



# Mathematics Policy

Reviewed:  
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## **AIMS**

In line with the National Curriculum, at Ryhill Junior, Infant and Nursery School, we aim to develop pupils' mathematical fluency. This means developing their understanding and quick recall of key facts and information, as well as enabling them to use, apply and make links between these different ideas, enabling them to become fluent in the language of mathematics.

We strive to develop pupils' numeracy and mathematical reasoning so that they understand and appreciate the importance of mathematics. We believe that all children should understand, engage with and enjoy mathematics. It is our belief that this will lead to children becoming lifelong lovers and learners of mathematics. We will achieve these aims through a clear and relevant curriculum, high quality teaching and learning, rigorous assessment and strong leadership and management. It is our aim at Ryhill to develop:

- A positive attitude towards mathematics and an awareness of the fascination of mathematics.
- Competence and confidence in mathematical knowledge, concepts and skills.
- An ability to solve problems, to reason, to think logically and to work systematically and accurately.
- Initiative and an ability to work both independently and in co-operation with others.
- An ability to communicate mathematics.
- An ability to use and apply mathematics across the curriculum and in real life.
- An understanding of mathematics through a process of enquiry and experiments.

## **CURRICULUM**

### **LTP**

Long-term planning incorporates what should be taught and assessed each year. The National Curriculum forms the basis of the long-term planning for each year group, assisted by high-quality planning tools such as White Rose Maths Hub. Long-term planning assists teachers in making links to other curriculum areas to increase pupils' engagement with maths and give them the opportunities to apply their skills to a range of tasks.

### **STP**

Short-term plans are prepared weekly and adapted as necessary as the weeks learning goes on. The objectives, explicit teaching, tasks (varied fluency, reasoning and mastery) kagan structures, outdoor links, resources and mathematical vocabulary are stated for each lesson. Weekly plans are shared with all teaching staff (teachers and teaching assistants).

## **BREADTH OF STUDY**

Through careful planning and preparation, we aim to ensure that throughout the school the children are given opportunities for:

- Practical activities and mathematical games.
- Concrete learning.
- Pictorial learning.
- Abstract Learning.
- Problem solving.
- Individual, group and whole class discussion activities.
- Open and closed tasks.
- A lesson once a week that is devoted to the teaching of mental arithmetic
- A range of methods of calculating, e.g mental, pencil and paper and using a calculator.
- Working with computers as a mathematical tool.
- Opportunities for deeper thinking.

## **TEACHING AND LEARNING**

### **WEEKLY TIMETABLE**

All classes in Key Stage 1 and Key Stage 2 teach a daily maths lesson of 1 hour. In addition to this teachers may do additional maths session to recap basic skills or revisit previous units during morning work or in afternoon sessions. Maths morning activities are used twice weekly and include a variety of maths problems to get the children thinking and applying their mathematical skills.

### **DAILY LESSONS**

Daily lessons are planned to allow opportunities for children to take part in problem-solving activities on a regular basis in order for them to develop their higher-order thinking skills and improve their resilience. Activities are planned that will engage and motivate children, whilst teaching them the basic skills and allowing them to apply these in a range of situations. Calculation methods will be taught progressively through the school using the current calculations policy as a model and adapting it to the needs of children in each class as necessary. School follows the WRMH scheme of work and calculations focusing on the concrete, pictorial and abstract methods.

Children will be given access to a range of written, visual and practical models in all areas of maths in order to consolidate and deepen their understanding. The outdoors is also used in order to further facilitate maths and provide a different context for the application of mathematical skills.

## **MARKING**

Children mark exercises (such as mental arithmetic tests) which involve routine practice. They do this with support and guidance from the teacher. Where appropriate, children in year 5 and 6 are encouraged to check computational exercises with a calculator. This can foster the independence in children, who can seek help if they are unable to locate and correct their errors.

The quality of marking is crucial. Feedback is given to the children during the lessons and teachers are encouraged to move children forward during the lesson if they are showing understanding of the task. Each day children's books are marked and feedback is given to move the children forward by challenging them or providing a next step where necessary that will show consolidation of their learning, or promote deeper thinking. We have a variety of examples that we use when giving next steps to the children to help do this. (For more details see the School Marking Policy and the 'Examples of good marking in mathematics' folder.)

## **SPECIAL EDUCATIONAL NEEDS.**

We include all pupils fully in maths activities. We will teach the skills, knowledge and understanding in the mathematics curriculum in ways that are appropriate to the abilities of our children in order to ensure each child reaches his/her full potential. Appropriate key objectives will be incorporated into OPP's and special arrangements made through discussions with the teacher, SENCO and outside agencies as necessary. Interventions are set up and decided upon by the class teacher alongside the SENCO and maths co-ordinator. Interventions will run as necessary in order to allow children to narrow the gap and make good progress. Additional support staff are available in all classes. They work collaboratively with the class teacher and maths co-ordinator. Support staff teaching intervention groups, report back to the class teacher and the results of the children are closely monitored by the maths co-ordinator.

## **RESOURCES.**

All classrooms have a range of mathematical resources. These resources are accessible to children and children will be taught how to use them effectively. Through this we aim to develop children's own resourcefulness. There is a central store in school where all the maths resources are kept and labelled. These resources are for the whole school to use as and when they please, but any resources moved from the central store must be returned. These resources are in line with the WRMH guidance. Resources will be replenished and updated by the mathematics coordinator, based on feedback from class teachers as well as external CPD and research findings.

## **MATHLETICS & TTRS**

All children and staff have access to Mathletics and TTRS. Children can access Mathletics and TTRS from home and during lessons. A Maths club runs every week for children throughout school, and class work and homework are set on Mathletics and TTRS. Teachers can use this as a tool to assess children before a unit and can test them after a unit, and for any consolidation throughout the units being taught and for children to practise quick recall of timetable fact. Each week the children's scores are counted and a celebration assembly is held for the top 5 scoring children and the highest scoring class.

## **MATHS IN THE CURRICULUM**

Wherever possible, teachers make links between topic units and mathematics. As well as making links throughout other areas of the curriculum, every term each class completes a 'Maths Mission'. This is based on a design or model linked to the topic area and different mathematical investigations are carried out linking to all the areas of mathematics. This gives the children the opportunity to apply their knowledge of mathematics in a fun and engaging way, helping them see a purpose for the use of mathematics.

## **ASSESSMENT**

Teachers are expected to make regular assessment of each child's progress and to record this on Otrack each half term. Children's scores that they achieve in the test are recorded on Otrack and the results are analysed by the maths co-ordinator.

Teacher assessment is also used alongside the judgement of the tests. Evidence is drawn from:

- Pupils Responses in class
- Children's work
- Test answers
- Conversations with children
- Application across cross curricular links.
- Mathletics analysis.

## **ANNUAL ASSESSMENT**

At the end of the year, children complete a final assessment test and the outcome of this, alongside teacher's professional judgment, informs their end of year

attainment. This is tracked to allow progress and attainment trends to be monitored for individuals and groups of children as they move through the school. At present, the end of year assessment for Years 2 and 6 will be a SATs test that will provide their end of key stage grade.

## **DATA ANALYSIS**

The mathematics coordinator, alongside other members of the Senior Leadership team, will be responsible for analysing termly and annual maths data. This analysis will be used to write termly subject reports and to inform provision for individual children and groups of pupils, individual staff CPD, whole-staff training needs, school development opportunities and future points for the maths action plan.

## **LEADERSHIP AND MANAGEMENT**

### **ROLE OF THE SUBJECT LEADER**

The mathematics Subject Leader, with the support of Senior Leaders and teaching staff, is responsible for ensuring that this policy is implemented consistently and effectively across the school. The mathematics Subject Leader has a responsibility to ensure that all teaching and learning across the school in mathematics is consistently good or better. Where this is not the case, action will be taken to ensure that progress is being made towards this end.

The Subject Leader will ensure this through taking part in the whole-school annual monitoring cycle (including lesson observations, coaching, book scrutiny and learning environment walks), as well as being available as a point of contact for any member of staff seeking support with the teaching and learning of mathematics and mastery maths. The Subject Leader will be responsible for giving staff individual and group feedback following monitoring activities and for organising a variety of different CPD opportunities, either internally or externally, as necessary.

The Subject Leader will write, amend and implement a rolling maths action plan in order to constantly develop the teaching and learning of mathematics in the school.

## **CPD**

The mathematics Subject Leader will have responsibility for monitoring and supporting the continued professional development of teaching staff within the school, where it relates to the teaching and learning of mathematics.

This will be completed through:

- Individual written and verbal feedback from monitoring activities
- Use of the triad coaching system

- Opportunities for peer observations
- Input for teaching staff within the school's INSET programme
- Use of Local Authority and external CPD providers
- Informal support as requested

## **PARENTAL INVOLVEMENT**

Parents are invited into school for 'inspire' sessions each term and some of these will have a maths focus. They are given the opportunity to work with the child and to make themselves familiar with the school's calculation policy. Parents are also given the opportunity to look at the child's work and to work together to complete mathematical tasks.