

# **ST JOHN XXIII CATHOLIC PRIMARY SCHOOL**



**Maths Policy**

## **School Vision**

A high-quality mathematics education provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject (National Curriculum 2014).

At St John XXIII Primary School all of our children are given the opportunity to develop their mathematical potential through a rich, engaging curriculum. We want our children to feel confident in using and applying mathematics in a wide range of situations. We believe that mathematics is uniquely powerful in helping us to make sense of, and describe our world and in enabling us to solve problems. It is a fascinating subject, dealing with the nature of number, space, pattern and relationships. Useful and creative, it requires not only facts and skills, but also understanding gained through exploration, application and discussion.

In mathematics we aim to develop lively, enquiring minds encouraging pupils to become self-motivated, confident and capable in order to solve problems that will become an integral part of their future.

## **Aims**

The purpose of mathematics education is to offer pupils intellectual excitement and challenge; to provide them with a sense of delight and wonder; to equip them with knowledge and skills and the ability and confidence to use and apply these to meet the needs of present and future society. St John XXIII Primary School aims to ensure that all pupils, irrespective of gender, race and culture, have access to a wide range of stimulating problems and activities which will include the appropriate Programmes of Study of the National Curriculum 2014 and the EYFS curriculum.

As they move from home into school and from primary into secondary education, their mathematical experience should be continuous and progressive producing competent and confident young mathematicians.

We ensure that the statutory requirements of the National Curriculum 2014 are met and so too are their aims:

- To become fluent in the fundamentals of mathematics

- Reason mathematically
- Solve problems

### **Intended Outcomes**

Our pupils will learn to:

- Develop the appropriate mathematical language associated with number, shape and position;
- Use and apply mathematics in practical tasks, in real life problems and in acquiring further knowledge, skills and understanding in the subject itself;
- Understand and use the four operations of number in relevant contexts;
- Understand relationships between numbers, learn basic number facts and develop a range of computational methods;
- Understand place value in our counting system and understand how it can be extended into numbers below zero;
- Use their mathematical skills in simple problem solving;
- Collect, interpret and represent data in tabular, graphical and diagrammatic form;
- Develop mental methods of calculation;
- Recognise, describe and represent shapes and patterns in terms of their properties, location and movement;
- Measure quantities including length, area, volume/capacity, angle, temperature, time and mass;
- By the time children reach Year 6 they will be introduced to ratio/ proportion and language of algebra as a means for solving a variety of problems.

We will judge the success of our mathematical teaching by:-

- The motivation and interest displayed by our pupils
- KS1 and KS2 SAT results
- Success in meeting targets
- Data analysis (SIMS)
- Book and planning scrutiny
- Observations of the teaching of mathematics

## **Teaching and Learning**

All pupils are entitled to a broad mathematics curriculum in which their learning needs are identified and met. Pupils should experience a range of practical and written activities on number, measurement, geometry and statistics. We operate the planning procedure agreed by the whole teaching staff based upon the National Curriculum Programmes of Study 2014 and the EYFS.

Classrooms should be rich in discussion between pupils and between teacher and pupils.

Some facts will need to be memorised, others will need to be practised but underpinning all of this will be the development of mathematical reasoning and understanding through exploration, problem solving and investigation. Our medium and long term planning is informed by these documents which map out the mathematics curriculum for each year group. We then develop weekly and daily plans which give specific detail of learning objectives and appropriate differentiated activities.

Mathematics is taught for 1 hour per day in both the Lower and Upper Phases. In the Foundation classes mathematics teaching is spread throughout the day aiming for the same structure as Lower Phase by the end of the Foundation year.

Each lesson has the following structure:

- A short mental/oral starter
- The main teaching
- Opportunities to apply new learning through differentiated activities.
- Plenary

Pupils in the Foundation year use a variety of media but most of the work is practical. All pupils in lower and Upper Phases use a pencil for mathematical calculations and squared exercise books to aid setting out of calculations.

## **Cross Curricular Links**

Mathematics is an integral part of our daily lives and therefore manifests itself in many areas of the curriculum. Links with ICT are continually developed through use of laptops, iPads and appropriate software. At St John XXIII Primary School we use a Creative approach to topic work through a programme called Innovative

Curriculum. There are many opportunities to link maths across the curriculum creatively.

### **Assessment, Recording and Reporting**

To develop learning, pupils will be continuously assessed using a variety of strategies - observation, questioning, marking in accordance with our school marking policy. In the EYFS, pupils will be assessed and the Foundation profile completed throughout the year. In the Lower and Upper Phases, children are assessed using a range of set tasks designated as appropriate to assess individual pupils, groups or a whole class on an individual or range of attainments. Information will be recorded onto the schools tracking system and then used to inform future planning, and to identify children for intervention and support. The Class Teacher, Assessment Co-ordinator, Phase Leader, SENCO, Deputy Headteacher and Head Teacher keep records of assessments.

Each pupil will have targets set and checked regularly. These will link to the learning objectives for that year group. Statutory Assessment Tasks (SATs) will be administered in accordance with the law at the end of Year 2 and Year 6.

Parent's consultations are held each term where the teacher discusses children's targets and progress in mathematics.

In accordance with statutory requirements, an Annual Report is sent to parents towards the end of the Summer Term. This report covers progress and achievements in mathematics, setting targets for future improvement.

### **Resources**

Pupils should engage in activities from a variety of sources – practical apparatus, worksheets, textbooks and the environment. Through regular and frequent access to computers and iPads, they will experience the fascination of mathematical exploration and investigation. They should also have the power to solve real and challenging problems. Each classroom has a variety of teaching aids to support mathematics. All classes have access to a wide variety of equipment including, multilink, Numicon, Cuisenaire rods, number lines as well as measuring and weighing equipment. Pupils are encouraged to choose resources which are relevant to their work, take care of and return them.

## **Intervention**

Interventions are provided to boost children's progression in maths and are tightly planned, with success criteria set and assessments made frequently to ensure progress is being made. Interventions are carried out mostly by our Teaching Assistants, however it is the responsibility of the teacher to decide how it is planned and delivered. Communication is paramount to ensure the intervention is being carried out correctly and effectively. There are also opportunities for Gifted and Talented children within St John XXIII Primary. Currently we have Maths Outreach Programme running in Year 6 to work with a teacher from a local high school to target children in helping them achieve level 6.

Data analysis, taken from SIMS, is used to identify children who require additional support in specific areas. We offer a range of additional maths intervention resources including:

- Rapid Maths
- Mathletics
- Numicon Interventions
- Maths Booster in the Upper Phase

## **Outside Agencies**

The Maths Co-ordinator works in conjunction with the West London Teaching Schools' Alliance which provides networking opportunities to discuss mathematics each term. In addition, the Phase Leaders and Deputy Headteacher liaise with outside maths consultants as appropriate.

## **Management**

Maths in EYFS (Nursery and reception ) is coordinated by the EYFS Leader

Maths in the Lower Phase (Year 1, 2 and 3) is coordinated by the Lower Phase Leader

Maths in the Upper Phase (Year 4, 5 and 6) is coordinated by the Upper Phase Leader

The Deputy Headteacher oversees Maths across all phases and meets with the Phase Leaders regularly to monitor the subject.

Their responsibilities are:

- Ensure a core of material is available
- Review and monitor planning
- Monitor maths teaching and evaluate pupils work
- Arrange liaison with outside consultants
- Work alongside staff to support if required
- Attend relevant courses to be aware of new ideas and disseminate these to all staff and to arrange appropriate inset for colleagues
- Be responsible for ordering all maths resources
- Carry out a curriculum review and relay findings to the Governors and staff
- Update the policy document and schemes of work as necessary
- Provide workshops for parents

### **Induction of staff**

New members of staff will be introduced to the policy, planning requirements, specific targets and resources by the Deputy Headteacher. NQTs receive additional LA training as part of their induction.

### **Liaison across Phases**

Regular meetings will take place between phase leaders in the EYFS and the Lower and Upper Phase to ensure best practice.

### **Evaluation**

The mathematics policy will be reflected in our practice. This will be monitored and evaluated by the Head Teacher, Deputy Headteacher and the Senior Leadership Team in the form of lesson observations, discussion and regular scrutiny of planning and of pupils' work.

### **Whole School Issues**

This policy will be considered annually when updating our School Improvement Plan and Maths Action plan. Inset will be planned to support Whole School responses and where possible individual professional needs.

This policy should be considered alongside our policies on:

- Display;
- Equal Opportunities;

- Special Educational Needs;
- English as an Additional Language;
- ICT.