

Maths Strategy – Brixham Primary School

At Brixham, we believe that all children can achieve and flourish in Mathematics. The teaching of Mathematics embraces our vision of 'Achieving and Flourishing'. We strive for children not just to become mathematically adept, but to have a real enjoyment of solving problems and to relish the opportunity to think deeply and embrace challenge in their maths learning.

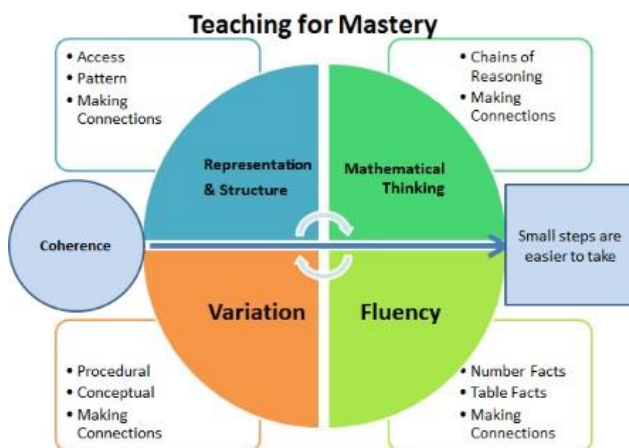
Using White Rose as the spine of our mathematics planning, learners will master small steps in an order that enables them to grow into competent mathematicians. They will understand the importance, relevance and wonderful influence that maths has in our world on a daily basis and apply their knowledge in sophisticated and contextual problems.

We have 5 main aims for mathematics at Brixham:

- 1) To provide a consistent and personalised approach to maths 'mastery' that benefits all pupils
- 2) To ensure pupils build upon prior knowledge, using a scheme of work, ensuring coverage and sequential planning. Lessons adopt a **Know, Show, Grow structure**
- 3) To develop our pupils' fluency, reasoning and problem solving
- 4) To ensure ALL pupils make good progress in mathematics, providing quick catch up for pupils that do not.
- 5) To ensure mathematics in EYFS and KS1 lays the early foundations that supports relationships with children and promotes learning in an enabling environment.

1

To provide a consistent and personalised approach to maths 'mastery' that benefits all pupils



The 'mastery approach' to teaching maths is the underlying principle of Mathematics Mastery through the use of the White Rose planning resources. Instead of learning mathematical procedures by rote, pupils are taught to build a deep conceptual understanding of concepts that will enable them to apply their learning in different situations.

We believe all students should have opportunities to develop reasoning and solve problems as well as develop fluency. Although we adopt a 'mastery approach', individual needs will be met through varying the degree of support, use of scaffolds and manipulatives, using extending questions and problems, and providing opportunities to deepen understanding for those children who grasp concepts more quickly.

2

To ensure pupils build upon prior knowledge, using a scheme of work, ensuring coverage and sequential planning. Lessons adopt a 'know, show, grow' approach.

Brixham has adopted the White Rose maths scheme across the school.



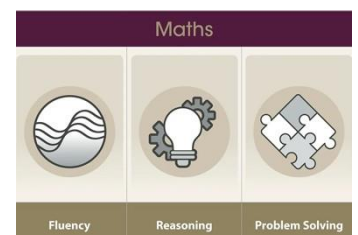
This scheme has been adopted to ensure staff are supported in planning units of work that build upon prior knowledge; provide opportunities for fluency, reasoning and problem solving; support staff subject knowledge and approach to teaching mathematics.

Our small step approach is designed to ensure that students will revisit taught mathematical concepts in different units of work throughout the year and as they progress within the school. Links and opportunities for mathematics in Learning Enquiries will be made where appropriate.

Children will have online and home learning mathematical provision through Timetable Rockstars and Maths Shed. These online platforms are used throughout the school. Children will have regular maths homework to support learning in class.

Lessons are structured in a structured using a **Know, Show, Grow approach**. New learning is revisited (what do I **know**), then acquisition of new knowledge is gained (What do I know now?), children move to **show** their learning in different ways and finally children are able to **grow** as a learner by justifying, reason and problem solve using their new knowledge.

In order to give our children a broad and rich mathematical experience, we will also supplement White Rose using NCTEM and Nrich resources.



3

To develop our pupils' fluency, reasoning and problem solving

We intend that the study of mathematics will enable our pupils to:

- **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.

To support this in lessons and marking feedback, Pupils are encouraged to reflect upon their work – this will be shown using a lightbulb. Children might **explain** their mistakes or thinking, **prove** their understanding through calculations or explain their **methods** trying to think about the most efficient. Teachers may use an E, P or M to focus children’s reflections. Children have regular opportunities for self-assessment and are encouraged to reflect on and correct incorrect answers.



Explain

Prove

Method

4

To ensure ALL pupils make good progress in mathematics, providing quick catch up for pupils that do not.

Identify - Use of assessment	React
<p>Formative Assessment</p> <ul style="list-style-type: none"> - Assessment during Whole-class teaching - Assessment of work in books - Reasoning and understanding - Use of Tapestry for Early Years and Y1 to record children’s development and to set next steps. <p>Summative</p> <ul style="list-style-type: none"> - End-of-unit assessments - Termly Rising Stars PUMA Assessment (KS2) - Times table assessment (Y4 multiplication check) 	<ul style="list-style-type: none"> • Provide opportunities in the classroom for all groups of pupils to be challenged – resulting in good progress • Interventions put in place in EYFS to ensure a good level of early development. • Precision teaching – daily intervention of times tables, number bonds, number recognition etc. • Targeted guided group work in class- working with the teacher on the area of need • Additional targeted group work – small group work and pre-teaching groups • Use assessment analysis to identify whole-class area of needs (GAPS analysis from PUMA)

5

To ensure mathematics in EYFS and KS1 lays the early foundations that supports relationships with children and promotes learning in an enabling environment.

At Brixham, we understand the importance of a solid foundation in mathematical teaching which will provide the basis for future mathematical confidence and success. In EYFS and Year 1 children will be mainly taught in small adult led groups. Learning will focus on developing counting skills and using understanding numbers up to 10. Children will also have access to mathematical activities and learning through continuous provision in a rich and engaging environment. Parents will be able to engage and support their child’s mathematical learning through tapestry.

All children in EYFS, Year 1 and Year 2 take part in the Mastering Number Project facilitated by the NCETM. This project aims to secure firm foundations in the development of good number sense for all children from Reception through to Year 1 and Year 2. The aim over time is that children will leave KS1 with fluency in calculation and a

confidence and flexibility with number. Attention will be given to key knowledge and understanding needed in Reception classes, and progression through KS1 to support success in the future.