



## **St Mary's RC Primary School**

### **Maths Policy**

#### MISSION STATEMENT

"All are welcome here to walk with Jesus as we love, learn and flourish."

#### Mathematics Policy Introduction

Mathematics teaches children how to make sense of the world around them through developing their ability to use number, calculate, reason and solve problems. It helps children to understand relationships and patterns in both number and space in their everyday lives. The Mathematics curriculum should be bold, provide breadth and balance and be relevant and differentiated to suit the needs of all children in the modern world. It should be flexible, motivating to all pupils thus encouraging success at all levels.

St Mary's is on a 3 year journey with the North, North-West Maths Mastery Working Group and as such is working with other schools across the North West to further develop our mathematics teaching and learning.

#### Aims

Maths Mastery aim: At St Mary's we aim to equip all children with the knowledge, confidence, skills and passion to be able to be successful mathematicians wherever their life path takes them.

To ensure all staff, children, parents/carers and Governors are aware of the aims for learning and teaching Mathematics at St Mary's RC Primary School and that these are consistently applied.

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

### School Staff

- To promote a confident, positive attitude towards the learning and use of Mathematics making it an enjoyable experience;
- To promote confidence and competence with numbers and the number system;
- Encourage pupils by believing that every child, with hard work, can be good at Mathematics through promoting a Growth Mindset.
- To promote the enjoyment of solving problems through connecting ideas, decision-making and applying their mathematical skills in a range of contexts, including other subjects such as Science;
- To promote mathematical reasoning and fluency by following a line of enquiry, developing an argument and making justifications using mathematical language;
- To promote a practical understanding of the ways in which information is gathered, presented and used;
- To promote the exploration of features of shape and space and develop measuring skills in a range of contexts;
- To understand the importance of Mathematics in everyday use, especially in relation to essential life skills, such as telling the time and understanding money.
- To provide children with a broad range of activities and puzzles that will encourage them to use their fluency and reasoning skills.

### Children

- To develop an enjoyment of learning through practical activity, investigation, exploration; mental exertion, problem solving tasks and discussion;
- To develop confidence and competence with numbers and the number system;

- To develop the ability to solve problems through connecting ideas, decision-making and applying their mathematical skills in a range of contexts, including other subjects;
- To develop the ability to reason mathematically by following a line of enquiry making justifications using mathematical language;
- To develop an understanding of the ways in which information is gathered and presented;
- To explore features of shape and space, and develop measuring skills in a range of contexts;
- To understand the importance of Mathematics in everyday life, especially in relation to essential life skills such as telling the time and handling money;
- To foster positive attitudes towards Mathematics by developing pupils confidence, independence, persistence and co-operation skills and understand Growth Mindset in a Mathematical context.

### Parents and Carers

- To support their children with Mathematics homework activities (please refer to Homework Policy).
- To praise their children for the good things that they do in Mathematics.
- To make mathematics part of children's everyday lives.
- School aims to involve parents/carers in their children's learning as much as possible and to inform them regularly of their child's progress in Mathematics.
- Parents/carers have the opportunity to meet with their child's class teacher at least twice a year at Parents' Evenings and receive written reports during the year.
- Parents/carers are encouraged to speak to their child's teacher at any point during the year, either informally or by making a specific appointment to discuss anything to further support them at home.
- Information about their child's progress, achievements and future targets in Mathematics is shared with parents/carers at these times and also ways that parents/carers may be able to assist with their child's learning.
- Parents/carers are encouraged to support their children with homework if they opt as a family to do it (Please see Homework Policy).

### Governors

A designated link governor will:

Meet with the Mathematics Subject Leader at least once a year to find out about;

- The school's systems for planning work, supporting staff and monitoring progress;

- The allocation, use and adequacy of resources;
- How the standards of achievement are changing over time.
- Visit School and talk to pupils about their experiences of Mathematics;
- Take part in lesson observations or planned maths activities in school;
- Promote and support the positive involvement of parents in Mathematics;
- Attend training and other events relating to the Mathematics curriculum;
- To be understanding and supportive of our aims in the learning and teaching of Mathematics and to review this policy annually.

## Implementation and organisation of Mathematics

### EYFS

- Our EYFS teachers use the Early Years Foundation Stage Curriculum to support their teaching of Mathematics in the Foundation Stage.
- The EYFS children have the opportunity to talk and communicate in a widening range of situations and to practise and extend their range of vocabulary and mathematical skills.
- The children explore, enjoy, learn about, and use Mathematics in a range of personalised situations.
- Mathematics is planned on a weekly basis and assessed using the criteria from the Early Learning Goals.
- Depending on the lesson being taught, the Reception children are either; with the rest of the KS1 children for the input or have input aimed directly at their Learning Goals.

### KS1

- Our KS1 teachers follow the Lancashire Maths Planning guidance, which is based on the National Curriculum 2014, to support their planning and delivery of Mathematics teaching.
- The teachers use the guidance given in the Medium Term Planning and Maths Planning CD created by the Lancashire Maths and Assessment team.
- The short term planning is done weekly, listing the specific learning objectives that are to be covered in each year group for each lesson that week.
- Teaching and learning is differentiated to best match the needs of the class and the individuals within it using Concrete, Pictorial and Abstract representations.
- Children in KS1 are taught Mathematics for approximately 1 hour daily in mixed ability class groups.
- At the beginning of each Mathematics lesson all children undertake an Oral/Mental Starter activity along with a plenary to end it.

## KS2

- Children in Years 3, 4, 5 and 6 are taught Mathematics in mixed ability class groups and are taught for approximately 1 hour daily.
- At the beginning of each Mathematics lesson all children undertake an Oral/Mental Starter activity.
- Our KS2 teachers follow the Lancashire Maths Planning guidance, which is based on the National Curriculum 2014, to support their planning and delivery of Mathematics teaching.
- The teachers use the guidance given in the Medium Term Planning and Maths Planning CD created by the Lancashire Maths and Assessment team.
- The use of Mathematics resources is integral to the concrete – pictorial – abstract approach and thus planned into our learning and teaching.
- UKS2 also complete mini-maths sessions throughout the week, which identifies and targets particular weaknesses for children.

## Resources

We have a wide variety of good quality equipment and resources, both tangible and ICT based, to support our learning and teaching.

- These resources are used by our teachers and children in a number of ways including: Demonstrating or modelling an idea, an operation or method of calculation, e.g.: a number line; place value cards; dienes; money or coins; measuring equipment for capacity, mass and length; bead strings; the interactive whiteboards and related software; 3D shapes and/or nets; Numicon and related resources and software; multilink cubes; clocks; protractors; calculators; dice; number and fractions' fans; individual whiteboards and pens; and 2D shapes and pattern blocks, amongst other things; Enabling children to use a calculation strategy or method that they couldn't do without help, by using any of the above or other resources as required; and providing a context, where possible and linking it to the application and practise of calculation strategies and number skills.
- Standard resources, such as number lines, multi-link cubes, dienes, hundred squares, shapes, etc. are located either within individual classrooms or in a central store area
- Resources within individual classes are accessible to all pupils who should be encouraged to be responsible for their use.
- Further resources (often larger items shared by the whole school) are located in the Mathematics cupboard.
- A range of Mathematics related software is also available including My Maths, TT Rockstars and Education City.
- Resource examples and useful websites for Reasoning task are available on the Teacher's Network and are used by KS2 to improve fluency and reasoning within mathematics.

- Teachers are encouraged to use the school playground as an outdoor classroom when possible, for example, when teaching length, area or perimeter.

### Planning Formats

- All teachers use the planning proforma created by the Maths Subject Leader that includes space for Learning Intentions for each year group, whole class input, individual group activities and plenaries.

### Assessment

- Children take termly assessments provided by Lancashire Maths team to identify gaps in their learning.
- EYFS are assessed according to Early Learning Goals.
- Year 1 are assessed according the Lancashire Assessments called KLIPs (Key Learning Indicators of Performance)
- Year 2 are assessed according to KLIPs along with the KS1 SATs.
- Years 3 and 4 are assessed according to KLIPs along with end of term NFER assessments.
- Year 5 are assessed according to KLIPs along with end of term NFER assessments.
- Year 6 are assessed according to KLIPS, KS2 SATs and the Maths Interim Assessment Framework.

### Calculation Policy

- The school follows the Lancashire Calculation Policies for both mental and written calculations (Please see Calculations Policy).

### Cross Curricular

- Opportunities are used to draw mathematical experiences out of a range of activities in other subjects such as Science, PE and Geography, to enable children to apply and use Mathematics in both real life and academic contexts and make links.

### Homework

- Homework (please refer to the School's Homework Policy)
- Mathematics homework is set for children all children each week.
- Homework provides opportunities for children to: practise and consolidate their skills and knowledge; develop and extend their techniques and strategies; and prepare for their future learning through out of class activities and homework.
- Homework activities are varied, interesting and fun so that the children are motivated; the tasks often compliment the area of Mathematics being taught that week

## Subject Leader

- The role of the Subject Leader is to provide professional leadership and management in Mathematics in order to secure high quality teaching, effective use of resources and high standards of learning and achievement for all pupils.
- They will achieve this by affecting the following key areas: strategic direction and development; learning and teaching (including planning and marking and presentation); leading and managing staff; and efficient and effective use of resources.
- The Subject Leader will train and coach staff on Mathematical pedagogy within the school and keep up to date with developments from a county and national level.
- The Subject Leader has regular discussions with the Head Teacher and other members of staff about learning and teaching in Mathematics and provides data and a subject overview of the strengths and weaknesses of Mathematics within St Mary's Primary School on a termly basis.
- During the academic year the Subject Leader has specific allocated time for subject evaluation and monitoring tasks.

Policy written by Rebecca Holland

Policy date - October 2020



All are welcome here to walk with Jesus as we love, learn and flourish.