The Grove Primary Academy

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Every Child, Every Challenge, Every Day

High aspirations, Diversity, Resilience

Statement of the Intent, implementation and Impact of our Curriculum – Maths

May 2020-21

**The Intent, implementation and Impact of our Curriculum – Maths**

**Intent**

At the Grove Primary School, we intend for all children, no matter their background, to achieve to their greatest potential in everything they do. Our School values of achievement, diversity and resilience drive our curriculum, alongside our fundamental British values. Through a creatively driven maths curriculum, children are taught to become competent and independent mathematicians. We follow the ‘mastery approach’ to teaching mathematics. This inclusive and challenging approach enables children to build a deeper understanding of mathematical concepts while developing vital skills needed to tackle problems found in everyday life. We teach mathematics through three key areas of mastery; varied fluency, problem solving and reasoning. In doing so, we intend for all children to develop the ability to confidently articulate, discuss and explain their thinking through mathematical representations and talk.

**Implementation**

In order for children to progress to deeper and more complex problems, we recognise that children need to be confident and fluent across each year group’s objectives. As a school, we follow the White Rose Maths scheme of learning to ensure full curriculum coverage; Years 1 to 6 use resources from the Power Maths scheme to support the teaching of maths mastery. Our teachers use this scheme as a core resource in both Key Stage 1 & 2 in conjunction with a range of other resources such as Fluent in Five and Classroom Secrets. These provide other opportunities for conceptual variation, problem solving and reasoning. We also recognise that mathematics can be enhanced through strategies related to metacognition and embed these approaches within our teaching.

The CPA Approach

For children to develop and cement their knowledge of a concept and truly understand what they have learnt, we believe children should be exposed to a ‘CPA’ approach.

* Concrete – children use concrete objects and manipulatives to help them understand and explain what they are doing.
* Pictorial – children build on this concrete approach by using pictorial representations, which can then be used to reason and solve problems.
* Abstract – with the foundations firmly laid, children can move to abstract representations using numbers and key concepts with confidence.

Objects, pictures, vocabulary, numbers and symbols are everywhere. Our mastery approach incorporates all of these to help children explore and demonstrate mathematical ideas, enrich their learning experience and deepen their understanding. When concepts are first introduced, we encourage children to physically represent their understanding with manipulatives before moving onto ‘Pictorial’ and ‘Abstract’ representations. Stem sentences are used to reinforce children’s learning at these different stages and are modelled by teachers.

Children at The Grove primarily use ‘Workbooks’ provided by the Power Maths scheme, alongside their ‘Maths Journals’. Both of these enable our children to see and represent their maths in a variety of ways; a key idea in the teaching of maths mastery.

Whole class teaching

Children have different strengths, skills and starting points when it comes to learning mathematics. Our belief is that all children can and will reach their full potential. We believe the best way to achieve this is through whole class teaching, meaning all children can access and achieve in every mathematical concept. Lessons are planned based on formative assessment of children’s prior knowledge, with their individual starting points and end goals in mind. When planning, teachers consider scaffolding that may be required for children struggling to grasp concepts in the lesson and discuss how they will address potential misconceptions; through targeted questioning, concrete resources and opportunities for reflection.

Children progress at different rates and find some mathematics concepts more challenging than others. In order for all children to move forward as a class, additional support may be required. This may be prior to the lesson in a ‘pre-teach’ session, focusing on vocabulary or representations, or after the lesson. Areas of difficulty must be dealt with as and when they occur. We tackle this through ‘Fix-it’ interventions which run in the afternoon of the same day. In addition, we run small, targeted intervention sessions that aim to reduce any significant gaps in children’s understanding.

Assessment

The Grove Primary School is fortunate enough to be part of the Kite Academy Trust. This partnership of 9 schools provides a variety of support systems through Maths leads, specialist teachers and the AsIST team. Through moderation of lessons, planning and books we can identify areas of both success and development in the individual schools.

Summative assessment takes place at the end of each term and children’s progress and attainment is discussed with senior leaders in pupil progress meetings. Formative assessment takes place on a daily basis and teachers adjust planning accordingly to meet the needs of their class.  The teaching of mathematics is monitored by leaders through lesson observations and book scrutinies and feedback is given to celebrate successes and highlight areas for development.

**Impact**

The learning in mathematics ensures children understand how number is essential to everyday life and provides the children with memorable experiences that enables a passion for the subject – children at our school are keen to talk about their work and their love of maths is reflected in the high quality work they produce. When problem solving, children take a growth mindset approach to learning and draw on skills and concepts they are confident in to tackle a range of problems. Children are able to reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, developing an argument, justification or proof using mathematical language. We have high aspirations at The Grove and expect all children to reach at least age related expectations or for some, make excellent progress from individual starting points.

The children at our school are guided on a learning journey that ensures they are ready for their next steps at secondary school with the skills needed to be happy, articulate and confident mathematicians.