mathematics rich environment with opportunities for mathematical development in continuous provision.
5. Emphasis/daily practise should be given to number work, e.g. Place value and partitioning, adding/subtracting in 1s, 10s and 100s, recall of multiplication and division facts using a multiplication square.
6. When children are ready to start drawing their own number lines in their maths books, these should be neat and drawn with a ruler.
7. One digit per square should be used for more formal, vertical calculations as detailed in the calculations policy.

## **Review**

This policy was reviewed in September 2022 and will be reviewed again in September 2023.