

John Ruskin Primary School and Language Classes

# Mathematics Policy

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Next review: 2027



***“Be responsible, be fair, stay positive and care”***

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Do not worry about your difficulties in Mathematics. I can assure you mine are still greater.  
Albert Einstein

If I were again beginning my studies, I would follow the advice of Plato and start with  
mathematics. Galileo Galilei

## Rationale

At John Ruskin School we believe that mathematics is fundamental to the social, personal and intellectual development of our pupils.

We encourage all our pupils to develop positive attitudes towards mathematics in order to be able to fulfil their potential.

Pupils at John Ruskin are entitled to and will be provided with, a broad and balanced programme of study in mathematics.

All pupils irrespective of gender, race, creed, culture or disability, are given equal opportunity to acquire the mathematical skills, concepts and knowledge required by the mathematics National Curriculum.

## Aims

- To give children the opportunities to experience mathematics through real problems, and to use and apply skills in a variety of situations.
- To ensure that each child becomes numerate.
- To ensure equal opportunities for all.
- To encourage problem solving and investigative skills.
- To promote the use of mathematical language.
- To challenge children intellectually through mathematical concepts.
- To enable the children to develop as independent learners in mathematics with a positive self-image.
- To incorporate weekly use of reasoning in lessons.

## Objectives

- Wherever possible provide the child with appropriate work within their own classroom environment.
- Give consideration for acceleration.
- Provide support for class teachers in their teaching of mathematics.
- Provide and make resources available to facilitate learning.
- Record and review progress, tracking teacher assessment and test scores.
- Inform and involve governors about the school's provision for mathematics.
- Inform and involve the parents.
- Consult and liaise with other agencies where appropriate.

## Planning the Curriculum

At John Ruskin School we follow the mathematics National Curriculum. For planning, the school uses *White Rose Maths* scheme of learning. It is planned to ensure breadth, balance, coverage and progress in mathematics. It supports a mastery approach to teaching and learning and has been designed to support the aims and objectives of the National Curriculum.

### **White Rose Maths overview:**

- have number at their heart. A large proportion of time is spent reinforcing number to build competency.
- ensure teachers stay in the required key stage and support the ideal of depth before breadth.
- ensure students have the opportunity to stay together as they work through the scheme as a whole group.

- provide plenty of opportunities to build reasoning and problem solving elements into the curriculum.

We believe that all children, when introduced to a new concept, should have the opportunity to build competency by taking this approach.

CONCRETE – children should have the opportunity to use concrete objects and manipulatives to help them understand what they are doing.

PICTORIAL – alongside this children should use pictorial representations. These representations can then be used to help reason and solve problems.

ABSTRACT – both concrete and pictorial representations should support children's understanding of abstract methods.

Pupils now undertake a reasoning activity once a week.

The mathematics curriculum clearly sets out the mathematical blocks to be covered each term, with work in the later terms often building on work studied in the autumn.

The framework is also used to identify suitable objectives to be incorporated into S.E.N. pupils' I.E.Ps each term.

## **Learning Experiences**

**Pupils experience a range of mathematical activities which help to develop and promote their interest. They work individually, in pairs, groups, or as a whole class according to the nature of the task.**

## **Resourcing the Curriculum**

We use a variety of resources in both Key Stages to assist curriculum delivery. Further equipment and resources used to support the curriculum is stored centrally in the maths cupboard and additional resources are also available in classrooms.

*White Rose Maths provides worksheets which are used and adapted as necessary. Other maths resources are used to supplement these (Maths - No Problem, Twinkl and CGP books).*

In addition to these resources, books with problem solving activities and investigations are available in each year group.

## **Classroom Organisation**

Mathematics at Key Stage 2 is taught in ability sets. Work is also differentiated within each set to meet pupil needs, depending on the activity.

The children may move between sets to meet changing needs. This is determined by teacher assessment.

In the Early Years, at Key Stage 1 and in the Language Unit, children are taught in differentiated groups within the classroom.

## **Effective teaching and learning**

Careful class, group and individual assessment will inform the planning of work to ensure appropriate pace, rigour and challenge. Opportunities for effective teaching and learning will take place through:

- Developing an enriched curriculum.
- Creating a stimulating, meaningful environment within and surrounding the school.
- All teachers implementing the school calculation and mental policies confidently and effectively.
- Using support staff in group work.
- Planning involvement of parents.
- Helping children to formulate questions.
- Encouraging co-operative and independent learning.
- Setting manageable yet challenging targets to maximise success to gain self-esteem and self-confidence.
- Encouraging pupils to take risks and make mistakes - learning from failure as well as success.

## **Mathematics Across the Curriculum**

**Many mathematical learning experiences are planned and taught through other curriculum areas. These activities include:**

- Compiling tables
- Drawing graphs and charts
- Retrieving information from charts or graphs
- Using co-ordinates and grid references
- Analysing timetables
- Designing and measuring for technology, science and geography
- Reporting conclusions
- Matching and pairing activities
- Estimating

- Practical investigations
- Developing pupils' explanation skills

## **Assessment and Record Keeping**

1. Teacher assessment of pupils' work through regular marking and observations within the lesson.
2. Assessment at the conclusion of topics using pencil and paper tasks which serve to reinforce teacher assessment.
3. The QCA national tests in years 2 and 6 are also taken in the summer terms.

Pupil targets in mathematics are set termly for each child as a result of these teacher assessments.

## **Parental Involvement**

Parents are informed of their child's progress at termly parents' evenings and are given parent information sheets with that year's maths goals and suggested activities to support their child.

Parent workshops have also been run to help parents support their child with the different calculation methods.

## **Equal Opportunities**

Teaching materials are chosen to reflect the cultural and ethnic diversity of our pupils. At John Ruskin, we aim to avoid stereotyping through gender or race and the pupils' performance is monitored to ensure that no group of pupils is disadvantaged. In lessons, the full participation of both boys and girls is expected and care is taken to ensure that the emphasis on whole class teaching does not disadvantage any gender.

## **S.E.N.D**

Children with Special Educational Needs will receive their full entitlement of the mathematics curriculum which will be delivered at the appropriate pace through I.E.P's. Individual programmes are planned by class teachers in consultation with the SENCO.

## The Language Unit

A primary aim of the Language Unit is to provide differentiated access to mathematics, catering for each child's individual needs according to their EHCP (Education Health Care Plan) in accordance with the mathematics policy. Access will incorporate material selected from the Key Stage appropriate to their understanding to enable individual pupils to progress and demonstrate achievement.

Material will be presented in contexts appropriate to the child's age and comprehension levels. Multi-sensory, concrete and practical experiences may be used for a longer period to ensure that the understanding of concepts, development of skills and acquisition of knowledge is secure prior to the introduction of symbolic representation.

Opportunities for consolidation and overt generalisation are incorporated into learning experiences. Mental arithmetic and the use of strategies are encouraged through structured talk.

Individual, paired and small group work provide opportunities for intensive focused teaching input, and classroom organisation may incorporate smaller differentiated groups as opposed to whole class teaching.

Mathematical vocabulary is given careful consideration within the wider context of language learning. *Makaton*, and *Communication in Print* are used where appropriate to aid memory storage and retrieval of vocabulary. This in turn aids pupils' abilities to organise and talk through a task by providing visual symbol support.

Language Unit children have opportunities to integrate with the main school in Mathematics. This takes place when their attainment is in line with their peers in the same year group.

## Monitoring

**The monitoring of the teaching and learning of mathematics is developed in line with the whole school policy and is monitored by:**

1. Senior management and the maths leaders provide feedback on book monitoring throughout the year.
2. Senior management and maths leaders also provide feedback on learning walks throughout the year.

## **Reviewing the mathematics Policy**

***This policy was reviewed in the Autumn term 2024.  
It will be reviewed again in the Autumn term 2027.***

Kieran Manera and Phoebe Clater (mathematics leads): July 2024