

John Ruskin Primary School and Language Classes

Mathematics Policy

Co-ordinator: Kieran Manera

Last review: 2021

Next review: 2024



“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.
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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* schemes 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.

The White Rose overviews:

- 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 schemes 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.

Collins, CGP and Maths - No Problem are used as a classroom reference material and there is now a wealth of resources available in the staff/ maths shared area on the computer.

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 some 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 co-ordinator provide feedback on book monitoring throughout the year.
2. Weekly plans are reviewed and feedback is given each term.
3. Senior management also provide feedback on classroom observations throughout the year.

Reviewing the mathematics Policy

***This policy was reviewed in the Autumn term 2021.
It will be reviewed again in the Autumn term 2024.***

Kieran Manera (mathematics co-ordinator): December 2021

John Ruskin School and Language Classes- Equality Impact Assessment Form
(covering race, disability, gender, age, religion or belief and sexual orientation)

Complete the sections/questions below and place a tick in the boxes, as appropriate:

Section 1 - General Information

1. Title of the policy or practice being assessed:

Mathematics

2. Aim(s) of the policy or practice being assessed:

To enable all children to develop as independent learners in mathematics with a positive self-image.

3. Type of policy or practice being assessed:

Existing

Proposed

4. Department and/or name of person responsible for the policy or practice:

Kieran Manera

5. Which members of our school community are affected/likely to be affected by the policy or practice?

Pupils

Staff

Parents and carers

Governors

School volunteers

Visitors to the school

Wider school community

Other – (please list) _____

Not relevant to members of our school community ⇨ **Process Ends** ⇨ equality impact assessment not required

Section 2 - Monitoring impact - gathering evidence

6. Do we currently collect or plan to collect any data or information to monitor the impact of the policy or practice on members of our school community (as listed in Q5)?

Tick all that apply:

Performance indicators or targets


People profiles – eg pupils, staff, governors, visitors, wider school community

User satisfaction methods – eg from pupils, parents and carers, staff, governors, visitors, wider school community

Consultation methodologies, eg sampling of policies using pupils, parents and governor forums, 1-to-1 meetings with people from diverse groups

Collating complaints and compliments

Other – (please list) _____

None 

7. Is the data we collect (or intend to collect) broken down into the following groups?

Tick all that apply:

children or people from different ethnic backgrounds


disabled children or people

boys or girls, men or women, people who identify as transgender

people of different ages

children or people with different religions or belief

children or people who are heterosexual, gay or lesbian


None of the above 


8. Do we know, from the data or information collected, if the uptake of any services, benefits or opportunities associated with the policy or practice is generally representative of our school community?

 Yes No Insufficient evidence to make a judgement

9. Is there evidence or reason to believe that some groups within our school community may be affected differently by the policy or practice – either adversely or positively?

No – Go to Section 3

No – insufficient evidence to make a judgement–  Go to Section 3

Yes  - these being:

children or people from different ethnic backgrounds

disabled children or people

boys or girls, men or women, people who identify as transgender

people of different ages

children or people with different religions or belief

children or people who are heterosexual, gay, lesbian or bisexual


Give detail of evidence and/or reasons why:

Section 3 - Anticipating future impact

10. Now consider what the policy or practice is aiming to deliver in the future, how will it do this and how it will impact on groups within our school community? Is there a possibility it may disadvantage or exclude from any groups within our school community? (See Appendix 2 – ‘Equality strands and factors to consider’ as a prompt)

No

Yes 

Not sure 

Please describe any potential issues here:

Section 4 - Addressing the red flags:

11. You now need to think about the implications of any red flags triggered during this assessment.

- How straightforward will it be to address the red flag triggers?
Can you fill any gaps in information by carrying out small consultations (eg1-to-1s) or surveys? Can you analyse existing data, or collect new data relevant to the policy or practice? Can you amend the policy or practice to address the issues? Decide how the red flag triggers can be best addressed appropriately and reasonably for your school.

- Are these red flags highlighting major gaps in your evidence or understanding which will need more detailed consideration?

Please indicate your conclusions below. This will explain the next steps you need to take.

- There are no red flags or issues identified. No further action is required. Go to Section 7 - Completion
- The red flags can be easily addressed for example, by collecting and analysing data, amending the policy or practice, or through carrying out small consultations.
Or we have identified an objective, lawful reason to justify the issue(s).
Go to Section 5 - Improvement Actions
- Red flags are highlighting major gaps in evidence or issues that will be difficult to address and we need to undertake more evidence gathering.
Go to Section 6 - Additional evidence gathering.

Section 5 - Improvement Actions

12. Please describe any actions which you intend to undertake to address any issues which have been highlighted by the EqIA. Then go to Section 7 - Completion.

Section 6 - Additional evidence gathering

If your assessment identified complex issues which would be difficult to address, or you had insufficient evidence to make a judgement, you need to undertake an additional evidence gathering process. This is described below:

(a) Gather and analyse relevant additional evidence to address gaps in your knowledge, enhance understanding of the issues and inform options for addressing these. Additional evidence may include any of the following:

- Involving for example, pupils, staff, parents, carers and governors from different equality groups in discussions about the how the policy or practice may affect them
- Information from specialist staff/in-house expertise, either within school or at Norfolk County Council (see Equalities and Diversity Contacts on equality pages on Norfolk schools intranet page)
- Benchmarking with other schools
- Analysing data of take up/use of policy or practice by school community profile groups
- Using results of any school surveys or consultation exercises undertaken in relation to equality
- Research reports on the needs and experiences of diverse groups
- National best practice guidance from, for example from Department for Children, Schools and Families, (www.dcsf.gov.uk) or Equalities and Human Rights Commission (www.equalityhumanrights.com)
- Expert views from organisations representing diverse groups (ie disability/race equality groups; trade unions etc – see Useful Resource Contacts on Norfolk schools equality pages for details of contacts)

(c) Use your additional evidence gathering and analysis to develop options for addressing the issues identified, and consulting with relevant management teams/governors where necessary to discuss issues and confirm proposed actions.

(d) Following completion of the above, please confirm the following:

Summary of evidence gathered, including any consultation:

The conclusions and agreed actions:

Section 7 - Completion

Name and job title:	Kieran Manera- Mathematics co-ordinator
Names and titles of any other people who assisted with this assessment:	
Date:	22.11.21
Date of next review:	22.11.24
When completed, a copy of this form should be saved with the master copy of the function/policy for audit purposes.	