

MATHS AT BRITANNIA BRIDGE

OUR INTENT

Subject Leaders – Caroline Hooper/Luke Anderson

At Britannia Bridge, we believe Maths is an essential part to everyday life and supports the understanding of the world we live in. Our Maths curriculum has been designed and **adapted** for 'each and every one' of our children to develop the essential, transferrable skills, knowledge and love of maths that they need to become **life-long Mathematicians**. We ensure that all our children leave us with the essential **cultural capital** they need to flourish at High School and beyond. We ensure that they leave us understanding that Maths skills are **keys to success** in all other areas of the curriculum and for their adult life/future employment.

Our Core Values of **HEART** (Happiness, Encouragement, Aspiration, Respect, Teamwork) underpin our Maths Curriculum and we ensure that each and every one of our children:

- are happy, self-motivated learners of Maths.
- encourages themselves and peers (through a strong Growth Mindset in Maths lessons). Our Britannia Bridge children know that, if they can't do something YET (in Maths) they will succeed through perseverance and resilience (especially when solving multi-step and reasoning problems).
- aspires to be a confident Mathematician, who understands that sound Maths skills will take them far in life, whatever they choose to do/become.
- develops a respect for how Maths skills link to their real life (and the every day world) and will ensure that they flourish in their future education and employment.
- understand that teamwork and collaborative learning, in Maths, aids their success as Mathematicians.

Our Maths curriculum is organised by teaching maths through the mastery approach. We follow cumulative age-related curriculum for depth, using the NCETM Mastering Number programme, NCETM curriculum prioritisation maps. The programme is supported by incorporating the Oak National Academy curriculum resources.

Our maths curriculum provides coherent sequencing by mapping out Years 1 - 6, into units, such as: number and place value, number facts, addition, subtraction, multiplication and division, plus many more. Our curriculum links to the DfE Primary Mathematics guidance and associated pedagogy and professional development in the NCETM Primary Mastery PD materials.

All of our children at Britannia Bridge will follow the same topics, in-line with the class. However, we remove gaps and barriers to learning by using carefully sequenced lessons for the children with SEND. As a school we will look back at previous steps, within the same topic, and utilise these sequenced progression documents to support and adapt learning for our children.

MATHS IMPLEMENTATION

Our Maths lessons are based on the **clear end points** of the National Curriculum, Early Years Framework and our bespoke Maths Progression Documents.

Maths learning is carefully planned and **adapted**, based on our children's **wide range** of starting **points**, **potential barriers to learning**, current abilities and prior knowledge. This enables us to meet the personal next learning steps of each and everyone.

Each year group's objectives are progressive and builds on prior knowledge and skills. Our teachers construct bespoke lessons, following our five-part lesson Mastery Approach, which are inspiring and memorable.

At Britannia Bridge, our teachers have excellent knowledge of mathematics and the mastery approach that they teach. All of our teachers have attended mastery training, with our local Maths Hub to ensure that our Maths teaching and learning is the very best that it can be. This allows our children to use mathematical language to reason, following lines of enquiry and develop mathematical arguments.

As a school, our children are given an abundance of opportunities to become fluent in the fundamentals of Maths, through fun, regular practise (so that they can recall and apply knowledge rapidly). We are currently taking part in the EYFS, Key Stage 1 and Key Stage 2 Mastery Number programmes, focusing on fluency and number sense.

Our Maths Subject Leaders monitor and evaluate the curriculum, regularly and robustly, to ensure that our children leave us with the essential skills and knowledge they need to succeed in their next phase of education. Monitoring and evaluation findings are consistently reported to our Governors, including our Core Subjects Governor (through presentations and Data Summaries).

Group and 1:1 Intervention Sessions, which are delivered by our teachers and teaching assistants, are delivered (within Maths sessions and after) to ensure that each and every one of our Britannia Bridge Mathematicians reaches their full potential.

Our children are given a wide range of opportunities to **apply** their mathematical knowledge and skills within Science and across other subjects, such as:

- Statistics in Science
- Data logging in Computing.
- Place value of dates in History.

EYFS

At Britannia Bridge, our teachers of the EYFS adopt a Mastery Approach, including our 'Dig Deeper' Challenges to ensure the children learn through a mixture of adult led activities and child initiated activities (both inside and outside of the classroom). Our EYFS planning is based on Development Matters and the Early Learning Goals (Number and Numerical Patterns). Reception use NCETM'S Mastering Number programme as a focus, in conjunction with the Number Blocks episodes, developing children's understanding of the wholeness of the number and its relationship with other numbers, is embedded through continuous provision.

Mastery Approach Year 1 - 6

At Britannia Bridge, we implement the Mastery Approach to teaching and learning. We follow the NCETM curriculum prioritisation, which provides a coherent sequencing for the primary maths curriculum. The prioritisation curriculum pulls together the DfE guidance and the high-quality professional development and classroom resources provided by NCETM Primary Mastery PD materials.

At Britannia Bridge, we also ensure that teaching stays within the required key stage and year group to support the ideal of depth before breadth. Children are taught through whole-class interactive quality-first teaching, where the focus is on the majority of pupils working together on the same lesson content at the same time, ensuring that all can master concepts, before moving to the next part of the curriculum. Throughout the sequence of lessons, teachers ensure opportunities are provided to build reasoning and problem-solving elements into the curriculum. Our children are taught to apply their mathematics to both routine and non-routine problems, including breaking down more complex problems into a series of simpler steps.

To introduce new concepts to the children, we understand the need to build competency in the new area. Teachers will ensure they use a wide range of manipulatives, approaches and pre-teaching allow the children to achieve their full potential.

This may include:

Concrete - children will have the opportunity to use concrete objects and manipulatives to help them understand what they are doing.

Pictorial - children should be allowed to use pictorial representations.

These representations can then be used to help reason and solve problems.

Abstract - both concrete and pictorial representations should support children's understanding of abstract methods.

Our Maths Mastery approach ensures that our children are always given opportunities to 'Dig Deeper', in Maths, to solve rich and sophisticated problems, rooted in reasoning and problem solving.

At Britannia Bridge, we continuously monitor our pupils' progress against expected attainment for their age, continually making formative assessment and using this to inform our teaching. Summative assessments are completed, at the end of each term; their results (along with Teacher Assessment) form discussions in termly Pupil Progress Meetings and update our school tracker. The main purpose of all assessment is to always ensure that we are providing excellent maths provision for each and every child.

Our Pupil Progress meetings not only allow us to celebrate the children, who are mastering the mathematical concepts one by one in a logical progression for their year group but also allow us the opportunity to highlight any child who needs further support (to ensure that no gaps in understanding are left unfilled). For those children, who have not fully made the small step covered in the maths lesson, we endeavor to provide them with intervention (either on the same day or the following). This system allows our child the opportunity to 'keep up' rather than 'catch up' (arrangements may differ, daily, from class to class).

Fluency

Teachers build time into part of the day to develop children's fluency in arithmetic. We have dedicated time allocated to times tables and fluency. Children are encouraged and taught to apply arithmetic fluently to problems, understand and use measures, make estimates and check their work.

Vocabulary

Developing a rich repertoire of vocabulary is a key driver at Britannia Bridge, to ensure that our children are able to enjoy using mathematical vocabulary within their everyday lives and their oral communication with others. One of the ways we support this is through the constant 'Review and Do' of prior learning. This enables the children to be drip fed the mathematical vocabulary allowing it to stick in their long term memory. From Nursery to Year 6, we use our bespoke VIV Approach (Very Important Vocabulary), across all curriculum areas, to ensure that our children leave us with ambitious vocabulary, which are always displayed on our working walls, to support them in their future learning and adult lives.

MATHS - OUR IMPACT

The impact of using the NCETM prioritisation curriculum shows a significant impact on children's learning in maths at Britannia Bridge Primary School. The children's learning has become more purposeful, which enables them to feel more confident in mastering essential concepts, such as number fluency and problem solving. Children's understanding has improved and deepened, developing a solid foundational knowledge.

The well-sequenced steps and scaffold support, ensures that all children, including children with SEND or gaps in their learning, are progressing. Concentrating on fewer topics, reduces the risk of children feeling overwhelmed, which improves confidence and increases achievability.

Our teachers at Britannia Bridge, will improve their maths subject knowledge through the clear guidance that the NCETM curriculum provides through the PD materials.

Our children leave us as happy, self-motivated lovers of Maths, fully equipped with essential, transferrable knowledge, skills and cultural capital to succeed in their next phase of their education and adult lives (as Mathematicians and employees/employers).

Each and every one of our pupils leaves Britannia Bridge, reaching their full potential and with a strong 'Growth Mindset' to support them in their High School studies, in Maths, and across the curriculum. Our children leave us fluent in Maths fundamentals, with strong mathematical conceptual understanding, able to reason successfully, with an advanced mathematical vocabulary and the ability to solve complex problems.