

# Sandon Primary Academy

# Maths Overview



The mathematics curriculum at Sandon Primary Academy is designed to ensure that all pupils are equipped with the necessary tools, skills and knowledge to become successful in mathematics, in not just school but in understanding the world around them and for their future working lives. Regardless of their socio-economic background, attainment levels or SEND status, all children are guided and encouraged to develop a positive, ambitious and can-do attitude towards mathematics. Our daily mathematics lessons are designed to provide all pupils with challenge and success in order to develop and achieve a growth mindset within the subject.

## Mathematics in the Early Years

Mathematics begins in our outstanding early years provision, where children develop their skills in number and shape, space and measure. In our well-resourced, maths-rich environments, children are offered a balance of child initiated and adult led learning, using continuous provision and small group activities. They are supported in developing and improving their skills in counting, understanding and using numbers and number bonds, calculating simple addition and subtraction problems and describing shapes, patterns, spaces and measures. Teachers and early years practitioners plan and deliver multi-sensory and hands on activities, which enable children to explore and investigate mathematical concepts. Pupils' individual interests are considered and followed in the planning process to make learning relevant and exciting. Children are supported to be active learners and the maths-rich environment enables pupils to explore, investigate and develop strategies to problem solve and think critically. Purposeful play and mathematical language is modelled to the children by skilled early years practitioners, which children mirror in their independent learning time. Children are exposed to mathematics and numbers continuously in their school day, through cross-curricular activities, songs and rhymes. Adult led sessions are planned carefully to ensure that they build on children's prior mathematical knowledge, so children are able to make links and develop strategies. When children are not fluent in their mathematics learning, early intervention is key so children have time to consolidate their understanding, to ensure that all children are masters of mathematics. Our curriculum is engineered to achieve the best possible start for pupils in their mathematics journey.

## Planning and Teaching

At Sandon, we use the Power Maths programme to deliver an exciting and progressive mathematics curriculum to teach the National Curriculum objectives. We strive to embed a mastery approach, where children are provided with continuous opportunities to problem solve, in order to deepen their understanding of mathematical concepts. The Power Maths programme equips teachers with age-appropriate, sequential and progressive, ready-made lessons, that are designed to spark curiosity and nurture children's confidence in mathematics. Teachers at Sandon are excellent in bringing the lessons to life in the classroom, through fun, exciting and engaging contexts. Our lessons are carefully sequenced, in order to build on prior knowledge and so children are able to make links between facts, strategies and methods to guarantee long-term learning.

In early years and KS1, the curriculum focusses on the acquisition of core facts, concepts, methods and strategies to develop children's proficiency in mathematics. Through concentrating on core facts, children are more likely to feel successful, which will develop their motivation and enjoyment of mathematics, which can then be built upon as they progress through the school. Teachers prioritise depth over breadth when teaching mathematical concepts, ensuring that children have a secure understanding of an objective before progressing. From early years to KS2, mathematics lessons are language rich and provide children with ample opportunities to work practically to support their thinking. Classrooms across the school are well equipped, with a wide range of practical, concrete resources so children are able to experiment with methods and strategies to solve mathematical problems.

## Lesson Structure

Each mathematics lesson is designed and structured to include five parts; power up, discover, think together, practice and reflect. Power ups are a short start-up to the lesson, which allow children to develop their quick recall and fluency of number facts. As the lesson progresses to discover, children are presented with a problem and questions, where they use practical, concrete resources to develop their problem-solving skills. The practical elements to mathematics lessons spark conversation and allow children to explain their reasoning and showcase the strategies they have used. During the think together aspect of the lesson, teachers focus on teaching calculation, strategies and formal and informal methods. The teaching of mathematics is monitored regularly throughout the academy and support from specialist teachers is drawn upon when required, through peer observations and sharing strong subject knowledge and good practice. To practice the taught skill, pupils each have a Power Maths practice book, where they are able to apply and practice the lesson objective, working independently. The question types vary within each lesson to ensure that children have a balance of fluency and problem-solving and reasoning questions. The reflect plenary to the lesson, allows teachers to make formative assessments so gaps in knowledge are identified and addressed accordingly. When children require more practice in achieving an objective, strengthening lessons are planned and children work in their mathematics journals. Journals provide space for children to practice their calculations efficiently and neatly, so there is less room for error.

Lessons are carefully planned and sequenced to ensure that all pupils are exposed to number and place value; addition and subtraction; multiplication and division; fractions, statistics and decimals; measures; geometry; data and statistics; and algebra. All elements of mathematics are of equal importance and Power Maths ensures that all children are able to develop and practice their skills within each area. Every half term, summative assessments are used to track children's progress in arithmetic and reasoning, which help to inform planning.

## Times tables and enrichment

Pupils in KS2 begin their day with times table practice, where they have dedicated time to practice their fluency of times table facts. They enter the classroom to a fun and catchy times table song, which entuses children at the start of the school day. Children are motivated to learn their times tables in order to earn wristbands, in which they collect to showcase their achievements. Pupils also use the app 'times table rockstars' to practice and develop their times table knowledge. Children take part in regular competitions with other classes, year groups and other schools in the local area, which provides competitive fun to motivate pupils. Annual mathematics, enrichment days are also planned into the school calendar, where children celebrate the love of mathematics.