



Inspire, Challenge,
Learn

At Pool Hayes Primary School, we are committed to providing our children with a curriculum that has a clear intention, is implemented consistently and impacts positively upon their needs.

Curriculum statement for the teaching and learning of Maths Mastery 2021/22

National Curriculum Intent

The national curriculum for mathematics intends to ensure that all pupils:

1. 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.
2. Reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language.
3. 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. Our curriculum ensures that children apply mastery skills. We follow the Power Maths scheme, with Mastering Number used in EYFS and KS1 to extend fluency.

They should also apply their mathematical knowledge to science and other curriculum areas.

INTENT	The primary intent for maths teaching at Pool Hayes Primary, is that all children become confident, competent and independent mathematicians.			
	The intentions is that this is developed through:			
INTENT	✚ Delivering an inspiring and engaging mathematics curriculum, taught by enthusiastic staff, which sparks curiosity and excitement and which nurtures confidence in maths.			
	✚ Building a deep conceptual understanding of maths and its interrelated content, so that children can apply their learning in different situations.			
	✚ Developing children's ability to articulate, discuss and explain their thinking using precise mathematical vocabulary.			
	✚ Instilling growth mind-set in every child and staff member that everyone can do maths and that maths is for everyone...EVERYONE CAN!			
	✚ Developing resilient and inquisitive learners, skills needed to become life-long mathematicians, by viewing errors as opportunities to learn.			
Underpinned By	Expectations	Modelling	Vocabulary	Connections
	Teachers will promote positive learning characteristics through the Power Maths characters - Determined (Dexter), Brave (Astrid), Curious (Ash) and Flexible (Flo). All children are expected to learn and to make progress from their own unique starting points.	Teachers will model the attributes of a good maths learner (as exemplified by the PM characters). Errors are highlighted as learning opportunities.	The use of precise language in maths underpins understanding. Maths teaching will use precise, age appropriate vocabulary and teachers ensure that the vocabulary is displayed and referenced so that this can be frequently reinforced. Where necessary pre-teaching	Teachers will provide opportunities for children to identify patterns or connections in their maths -they can use this to predict and reason and to also develop their own patterns or links in maths and other subjects. These connections are often

			of vocabulary will ensure that it is accessible to all learners.	highlighted during the 'Reflect' part of the lesson.
	Fluency	Reasoning	Problem Solving	Mastery
	Fluency will be developed through the Power Maths Mastery approach and underpinned by a range of drivers including the use of KIRFs across all key stages, the Mastering Number programme in EYFS and KSI and TTRockstars from Y2 onwards.	We intend for all pupils to reason confidently mathematically, by following a line of enquiry, investigating relationships and generalisations and proving their answers using appropriate mathematical language or models.	Through the variation built into the Power Maths scheme, frequent opportunities will be provided to solve problems by applying learning in different contexts. Progressively this moves from single step to more complex problems and children are given strategies to break problems down into manageable steps.	All children will secure long term, deep and adaptable understanding of maths which they can apply in different contexts.

	Power Maths	CPA	Assessment	SEND and Catch-Up Provision
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Implementation	<p>To ensure consistency of mastery teaching and learning across the school, all year groups follow the Power Maths scheme. This scheme is one of the national schemes recommended by the DfE, in line with National Curriculum expectations. Power Maths builds in reasoning and problem solving aspects to daily session and then extends these opportunities at the end of each unit of work. (Units typically last for 5-15 days, but can be adapted</p>	<p>The CPA method was initiated through the original Singapore strategy upon which mastery maths is built. We use CPA (Concrete, Pictorial, and Abstract) steps to enable the pupils to build cognitive links. Concrete (physical) experiences in maths are useful at all ages and stages of learning and these physical experiences can shape learning. Similarly providing a range of visual or pictorial representations of maths concepts, and encouraging children to create these themselves, supports problem solving. These two approaches ensure that</p>	<p>Assessment in maths takes several forms. Daily - through targeted questioning and reflection portions of lessons. Unit based- at the end of each unit there is an end of unit check enabling interventions, consolidations and extensions to be built in to future learning. Termly - online PUMA tests evaluate ongoing progress against year group expectations and support teachers' planning. Summative national assessments for EYFS (ELG).</p>	<p>Provision will be made for children who are not making the expected level of progress through I.E.P.s and interventions. Additional tutoring support in maths has also been made available, where pupils are taught in small groups by experienced teachers including SLT.</p>
				CPD

	<p>according to the need of the pupils.</p> <p>All children experience maths learning daily, whilst also engaging with maths concepts through other curricular areas such as science and fluency activities (including Mastering Number, KIRFs and TTRockstars).</p>	<p>when children tackle questions presented in an abstract context, they have clarity of concepts and strategies with which to work.</p>	<p>Y2 (SAT), Y4 (Times Tables Check) and Y6 (SAT), chart the effectiveness of teaching over time</p>	<p>The Maths lead and DHT are part of a maths hub, which gives regular opportunities to explore pedagogy and refine practice. This is then fed back to all teachers in designated staff meetings. All teaching staff have completed CPD involving Power Maths, while teaching staff from YR, 1 & 2 have also engaged with training materials through the Mastering Number programme, which is targeted for these year groups.</p>
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Attitude to Maths Learning & Learning Culture	Fluency	Reasoning	Progress
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Impact	Children feel confident in age appropriate maths concepts and are able to discuss and explain their learning using appropriate maths vocabulary.	Children at all ages and stages show increased levels of fluency by having elements of KIRFs for the year group available to use in calculation, without adding to cognitive load.	Children explicitly practise reasoning in maths during their daily maths learning, particularly during reflection segments of the session. They are encouraged to make connections between current and prior learning, including between different elements of maths where appropriate.	All children make progress from their own unique starting points as is evidenced by formative data tracking (including PUMA assessments) on DCPPro and in books via reflect and unit checks.
	They are able to use concrete apparatus and familiar models (such as part-whole diagrams or bar models) in their explanations.	For example: children in YR are able to recognise patterns in number (e.g. dot patterns on dice) or show a number of fingers up to 10, without counting.		
	Children are not afraid to make mistakes in maths and use errors as steps in learning.	In Y2, they are able to generate number sentences using knowledge of bonds to 10.	Problem Solving	Data
	Pupil voice questionnaires show progress in maths confidence.	In Y4 they are able to answer questions using multiplication facts up to 12×12 without needing to roll the numbers.	Children encounter problem solving within a wide range of contexts. This is modelled during shared elements of the lesson and then completed independently or with a learning partner. Children are encouraged to share their solutions and to understand that there will frequently be more than one solution.	National data* In July 2022 the updated assessment data for each reporting group will be added to this statement. This will not be done prior to this time as data will be incomplete due to the impact of Covid.
	Children enjoy being involved in maths events such as TTR Battle of the bands.	Rapid mental recall is assessed through targeted questioning as well as through timed exercises where individual progress can be tracked (e.g. TTRockstars).		