Maths Curriculum Intent, Implementation and Impact

Intent

All pupils at The Downley School are immersed in a carefully crafted maths curriculum that develops confident, resilient mathematicians with a deep conceptual understanding of the skills required to approach any maths problem. We want to enable all learners to enjoy and succeed in mathematics and be equipped with an understanding that will be relevant and useful in their future studies, the world of work and their future communities.

Our maths curriculum enables pupils to **learn, grow and succeed** together and is underpinned by our six values:

Respect

- Pupils will understand how mathematics helps us understand the world, and how we use the world to understand maths. It gives us a way to understand patterns, to quantify relationships, live our life and to predict the future. The world is interconnected. Everyday maths shows these connections and possibilities.

Resilience

- Pupils are resilient learners and learn from their mistakes; we encourage all children to approach maths with a growth mindset.
- Pupils understand that they may need further practice in a new topic and that they may not be fluent **yet.**

Teamwork

- Pupils have opportunities in lessons to discuss the outcome of their work using a variety of concrete, pictorial or abstract (CPA) approaches in pairs or groups during independent work and as a whole class in starters or plenaries.
- The introduction of additional fluency sessions in the timetable allows pupils to improve their speed of recall, retrieval skills and focus on oracy to explain their reasoning in lessons helps strengthen pupils' confidence in using the correct mathematical language.

Inclusion

- We understand that a deep grasp of mathematics is essential to enabling greater social equity and mobility.

- We encourage all children to develop their thinking using CPA approaches and to support each other when developing their thinking, supported by appropriate scaffolding so that all can achieve.

Responsibility

- Pupils understand that they have a responsibility for being ready to learn, using appropriate tools to develop their independence, trying their best, showing a curiosity to learn, spotting patterns, and using correct mathematical vocabulary to express their problem-solving and reasoning skills.

Integrity

- Being a confident mathematician will allow pupils to develop a sense of enquiry, and curiosity and enable them to provide reasoned arguments based on facts to justify their reasoning which will help prepare them for the workplace and community in years to come. They will feel empowered to identify opportunities for social responsibility and justice for future generations.

Implementation

Our high-quality maths curriculum has clear progression, and learning is carefully sequenced with small steps that is built on and revisited using a Mathematics Mastery approach.

Lessons are presented in real life contexts and planned to deepen pupils' knowledge and skills, for future learning and for future employment.

We use a high-quality maths scheme **'White Rose Maths'** which is a whole-class mastery programme designed to spark curiosity and excitement and nurture confidence in maths and further supported by additional investigational materials to develop our academically more able (AMA) pupils. It is successful programme written specifically for UK curriculum by leading mastery experts and comes recommended by the UK's Department for Education (DfE).

Pupils are encouraged to demonstrate their learning in different ways and have a variety of concrete tools to support or scaffold their visual learning styles in the classroom. The lesson sequence in the scheme focuses on supporting children's understanding of core concepts and building their mathematical confidence. Each topic is divided into small steps that take children on a journey through a sharing of ideas, scaffolded practice and independent practice to develop fluency, reasoning and problem-solving skills.

New concepts are shared within the context of relatable real-life problems which prompt discussion and reasoning and promote an awareness of maths in contexts that link to other areas of learning. In EYFS, KS1 and KS2, these problems are

almost always presented with objects concrete manipulatives and/or pictorial representations. Independent work provides the means for all children to develop their fluency further, before progressing to more complex related problems. Most of the children progress through the curriculum content at the same pace. Differentiation is achieved by emphasising deep knowledge and through individual support and intervention. Mathematical topics are taught in blocks, to enable the achievement of 'mastery' over time. Practice and consolidation play a central role. Carefully designed variation within this builds fluency and understanding of underlying mathematical concepts.

We use a variety of strategies to evaluate the knowledge, skills and understanding that our children gain as they progress from EYFS to Year 6:

- Regular feedback marking and pupil voice feedback
- End of Unit Assessments allow teachers to identify gaps or target specific pupils to help them catch up.
- Subject monitoring, including planning scrutinies, book looks and learning walks
- Regular low stakes knowledge assessments, using a range of creative approaches
- ODBST academy cross-school moderation to ensure secure teacher judgements
- Termly progress tests support our teachers' assessment

As well as assessment for learning during lessons, regular and ongoing assessment of the pupils' outcomes informs teaching, as well as intervention to address misconceptions and develop their use of mathematical vocabulary to support and enable the success of each child.

Home School Communication & Home Learning

- Clear maths objectives and curriculum overviews and knowledge organisers for each year group, alongside a yearly parent maths information workshop, will allow parents and carers to be more confident on what is expected and how they can help their child.
- Regular feedback to parents regarding key instant recall facts and times table facts in accordance with age-related expectations will allow pupils to further develop their skills at school and at home.
- Pupils have opportunities to consolidate their learning at home through weekly homework using online programmes such as Mathletics and Times Table Rockstars and the use of CGP booklets in Year 5 & 6.

Extra-curricular opportunities

We celebrate our love of mathematics through participation in an annual inter-school maths competition, bespoke Maths days e.g. Maths Day (November), Number Day (February), Numeracy Day (May), and as part of an annual STEM week, maths plays a key role in mathematics investigations or cross-curricular challenges.

Impact

The school has a supportive ethos, and our approach supports the children in developing their collaborative and independent skills, as well as empathy and the need to recognise the achievement of others. Students can underperform in Mathematics because they think they can't do it or are not naturally good at it. The Mathematics Mastery programme addresses these preconceptions by ensuring that all children experience challenge and success in Mathematics by developing a growth mindset.

Children understand the importance of resilience and are more confident communicators, having developed their reasoning and problem-solving skills during their time at TDS.

They know more, remember more, and can do more; they are prepared for applying their knowledge of maths in their future aspirations in whatever field they may choose.

They understand that when we learn together, we grow together and succeed together.