Hunton & Arrathorne Community Primary School

Mathematics Policy

Date: **April 2024**	**Headteacher: Mr S Donaldson**
Review Date: **April 2025**	**Chair of Governors: Mrs A Peacock**

Aims

The 2014 National Curriculum for Maths aims to ensure that all children:

- Become fluent in the fundamentals of Mathematics
- Are able to reason mathematically
- Can solve problems by applying their Mathematics

At Hunton and Arrathorne, these skills are embedded within Maths lessons and developed consistently over time. We are committed to ensuring that children are able to recognise the importance of Maths in the wider world and that they are also able to use their mathematical skills and knowledge confidently in their lives in a range of different contexts. We want all children to enjoy Mathematics and to experience success in the subject, with the ability to reason mathematically. We are committed to developing children's curiosity about the subject and supporting them through innovative teaching styles, accompanied by rich resources and cross-curricular links.

Organisation

From their start in Reception, the children have daily mathematics lessons.

Planning Structure

As a school, we follow the White Rose Maths Hub long term plan. In Reception and KS1 pupils follow single aged overviews and associated small steps guidance; in KS2 mixed age plans are followed. Although teachers use the White Rose plans to sequence lessons appropriately, by following small steps, we are committed to ensuring children receive a wide diet of mathematics tasks and therefore activities will not be exclusively from the White Rose resources.

It may be appropriate, for example at the beginning of the unit, to spend one session investigating concrete representations. Likewise, at the end of the unit the teacher may choose to spend a session entirely on the application of reasoning. Similarly, we understand the value of 'deep practice' and teachers are encouraged to spend appropriate time to give pupils a thorough depth of understanding.

In addition to the White Rose overviews, we also have bespoke progression documents for calculations and mental calculations. When teaching these aspects, teachers refer to these. Likewise, in rapid recall work these follow the basis of our plans.

Lesson Structure

The first lesson in each teaching sequence should allow the children to explore concrete representations at a level which is appropriately challenging for them.

Active Counting (5 minutes)

Each class has between 5-10 minutes rapid recall of counting per day – this could include key number bonds, multiplication tables or other curriculum related tasks.

Rapid Recall (5 minutes)

Rapid recall sessions should last 10 minutes and provide the pupils with opportunities to recap and revisit key skills – these should have a focus on progression in calculations and mental calculations although should not be exclusively limited to this. In KS2 pupils use A3 paper to share their workings and calculations, although squared whiteboards should also be used.

Teach It

High quality teacher modelling should include concrete, pictorial and abstract representations with the adult or adults modelling clearly initially. This follows an 'I do, you do' approach and may give pupils opportunities to consolidate skills on mini whiteboards or within books. Resources to support this come from a variety of resources including White Rose, the NCETM and bespoke teacher made resources etc.

Twist It

The objective is presented in a different way (varied fluency) and modelled clearly once again by the teacher. Children apply their knowledge in a different context.

Deepen It

The children are given the opportunity to explore the objective at a deeper level through reasoning and problem-solving tasks.

Challenge

An additional extension challenge which some children may access.

Plenary

This may involve a recap of knowledge, children self-marking or additional extensions. Where possible, real life links should be clearly explained to the children.

The teacher may decide to follow the above sequence within the initial lesson and stop the children after each part, moving some children on. Equally, they may decide to hold a whole class input first and then allow the children to work through problems independently.

Learning Environments

Learning environments should be maths rich. Resources should be readily accessible to the children. In addition each classroom should include:

- Age appropriate number lines (linked to curriculum objectives)
- A hundred square
- Concrete resources which are readily accessible
- Four sections – Concrete / Pictorial / Abstract / Reasoning with examples of each.
- A vocabulary section with relevant vocabulary for the topic
- Squared easel paper for modelling key concepts

Presentation

Children worked in squared maths books which are clearly labelled in the school style. Children use one square per digit and are encouraged to present their work to

the best of their ability. When paper is used, it is trimmed and children are taught how to stick it in neatly. All work has a date and learning objective which starts with 'I can…' and an objective clearly linked to the national curriculum. Objectives may be provided for the children or written themselves depending on their age and ability. Children start a new page for each piece of work.

Marking & Feedback

Our emphasis will be on 'live marking' with either the children marking their own work (blue pen) or teacher marking correct or incorrect answers.

The teacher will not provide written comments in maths books, instead whole class feedback or individual verbal feedback will be given. Children will respond to teacher feedback immediately using a purple pen. They will also correct a reasonable amount of work or complete extension activities in purple pen.

Progression in Mental Mathematics

The progression in mental mathematics documents are proven to be progressive over time. They are year group end objectives and it is recommended that they are tested at least half-termly, so careful tracking and rapid interventions can be implemented for children who are not on track.

Assessment & Impact

The school has a supportive ethos and our approaches support the children in developing their collaborative and independent skills, as well as empathy and the need to recognise the achievement of others. Children can underperform in Mathematics because they think they can't do it or are not naturally good at it. Our programme addresses these preconceptions by ensuring that all children experience challenge and success in Mathematics by developing a growth mindset. Regular and ongoing assessment informs teaching, as well as intervention, to support and enable the success of each child. Our mathematics curriculum is high quality, well thought out and is planned to demonstrate progression. Within each objective, children should access varied fluency, the opportunity to reason and problem solve. Children use mathematics books to record their progression which are marked in accordance to our feedback policy.

The expectation is that the majority of the children will move through the domains of mathematics and where needed, will access 'keep up' interventions to ensure they do

not fall behind. Staff monitor this through the use of the Insight Tracking assessment package which is formally monitored on a termly basis. In conjunction with this, teacher's make sound teacher assessment judgements through the use of summative assessments, using White Rose termly assessments and past SAT's papers for Y6. Progression in mental calculations is assessed half-termly through our 'Progression in Mental Arithmetic' tracker. Rigorous assessment of this tracker ensures gaps are closed readily and children are secure in their mental knowledge at the end of each stage of learning.

Related Policies:

- Progression in Mental Calculations Guidance
- Progression in Calculations Guidance
- Mathematics Non-Negotiables