

Maths

Introduction to Maths

At Sunnyside Spencer Academy, we follow the Power Maths Scheme of work which is designed to ensure that no child is left behind and we learn together. Following the key principles of the 'Maths Mastery' approach, the children explore the key foundations of maths, using concrete, pictorial and abstract representations to deepen their understanding and ability to make connections. The children are assessed throughout the lesson through higher order questioning and misconceptions are addressed within this time to enable children to access all parts of the lesson. Additional same day intervention time is allocated for children who need further support to enable them to be ready for the next phase of learning as well as 'pre-teaching' sessions to ensure solid foundations are in place before a new concept is introduced.



Time: Less is more – don't feel rushed

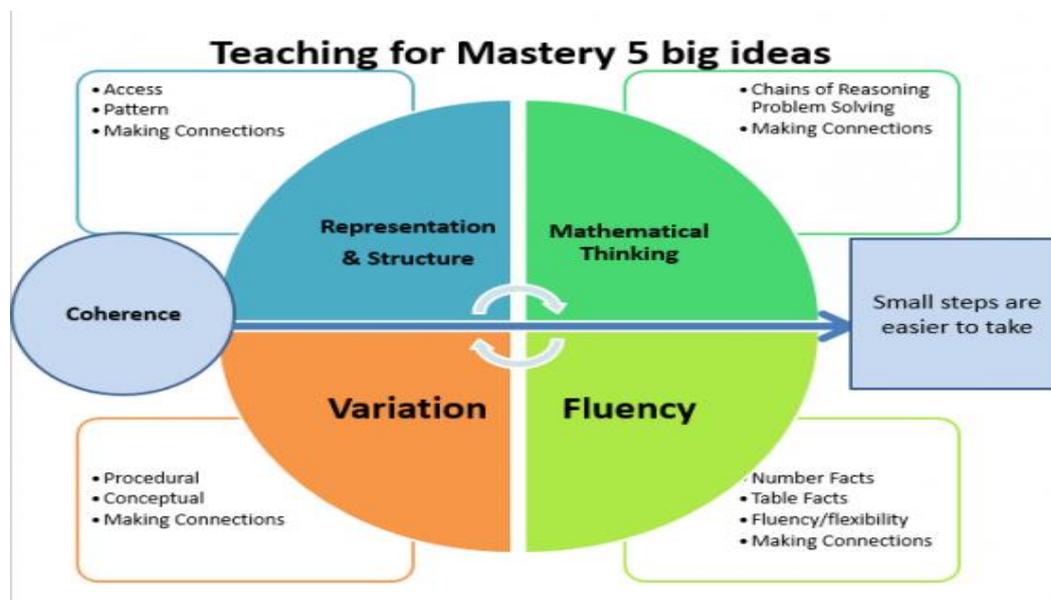
Curriculum Intent

At Sunnyside Spencer Academy, we recognise that Mathematics is a universal communication which all children and adults need to be successful in life outside of education. Alongside this, we also recognise that becoming fluent and articulate in Mathematics is also a key to success. It is a very basic expectation of employers that as young adults they can calculate competently and any young adult who cannot is at a severe disadvantage, no matter what the job. The long-term benefits of mastering basic Mathematical skills are immeasurable. In order for our pupils to SHINE we also acknowledge that children need to enjoy learning Mathematics and become independent in accessing tools to support them on their learning journey.

Aims

The national curriculum for Mathematics aims to ensure that all pupils:

- become **fluent** in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
- **reason mathematically** by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language
- can **solve problems** by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.



Mathematics is an interconnected subject in which pupils need to be able to move fluently between representations of mathematical ideas. The programmes of study are, by necessity, organised into apparently distinct domains, but pupils should make rich connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems. They should also apply their mathematical knowledge to Science and other subjects.

The expectation is that the majority of pupils will move through the programmes of study at broadly the same pace. However, decisions about when to progress should always be based on the security of pupils' understanding and their readiness to progress to the next stage. Pupils who grasp concepts rapidly should be challenged through being offered rich and sophisticated problems before any acceleration through new content. Those who are not sufficiently fluent with earlier material should consolidate their understanding, including through additional practice, before moving on.

Curriculum Implementation

The teaching and implementation of the Maths Curriculum at Sunnyside Spencer Academy is based on the National Curriculum and the principles of the 'Maths Mastery' approach ensuring a purposeful, creative and inclusive approach to this subject. We follow the Power Maths Scheme of work which is government accredited and its design helps develop confident, curious mathematicians.

Each lesson will begin with a 'Power Up' which helps deepen children's understanding of previous learning and enable them to develop quick recall and practice previous methods of solving problems.

Each lesson has a progression, with a central flow that draws the main learning into focus. There are different elements, informed by research into best practice in maths teaching, that bring the lessons to life:

- **Discover** – each lesson begins with a problem to solve, often a real-life example, sometimes a puzzle or a game. These are engaging and fun, and designed to get all children thinking.
- **Share** – the class shares their ideas and compares different ways to solve the problem, explaining their reasoning with hands-on resources and drawings to make their ideas clear. Children are able to develop their understanding of the concept with input from the teacher.
- **Think together** – the next part of the lesson is a journey through the concept, digging deeper and deeper so that each child builds on secure foundations while being challenged to apply their understanding in different ways and with increasing independence.
- **Practice** – now children practice individually or in small groups, rehearsing and developing their skills to build fluency, understanding of the concept and confidence.
- **Reflect** – finally, children are prompted to reflect on and record their learning from each session and show how they have grasped the concept explored in the lesson.

During the lessons, teachers will identify groups who need additional support whilst challenging the more able through questioning and

The children are taught Maths daily, with additional interventions planned in the afternoon to support prior learning and pre-teach for upcoming. All areas of Maths are taught and enjoyed, more detail can be found in our Calculation policies for each Phase.

The children's learning is further enhanced with TT Rockstars, Hegarty Maths and events such as the Sunnyside Darts World Championship.

Curriculum Impact

Maths is assessed daily by all teaching staff to ensure that no child is behind and rapid interventions can take place. We do 3 formative assessments using PUMA Rising stars assessments and these give us a standardised scale score to track the progress of each child and highlight any children that require additional interventions, support and focus. We also do end of unit assessments using the Power Maths Unit checks which helps support our teacher assessments on our RAG data. Summative assessments take place throughout the year and teachers record the progress and attainment against the National Curriculum expectations of attainment. Teachers use this information to inform future lessons; ensuring children are supported and challenged appropriately. This data is analysed on a termly basis to inform and address any trends or gaps in attainment.

Further information is gathered through pupil questionnaires; highlighting strengths and achievement and any improvements, knowledge and skills that still need to be embedded.

Final end of year assessments are made using all formative and summative assessment data that has been collated throughout the year.

Calculation policies for each phase are in separate folder in WILLS.

Classroom working wall.

Non – Negotiables

- *The What is displayed*
- *The Why is displayed*
- *Key Vocabulary relating to focus area*
- *Concrete, Pictorial and Abstract methods displayed*