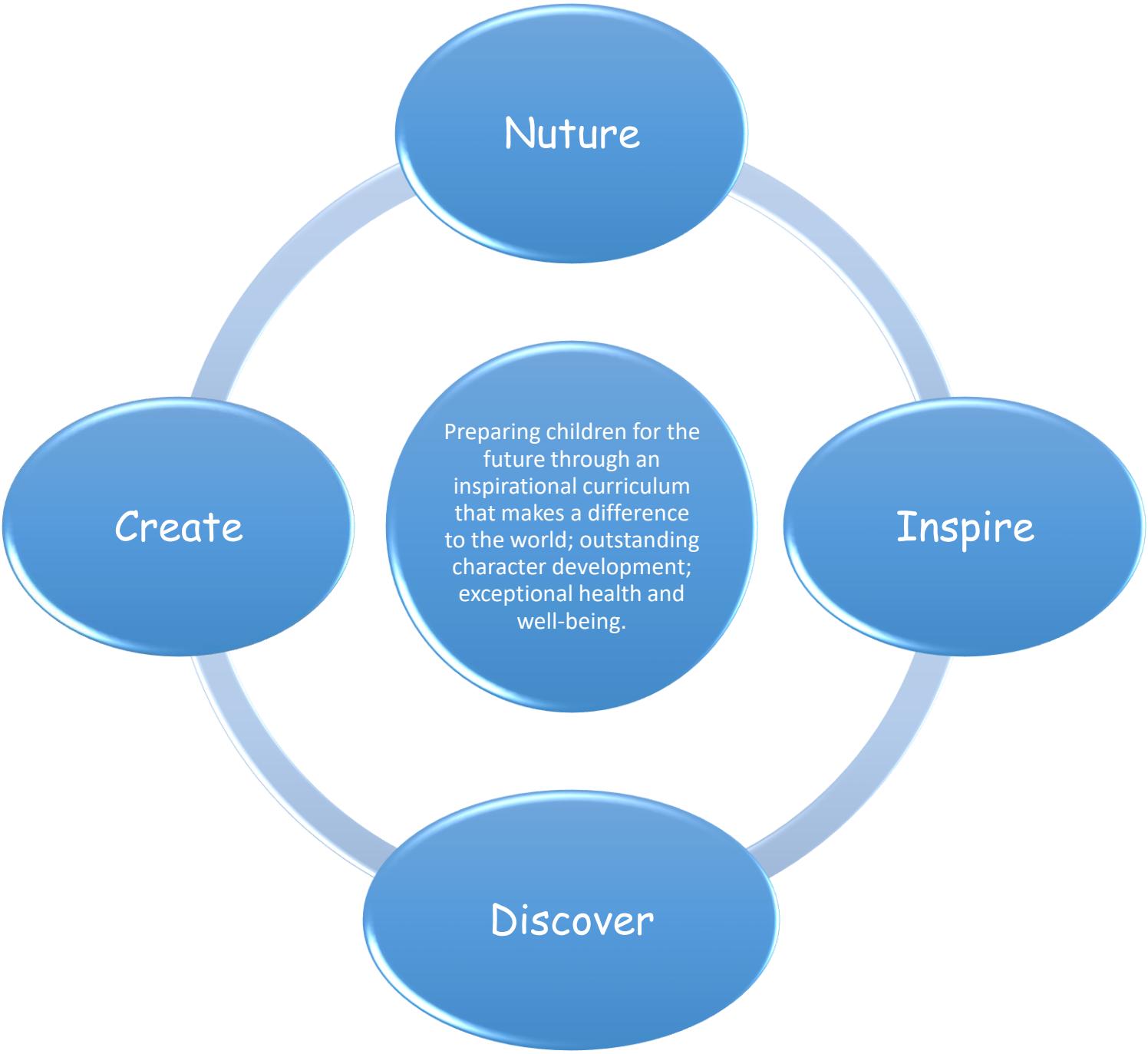
Stathern Primary School

'Nurture, Inspire, Discover, Create'

Maths Curriculum Vision, Knowledge and Skills



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Intent and Design – What are we trying to achieve?

Vision

- **As a school we aim to:**
- Preparing children for the future through an inspirational curriculum that makes a difference to the world; outstanding character development; exceptional health and well-being.

- **In Maths we aim to:**

- **Empower all children with a 'can do' attitude towards maths, equipping them with the vital secure base of knowledge on which their future maths education and skills essential for everyday life will build.**

Motto

- **Nurture** – We care for each other and celebrate our differences, achievements and contributions to the world. We support each other through challenges and difficulties, recognising that the mental health and well-being of both ourselves and those around us is one of the key factors in our happiness and success.
- **Inspire** – We inspire each other to greater heights through our communication, actions, support and achievements. We take inspiration from the people, places and events all around us. We recognise that whether a situation is good or bad, there is always learning and growth to be gained. These situations inspire us to make positive change a reality.
- **Discover** – We are excited to discover new knowledge, skills, people and places. We are open to alternative ideas beyond our own and enjoy exploring the thoughts, conversations and solutions that others bring to different situations and experiences.
- **Create** – We enjoy working together to create new and exciting solutions to make our world a better place. We believe we can make a difference no matter how large or small. Our school is a place where we can experiment and take risks in order that we might better ourselves and the world we live in.

School Values

- We believe in…

- **Developing outstanding character** and attitudes to learning in preparation for future challenges in a changing world.
- **Promoting physical and mental health** in a happy caring environment that is supportive and encouraging.
- **Making a difference** to the world we live in through creating enterprising solutions to local and global issues.
- Developing social skills and an appreciation of **each person's unique strengths**, respecting and embracing different cultures, races and religions.
- Fostering a **deep sense of care and nurture** for the world we live in and the people around us.
- Creating a broad range of **inspiring experiences** that allows children to develop skills and find their place in the world.
- Working in **partnership with our school community and beyond to build brighter futures**.
- High expectations alongside a **culture of self-awareness, reflection and self-improvement**.

Aims of our Maths Curriculum

- **Our inspirational Maths curriculum will enable:**
- All of our children to see themselves as competent mathematicians. The 5 big ideas of mastery inform our everyday teaching, meaning that learning is built carefully, slowly and securely. Pupils will show flexibility in their understanding of a concept: representing the structure of the maths in multiple ways; choosing their methods and stratgties to maximise their efficiency; and communicating their maths understanding and choices effectively using accurate mathematical language. They will build connections between the areas of maths they are learning,including old and new learning, facilitating their ability to apply the concept to new problems or unfamiliar situations. At each stage of learning, pupils should be able to demonstrate a deep, conceptual understanding of the topic and be able to build on this over time. It is not just about achieving a superficial understanding that can easily be forgotten. Depth of understanding is more important than speed and a 'can do' attitude to fostered in all pupils as we approach our learning together, using a range of strategies to allow pupils to keep up and not catch up. Individual strengths, creativity and choices are embraced within our lessons. Crucially, this allows all children to develop the self reliance, self-reflection, perseverance and resilience needed to prepare them for their future lives.

Learning Intentions

- Our Maths curriculum at Stathern, is designed to cover ten core themes as set out in the national curriculum: place value, addition and subtraction, multiplication and division, fractions (including decimals), measurement, geometry (properties of shape) geometry (position and direction) statistics, ratio and proportion and algebra. These are broken into topics that are taught progressively across both key stages. Children are encouraged to make connections across areas of maths in order to encourage fluency, competence and problem solving. In addition, areas of maths are also applied through a variety of other subjects as appropriate.
- We aim to ensure our children are able to:
  - Be fluent in the fundamentals of mathematics, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
  - Build understanding sequentially through varied and frequent practice to enable fluency and confidence to build.
  - Reason mathematically, forming conjectures about relationships, generalisations and justifying ideas using appropriate mathematical language.
  - Solve a wide variety of problems by applying their mathematical knowledge and persevering in seeking solutions.

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Implementation and Organisation – How will we arrange our learning?

Our planning at Stathern is informed by the national curriculum, DFE non statutory guidance and the NCETM's prioritisation and professional development materials. These documents inform a consistent and progressive use of representations that expose the mathematical structures of the underlying concepts being taught throughout the school. Exemplification materials inform teacher's subject knowledge, ensuring learning is nurtured through a series of small steps and that those steps of learning are carefully sequenced with sound mathematical progression at its heart. Ongoing assessment of pupils understanding informs our teaching and steps in learning, challenges and approaches will always be adapted as necessary and based on pupils' security of understanding and readiness to progress to the next stage. Fluency in pupils' ability to choose effective strategies and achieve flexibility in their approach is achieved through an episodic teaching style with frequent opportunities for children to discuss and reflect on their understanding as well as learning from others. Reasoning, discussion and exploration opportunities are embedded within lessons and allow children to discover the joy of taking ownership over their own maths, spotting patterns, forming conjectures. A mixture of collaborative, individual and paired work, require children to see that maths is not only knowing the answer, but being able to communicate this clearly to others and grow from this. High speed recall of key mathematical number facts is achieved through discrete fluency sessions, class teaching and homework activities. These are key to achieving children's sense of confidence and automaticity within these areas, allowing them to meet the challenges of our progressive curriculum.

School Focus	Reading	Challenge	Vocabulary and Communication	Progressive Skills	Transferable skills	Positive Mental Health and wellbeing
Maths Developmental Foci	Problems in maths are read, analysed and represented in a variety of ways for clarity and accuracy.	Lessons are planned to challenge pupils both academically and developmentally	Stem sentences, dialogue and accurate use of vocabulary empower children to use this to cement their conceptual understanding, form conjectures and justify their ideas with accuracy and clarity.	Small steps of learning build sequentially and consistently throughout the school.	Maths is taught in context where appropriate within discrete maths lessons but also throughout the wider curriculum to facilitate transfer of skills.	Delivery of lessons supports pupil's personal development by embedding skills of collaboration, perseverance and a celebration of strengths with its ethos.
Contexts	Main daily maths session: This will be tailored to individual cohorts and points in the year, but all incorporate aspects of the 5 big ideas of mastery.	Focused, discrete fact fluency sessions: These focus on efficient strategies, fast pace retrieval and recital to facilitate fluency in required facts.	Additional sessions and pinpointed interventions: These include pre-teaching and same day intervention to ensure all have the concepts securely in place for their next stage of learning.	TT rockstars, Edshed and bespoke homework activities used to reinforce key concepts and factual fluency at home.		

A range of quality resource inform our teaching and facilitate flexibility in meeting the needs of learners. This is informed primarily by the NCETM prioritisation materials, but also include: NCETM PD, White Rose Maths premium, Deepening understanding, Number sense, I see reasoning.

R	Y1/2	Y3/4	Y5/6
Number and Place Value			
Number: Addition and Subtraction			
Number: Multiplication and Division			
Number: Fractions (including decimals)			
Geometry: Position and Direction			
Geometry: Properties of Shape			
Statistics			
Measurement			
			Algebra
			Ratio and proportion

School Values, NCETM PD EMS Maths Hub, OLP and VLP networks

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Key learning within EYFS (2021)

Numeracy

"Developing a strong grounding in number is essential so that all children develop the necessary building blocks to excel mathematically"

These areas feed directly into the following areas on the Year1 – 6 progression maps:
Number: Number and Place Value: *Identifying, representing and estimating number, Counting, Comparing and understanding place value.*
Number: Addition and Subtraction: *Number bonds, Mental calculation.*

Number:	Numerical Patterns:
- Have a deep understanding of number to 10, including the composition of each number; 14 - Subitise (recognise quantities without counting) up to 5; - Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts.	- Verbally count beyond 20, recognising the pattern of the counting system; - Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity; - Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.

For detailed progression of learning from year 1 to 6 in each of the above themes, please see appendix in line with the National Curriculum, aligned in areas of mathematics by the NCETM. This can also be accessed electronically using this link:
Progression Maps for Key Stages 1 and 2 | NCETM

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Impact – How well are we achieving our aims?

Impact seen in:

Teacher Assessment	Pupil Voice	Moderation
Work scrutiny	Parental surveys and feedback	Observations and Blinks
Data analysis	Progress of pupils across the curriculum	Staff Questionnaires

Our children will:

Making great progress and have high standards of achievement and attainment	Have a lifelong love of reading and learning and be able to communicate clearly	Be respectful of themselves and demonstrate excellent behaviour
Be confident, positive and independent learners with high aspirations	Have mental wellbeing and make healthy lifestyle choices	Participate in the community and have excellent attendance

Work Sample Analysis:	What do our books show?
Lesson Observations:	How is the quality of teaching, learning and use of assessment in the lesson? How good is the questioning in the lesson?
Surveys:	What do parents and children say about this subject?
Interviews:	What do the children say about their learning in this subject? What do the staff say about their learning in this subject?
Coaching and Mentoring:	Is there a need for coaching and mentoring in this subject? What support do colleagues need in this subject?
Training:	What training has taken place? What is the impact of any training given?
Learning environment:	How does the learning environment support the learning in this subject area?