NPSB Maths Menu

Why do we prioritise Maths at NPSB?

'The book of nature is written in the language of Mathematics' (Galileo Galilei). Mathematics, a universal language that enables understanding of the world and ourselves, is a fundamental part of human thought and logic. Beyond the study of numbers, shapes and patterns, children will develop a methodical mindset and the critical ability to learn. The skills of learning are more important than knowledge in opening new doors to further study and employment. Our Maths curriculum aims to:

- empower all children to make progress so that they are not left behind.
- develop a life-long love of Maths that will help children build a positive and resilient attitude to problem solving.
- develop critical thinkers who use and understand mathematical language and recognise its importance as a language for communication and thinking.
- ensure pupils become fluent in the fundamentals of mathematics, identify misconceptions and are able to reason mathematically.
- develop necessary life-long skills.
- build understanding of how mathematics is used in the wider world, with an ability to recall and apply knowledge rapidly and accurately.
- learn about our responsibility to the Global Family.
- develop pupils who are keen to take responsibility for their own learning using a virtues-led approach.
- help to break down the barriers that they may face in life and to minimise and eliminate the gap for disadvantaged pupils.

Knowledge and Skills of a Mathematician:

Number knowledge: place value, addition, subtraction, multiplication, division, fractions

Other knowledge: Measurement, Geometry, Statistics, Algebra, Ratio and Proportion

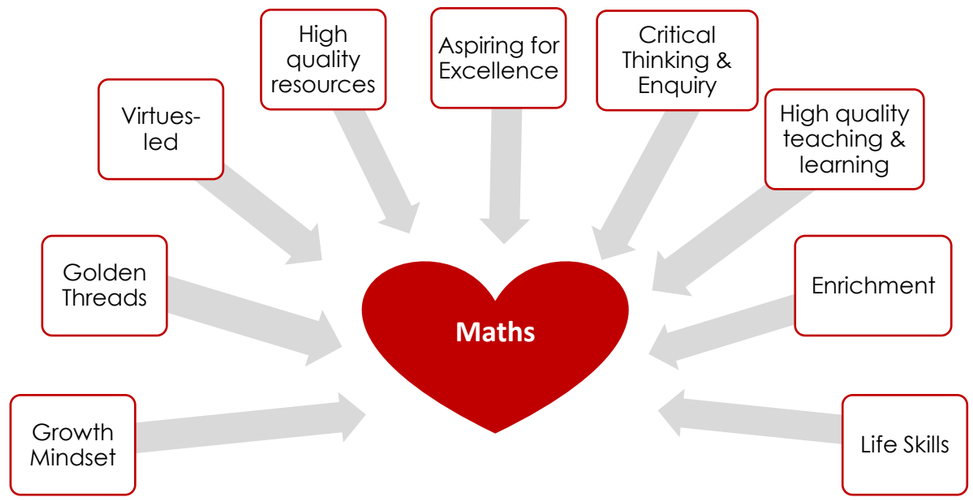
Recall

Fluency

Problem solving

Reasoning

Critical thinking



Virtues Links

Creativity to solve problems.

Resilience and **determination** to keep trying and preserving when problem solving and when developing our skills, knowledge and ideas.

Respect and **kindness** towards ourselves and others when sharing thinking, reasoning and ideas, and when mistakes are made.

Understand how **collaboration** and **commitment** helped mathematician to solve problems and develop our world. To know how to apply these virtues within our own learning.

Striving for **excellence** and using **diligence** in all learning and outcomes by always trying our very best.

Awe to gain a better, well-rounded understanding of the simplicity and order of the laws of the universe, and how to apply them in our every day life.

Golden Threads:

GT1 – Love & Forgiveness vs Enmity & Hate GT2 – Peace & Collaboration vs Conflict & War GT3 – Trust in 'the Divine' / 'God'

Well-Structured	**A**mbitious & Inclusive	**L**ife-Long Learners	**K**nowing more & remembering more	**S**ubject knowledge and skills
• Well-sequenced progression of knowledge and skills document. • Vocabulary progression document. • Lesson expectation document that outlines effective ways to teach Mathematics. • Purposefully planned units of work to ensure new content draws on and links to content that pupils have previously acquired.	• CPA / Mastery approach to enhance recall over derivation • Higher-order questioning • Children selecting their own level of challenge [hard and harder activities]. • Enable table resources and working walls to support learning. • Challenge and scaffold • Creativity as the cultural capital of the Mathematics classroom (STEM week, projects))	• Golden Thread enquiry questions eg How did Florence Nightingale's belief in the Divine and virtuous living lead her to become the founder of modern statistics? • Lessons linked to virtues • Leaders of learning • Creating global citizens – understanding our responsibility to our global family. • Enrichment opportunities that foster a love of Mathematics. • Growth mindset to promote positive attitudes towards Mathematics	• *'The Big Picture'* to capture the end goal of each unit and link current learning to previously taught knowledge and skills. • *'Can You Still…?'* is an opportunity to retrieve and practise previously learned knowledge and skills. • Make explicit links to empower children to make connections to applications of Mathematics in real-life situations • STEM Week as part of British Science Week incorporates the revisiting and application of previously taught knowledge and skills.	• High-quality teaching and learning • All staff involved in high-quality professional development and training. • High-quality questioning and use of mathematical vocabulary. • Opportunities to revisit previously taught knowledge and skills. • Cross-curricular links (eg Science, DT, Art, Geography, History and Reading) and opportunities to work like a mathematician. • Clear focus on core facts to achieve automaticity in facts and methods • Variation theory which offers children the opportunity to make meaningful connections.