

John Randall Primary  
School and Nursery

# Mathematics Policy

Co-ordinator: Miss L Baynham

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### **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 John Randall Primary School and Nursery 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. 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.

John Randall Primary School and Nursery 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
- 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 KS1 and KS2.

In the Foundation classes mathematics teaching is spread throughout the day aiming for the same structure as KS1 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

### **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 classroom computers, iPads and appropriate software. At John Randall Primary School and Nursery we use a creative approach to topic work. 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 KS1 and KS2 children are assessed using their books and a range of set tasks designated as appropriate to assess individual pupils. 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, Mathematics Co-ordinator, SENDCo 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 KS1 and KS2. 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 and includes the level achieved in the SATs if appropriate.

### **Resources**

Pupils should engage in activities from a variety of sources. Through regular 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. Pupils are encouraged to choose resources which are relevant to their work.

### **The Environment**

We recognise the important role displays have in the teaching and learning of mathematics by having mathematics work displayed in classrooms and around school. Every class has a mathematics display, where possible in the main teaching area, which has number lines, number grids, vocabulary and other display materials that provide visual support, promote mathematical thinking and discussion and to prepare them for their future learning.

### **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. Data analysis is used to identify children who require additional support in specific areas.

### **Management**

The Maths Co-ordinator works in conjunction with Telford and Wrekin South Cluster which provides regular moderating opportunities. In addition the Maths Coordinator liaises with outside maths consultants as appropriate.

The role of the Maths Co-ordinator:

- 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 as necessary
  - Review and renew a Raising Attainment Plan each term with staff

### **Induction of staff**

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

### **Liaison across Key Stages**

Regular pupil progress meetings will take place between staff in the EYFS, KS1 and KS2 to ensure best practice and progression.

### **Evaluation**

The mathematics policy will be reflected in our practice. This will be monitored and evaluated by the Head Teacher, the Senior Leadership Team and the Maths Co-ordinator in the form of lesson observations, discussion and regular scrutiny of planning and of pupil's work.