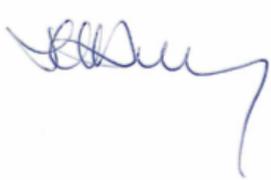


# RISE PARK PRIMARY AND NURSERY SCHOOL



## Maths Policy

September 2020

Signed by Chair of Committee	
Print Name	Jeanette Kirkby
Date	September 2020
Date of review	September 2022

# MATHEMATICS POLICY - RISE PARK PRIMARY AND NURSERY SCHOOL

## Intent

This policy outlines the teaching, organisation and management of the mathematics taught and learnt at Rise Park Primary and Nursery School. The school's policy for mathematics is based on 'The New National Curriculum for Year 1 to Year 6 (2014).' The policy has been drawn up as result of staff discussion and has full agreement of the Governing Body. The implementation of this policy is the responsibility of all the teaching staff.

*'Mathematics is a creative and highly interconnected discipline that has been developed over centuries providing the solution to some of history's most intriguing problems. It is essential to everyday life, critical to science, technology and engineering and necessary for financial literacy and most forms of employment. A high quality mathematical education therefore provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the power and beauty of mathematics, and a sense of enjoyment and curiosity about the subject.'* (DfE 2013)

As can be seen from the above description, mathematics pervades all aspects of our lives and helps us to make sense of our world. With this in mind this policy promotes the basic and wider understanding of mathematics, and hopes to instil an enjoyment in the subject by supporting children to engage with it and build upon their own understanding and promote further learning. Learning skills are an important aspect of mathematics but such skills are only a means to an end, and should be taught and learned in a context that provides purpose and meaning.

## **1 AIMS AND OBJECTIVES**

As a result of teaching and learning in mathematics, our aim is that pupils will be able to meet the key aims of the National Curriculum for maths.

- In our school we aim to promote children's **curiosity** and enable them to safely take risks and learn from first-hand experience wherever necessary
- Our primary focus is to support the children to become fluent in mathematical **understanding** from the most basic level so that they can build upon their own understanding.
- We aim to enable our children to develop conceptual understanding, **recall** of number facts and patterns and apply their knowledge rapidly and accurately.
- We aim to promote children's ability to **reason** through opportunities to discuss their thinking and understanding. This emphasis may result in less written work but much deeper understanding.
- We promote **problem solving** and solution finding. This is not only true in mathematical learning but in almost all aspects of school life.
- We aim to support children to make **progress at their own pace**. Often misconceptions cause greater difficulties at a later stage of learning. We will promote smaller group learning opportunities whenever possible and encourage children to revisit their thinking to ensure they feel secure in their understanding and able to move confidently on to next steps and challenges.

## **Implementation**

### **2 TEACHING AND LEARNING**

#### **Spoken Language**

The national curriculum for Mathematics reflects the importance of spoken language in pupils' development across the whole curriculum – cognitively, socially and linguistically. The quality and variety of language that pupils hear and speak are key factors in developing their mathematical vocabulary and presenting a mathematical justification, argument or proof. They must be assisted in making their thinking clear to themselves as well as others and teachers should ensure that pupils build secure foundations by using discussion to probe and remedy their misconceptions.

#### **Knowledge Skills and Understanding**

In KS1 and KS2, teachers use 'The New National Curriculum (2014)'. Foundation Stage teachers use the 'Curriculum Guidance for the Early Years Foundation Stage (EYFS)' and are exploring the benefits of using the Maths Mastery programme. Through careful planning and preparation we aim to ensure that throughout the school children are given opportunities for:

- ✓ practical activities and mathematical games using a wide range of manipulatives
- ✓ Application tasks that encourage problem solving and reasoning
- ✓ individual, group and whole class discussions and activities
- ✓ open and closed tasks
- ✓ building number sense and fluency in calculation
- ✓ a range of methods of calculating (recalling a known fact, mental, a jotting, a formal written method)
- ✓ working with computers and calculators as mathematical tools

#### **Scheme of Work & Planning**

Our school scheme of work in years 1-6 follow the White Rose Scheme of Learning. Our weekly plans are developed from the New Curriculum 2014 objectives by year group teachers and consider the needs of our pupils. To ensure we provide challenge for all, this planning is supported through ongoing CPD, The White Rose Maths Hub resources, Deepening Understanding resources and The National Centre for Excellence in Maths (NCETM) Mastery documents. Alongside this, KS1 have worked with The Primary Team to explore the number fluency project. EYFS follow the Maths Mastery programme and planning is adapted to reflect this. Across a range of lessons children should be allowed to engage in mathematical discussion (talk partner or group work), investigations, problem solving, practical experiences and written methods, as well as allowing for time to demonstrate their understanding through DIRT (dedicated, independent, reflection tasks) activities.

Each class teacher is responsible for the mathematics in their class in consultation with and with guidance from the mathematics subject leader. Lessons are planned using a common weekly planning format and are regularly monitored by the mathematics subject leader and feedback provided. Planning will demonstrate the

various challenges available to children, together with AfL (Assessment for Learning) opportunities (speaking and listening and self/peer assessment) and teacher assessment.

## **Organisation of teaching**

### **Lessons**

To provide adequate time for developing mathematics skills in KS1 and KS2 each class teacher will provide at least 4 daily mathematics lessons per week. This may vary in length but will usually last for about 60 minutes. Additional mathematics may be taught within other subject lessons when appropriate.

In EYFS teachers will base their teaching on objectives in the curriculum guidance for early years; this ensures that they are working towards the 'Early Learning Goals for Mathematical Development'. Every child in EYFS takes part in the Maths Mastery programme which provides children with 15 minutes of specific maths teaching four times a week. AFL is constantly used as an assessment tool and children are often targeted following a teaching input in the continuous provision if they require additional support. As children enter KS1 there will be a carefully planned transition to ensure children are able to cope with the increase in taught sessions.

### **Additional support**

Times Tables Rock Stars will be delivered at least three times a week in years 2-6 (year 2 to start in the January each year) and scores are collected and recorded on the online programme. The maths subject coordinator is responsible for monitoring the progression of the scores when termly baselines are completed and to offer support to groups of pupils whose scores are not improving.

'Fluent in 5' will be taught at least three times a week from years 1-6 and recorded in the maths books. This process is whereby 5 key fluency calculations are chosen by the teachers based on their AFL and pupils practise the skills such as column addition, finding fractions amounts etc, similar to questions found on the arithmetic paper. This is to ensure regular practice and retention of key mathematical fluency skills are embedded.

Teaching assistants offer additional support through pre-teaching at least three times a week. Class teachers will either identify pupils through their AFL or through questions posed at the end of a lesson who will receive a 10-15 minute pre-teach of the following lesson in order for them to become successful. The idea is that children are identified in advance and gaps are addressed prior to the lesson so that they can 'keep up' with their peers. The groups are fluid and the children will vary dependent upon the need. Evidence is recorded in the maths books. A similar 'keep up' philosophy is adopted in EYFS as well where children are identified through AFL in the teaching input and their gaps are addressed the same day through effective adult interaction during continuous provision.

## **4. ASSESSMENT**

Assessment will take place at three connected levels: short-term, medium-term and long-term. These assessments will be used to inform teaching in a continuous cycle of planning, teaching and assessment. Short-term assessment will be an informal part of every lesson. The teacher will share the objectives for the lesson with the children and make sure they are clear what is being expected of them to successfully achieve the objective. This is a necessary part of assessment for learning and helps the children take ownership for their own learning. The short-term assessment will also involve the teacher checking the children's understanding throughout the session through mini plenaries to inform future planning and ensure the needs of all children are met. Children will be provided with feedback either verbally or through written marking. Often, in order to clarify understanding of a concept, children will be set DIRT activities once a week; these

should be completed by the children at the next earliest opportunity after the lesson. When marking work teachers should adhere to the school's Marking Policy.

Medium and Long-term assessment will take place three times a year to assess pupils' progress and attainment. Reference should be made to the school's *Assessment Policy* for further details. In Year 2 and Year 6 teacher assessment will be supplemented by the compulsory National Curriculum mathematics tests (SATs). This information will then be reported to parents and shared with the next teacher through our transition programme.

## **5. INCLUSION**

In line with the School's Inclusion Policy each child will have an equal entitlement to all aspects of the Maths curriculum and to experience the full range of Maths activities. Therefore, in delivering Maths, care will be taken to ensure that a variety of learning styles are accessed and teaching methods adopted.

In all classes, children have a wide range of mathematical abilities. We recognise this and provide suitable learning opportunities to support all pupils on their journey to mastery. Planned tasks, questioning strategies and the use of manipulatives, both physical and computing based resources are skilfully used by teachers in order to support and extend pupils. Intervention groups will take place both within the Maths lesson and outside; these sessions may be delivered by the teacher or teaching assistant and may involve individual or small group work, accessing both ends of the learning spectrum.

## **6 CROSS CURRICULAR LINKS**

Mathematics contributes to many subjects within the primary curriculum and opportunities will be sought to draw mathematical experience out of a wide range of activities. Our school curriculum maps will outline any key mathematical links for each year group. Weekly plans will note any more specific links. Our staff will always seek opportunities for incidental links to other subjects or real-life contexts to support children's understanding. This will allow children to begin to use and apply mathematics in real contexts.

## **7 RESOURCES**

Practical resources to support learning are stored both in individual classrooms where they are easily accessible to all children and additional resources are stored centrally outside the Year 2 classrooms. Each classroom has a maths 'working wall' and displays with vocabulary appropriate to the age range that displays the current topic of learning. Children use these displays as a reference point and an independent strategy to help them with their learning.

## **8. MANAGEMENT OF MATHEMATICS**

As Mathematics is involved in many aspects of the learning which takes place in school, the subject leader needs to ensure close liaison with other subject leaders to ensure that children are provided with appropriate opportunities and resources to enable them to engage in mathematical activities in a cross curricular way. The role of the Mathematics Subject leader is to:-

- Ensure that appropriate resources are available;
- Provide 'expertise' to assist staff in the delivery of the curriculum;
- Lead by example in the way they teach in their own classroom;
- Prepare, organise and lead INSETs and Staff meetings with the support of the Headteacher and deputy head teacher;
- Work co-operatively with the SENDCo;
- Observe colleagues from time to time with a view to identifying the support they need;

- Attend training provided by the local partnerships of schools to remain current;
- Inform parents about any major changes effecting the teaching of maths in school;
- Monitor planning, teaching and books;
- Discuss regularly with the headteacher and maths governor the progress of implementing the New Curriculum in the school.

## **10. POLICY REVIEW AND EVALUATION**

Evaluation of this policy will be ongoing and will be carried out through team meetings, planning meetings, lesson observations and evaluations. Resources will be audited on a regular basis and proposals for new resources along with new initiatives will be discussed with the Head Teacher and Maths subject lead.

### **Intended Impact**

- Pupils will see themselves as mathematicians and display confidence in the subject.
- Pupils of all abilities will be able to succeed in maths lessons, becoming confident, fluent mathematicians.
- Pupils will be confident at understanding different questions and using a range of skills to answer them.
- Parents and carers will have a good understanding of how they can support maths home, and contribute regularly to help improving key mathematical fluency.
- Pupils will make at least expected progress in maths.
- The % of pupils working at ARE within each year group will be at least in line with national averages.
- The % of pupils working at Greater Depth within each year group will be at least in line with national averages.
- There will be no significant gaps in the progress of different groups of pupils.

Policy Written by L Griffiths

Date of Review 2022