



# Thornaby Church of England Primary School

## Mathematics Policy

### **Intent**

We believe that a high quality, effective mathematical education is essential. We follow a mastery approach, using White Rose Maths, which has a clear curriculum design, a considered sequence of content and shows clear progression. By following this approach, all staff have a shared vision and culture for Maths and there is consistency across year groups.

Department for Education research states that successful teaching promotes quick recall, accuracy and fluency alongside the development of understanding and reasoning. White Rose Maths promotes all of these, using a cumulative 'small steps' design. It ensures that our children's knowledge and skills are linked and that they develop a depth of understanding. Within the scheme, there is a focus on language and communication, an area in which our children are showing increasing gaps as they enter and move through our school.

Within Maths lessons and daily calculation sessions, our children are encouraged to develop mathematical inquisitiveness, the confidence to question and the ability to make connections. Through mastering a concept, understanding can then be applied to a new problem in an unfamiliar situation. We believe these skills are essential in everyday life, as well as being critical to science, technology and engineering. By following the mastery approach our aim is to support children in developing life skills and provide access to a variety of careers. White Rose Maths allows pupils to gain the problem-solving and reasoning skills useful in all areas of life.

White Rose promotes success for all children; they understand that, with dedication, hard work and perseverance, everyone can develop their mathematical ability over time. They are taught to enjoy challenges as they understand that setbacks can be overcome. Children come to understand that with consistent effort and by applying effective strategies, success will follow. All pupils will be expected to achieve their full potential by encouraging high expectations and excellent standards regardless of their ability or background.

### **Implementation**

Here at Thornaby C of E, we follow White Rose to ensure that our children have full coverage of the Maths National Curriculum. This scheme is a progressive approach to maths where each topic unit builds on the next in a cohesive way and then each year builds on the foundations/skills taught the previous year.

## Teaching and learning

We believe in success for all. Every child can enjoy and succeed when they are given the appropriate learning opportunities and a growth mindset enables pupils to develop resilience and confidence. We use the 'I do, We do, You do' approach to ensure that all pupils have the chance to experience clear teacher modelling and to first explore concepts in a risk-free way before applying knowledge independently. To deepen understanding, pupils are given time and opportunities to explore mathematical concepts. The challenge comes from investigating ideas in new and complex ways - rather than accelerating through new topics. We also enable learners to solve new problems in unfamiliar contexts is the aim of mathematics education. Identifying, applying and connecting ideas enables pupils to tackle new and more complex problems. Successful mathematicians are known to develop mathematical 'habits of mind'. To encourage this, we support pupils to be systematic, generalise and seek out patterns and questioning is a key element of this. Mathematical language is carefully introduced and reinforced through frequent discussion to ensure it is meaningfully understood as it strengthens conceptual understanding by enabling pupils to explain and reason. Objects, pictures, numbers and symbols enable pupils to represent and make connections in different ways. This develops understanding and problem-solving skills making lessons engaging and fun.

## Mixed Year Groups

Most children are taught in year groups with the exception of 2 mixed classes (Year 1/2 and 3/4). Our Year 6 pupils are streamed where necessary, to ensure all pupils can access the Year 6 curriculum, ready for the KS2 SATs.

## Planning

Throughout Year 1 to Year 6 we use a consistent approach to the planning and teaching of Mathematics. This is done using the White Rose Maths scheme, using a small steps method to ensure that children are secure and confident before moving onto new learning. Reception delivers their curriculum through the NCTEM mastering number scheme and nursery use Master the Curriculum.

## Intervention

If the day's learning objective has not been met a tailored same day intervention will be given to children identified. As the scheme is flexible, it allows time for consolidation and repeating small steps where needed. Class teachers are provided with the information to prepare interventions for SEND pupils and the children identified in the bottom 20% of the school.

## Children's work and feedback

Work in books includes elements of fluency, reasoning and problem-solving to ensure that our children are exposed to varied question and problem styles. We aim to use a range of questioning within lessons, aimed at supporting and challenging all pupils. Our teachers use procedural variation to provide structure and increasing challenge during the independent task. Teachers live mark where possible providing instant oral feedback at the point of learning to ensure misconceptions are addressed effectively.

## Equal Opportunities

The school is committed to working towards equality of opportunity in all aspects of school life. Our aim is to offer all our pupils a Mathematics curriculum that is relevant and differentiated to all pupils needs and abilities, so that every child may reach his/her full potential.

## **Impact**

Here at Thornaby C of E, we want our children to strive to be the best mathematicians they can be. 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.

## Assessment, recording and reporting

We assess maths in several ways at Thornaby Church of England school:

- Formative assessments are an integral part of teaching Maths. These are carried out daily and used to clarify learning and adapt teaching. It is done through mini plenaries and 'live' individual feedback by teachers and teaching assistants. Peer to peer feedback, discussion and reflection is also used regularly as an essential part of learning. Within every lesson, formative assessment takes place by starting with the 'Ready to learn' which is supportive of other parts of the lesson. We also frequently revisit previously taught concepts through our daily calculations sessions to ensure children are fluent and secure in the skills being taught.
- Summative assessments are done using the White Rose Termly assessments to measure performance and to support the judgements by class teachers of mathematical attainment and progress. Data analysis is carried out using SmartGrade to identify next steps in learning.

## Monitoring and Evaluation

The curriculum leader and senior leadership team are responsible for monitoring standards annually and a full Maths review is implemented in line with the school's curriculum review cycle. The curriculum leader prepares an annual self-evaluation report that feeds into the whole school improvement plan.

## **Special Educational Needs**

Planning for pupils with SEND is part of the planning process that we do for all pupils at Thornaby Church of England School. Removing barriers for pupils with SEND ensures that all children can learn and progress in ways that are personalised to them but to also ensure they have access to a broad and balanced curriculum.

We strive hard to meet the needs of those pupils with special education needs and take reasonable steps to achieve this. To ensure our SEND children learn more effectively, it may be appropriate to plan smaller steps for them to achieve the learning goal, adapt the task

through differentiation, alter the materials (such as less on the page, enlarged font, simple language etc), use a range of teaching styles or provide additional resources, materials or equipment. The modifications we make to each lesson depends on the SEND needs of the children and the intended learning outcome.

The SENCO is available to support staff with advice concerning any aspect of special educational needs including the provision or adaptations that need to be in place for SEND children.

Jenny Singh & Rachael Edgerley - Maths Leaders