



Subject Leader Report: Mathematics 2026-27

"Our Vision is for every child to love learning, be compassionate and achieve now and in the future. Working together with our communities, we will give our children roots to grow and wings to fly."

Aims in Mathematics

Mathematics will be one of the cores of children's learning throughout their time at Portsdown Primary School. It is a fundamental life skill that all children need to achieve. Our aim is to provide exciting mathematical experiences that not only develop fluency but create rich connections across the domains to highlight the inter-connected nature of this subject. Alongside this, children will be challenged to apply this fluency to reason mathematically and foster a growing understanding of appropriate vocabulary to support their thinking. As they progress through the school, they will tackle increasingly complex problems and deepen their understanding

At Portsdown, our mathematics curriculum aims to:

- Develop children's **number sense**, fluency and conceptual understanding, so that they can work confidently with numbers, operations, measurement, geometry, statistics and algebra.
- Teach mathematics in a coherent, progressive way, using CPA (Concrete → Pictorial → Abstract) scaffolding to deepen understanding.
- Promote reasoning, problem-solving, enquiry and mathematical thinking, encouraging children to explain, justify and generalise.
- Ensure consistency of approach and expectation across year groups with a shared calculation policy, progression documents, vocabulary and models.
- Foster parental engagement and home-school links in mathematics, giving families clarity about methods and strategies.
- Use assessment, monitoring and leadership to ensure that mathematics provision is high quality, responsive and impactful. Use purposeful interventions to plug gaps / address misconceptions.

Disciplinary and substantive knowledge in maths

Disciplinary knowledge in mathematics refers to how pupils think, reason and work mathematically. It is about applying skills and processes such as problem-solving, logical reasoning, generalising, making conjectures, and proving or disproving ideas. This knowledge enables learners to engage with mathematics as a discipline, understanding not just the 'what' but the 'how' and the 'why'. Pupils develop resilience when tackling unfamiliar problems and learn to select appropriate strategies. Disciplinary knowledge is therefore about cultivating habits

of mind: noticing patterns, reasoning with precision, and communicating mathematical ideas clearly. It goes beyond recalling facts and procedures, encouraging pupils to think critically and flexibly, and to justify their solutions with evidence.

Substantive knowledge in mathematics refers to the core content, concepts and facts that pupils need to know and remember. This includes number facts, place value, operations, properties of shapes, measures, fractions, and data handling. It also extends to more advanced ideas such as algebraic notation, proportional reasoning, and probability. Substantive knowledge provides the essential building blocks that enable pupils to access new learning and make links between different areas of mathematics. Without secure substantive knowledge, pupils struggle to engage in deeper reasoning or problem-solving. Teachers carefully sequence the curriculum so that key facts and procedures are introduced, revisited, and embedded over time. In this way, substantive knowledge supports fluency, accuracy and confidence in mathematical thinking.

Planning & Teaching

We follow the **White Rose Maths Scheme** (Years 1–6) for long-term planning, which lays out when units should be taught, key objectives (steps), misconceptions and required representations. Each unit will be supported by an S-plan as a medium term to ensure challenge and support is sufficiently planned for. This gives teachers a clear outline of appropriate resources and models, vocabulary to use and a coherent progression throughout the year and across the school. Our Calculation policy, with core models and images, is available to all staff and used to guide consistency in presentation and methods across classes. Vocabulary progression is explicit (White Rose); staff and children are supported by a maths glossary to ensure consistent language. This includes using a concrete-pictorial-abstract approach when introducing new learning and to support conceptual understanding. This means that every lesson will show the use of appropriate resources or models. Teachers will also use a range of scaffolds to support all children to work towards the same learning objective such as sentence scaffolds and worked examples. They will ensure learning journeys build on prior knowledge and check regularly for understanding and ensure learning is broken into small steps along the learning journey. Teachers adapt lessons in response to formative assessment; scaffolds, visual representations and manipulatives are available to support understanding. In EYFS (Reception) they are following Mastering Number as their main Maths lessons (updated version). In EYFS (Nursery), mathematics is woven into provision: children are exposed to number language, subitising, counting to 10, exploring shape, measure and spatial thinking. Enrichment opportunities (e.g. NRICH investigations, challenge tasks) are used to deepen mathematical thinking beyond routine tasks.

Strengths / What is working well

- In EYFS, children are regularly immersed in number talk, subitising and exploring spatial concepts, supporting early number foundations.
- The vocabulary progression helps staff, pupils and parents to speak a common language. The use of sentence stems also aids the use of a consistent vocabulary and supports the understanding of the children.
- Teachers respond to formative assessment, adjusting scaffolding and support during units.
- Enrichment and reasoning tasks are used in many lessons, giving pupils opportunities to stretch and deepen understanding.
- Leadership has oversight of maths provision and access to curriculum documents; the subject is visible in the wider curriculum.
- Good awareness among staff of the CPA approach and use of manipulatives / visual models in many classes. This is aided by White Rose Maths Scheme.
- Teachers are confidently and consistently using the 'I do, we do, you do' approach, resulting in more structured and effective whole class teaching that clearly supports all learners - use of widgets on PowerPoint to show the planning of this during lessons.

- Oracy Partner talk is now a well-established routine, enabling children to rehearse and articulate their reasoning using precise mathematical vocabulary, White Rose supports this through the use of vocabulary progression and constant use of stem sentences.
- Fluency and rapid recall of number facts (addition, subtraction, multiplication tables) has become more consistent across classes and cohorts through the use of Mastering Number (KS1) and Number Sense (KS2).
- Use of unit and termly assessments are being used to inform teacher's use of Flashback 4 (adapt to the needs of the cohort) and daily arithmetic lessons (created by the teachers to practise skills taught - success needed not a challenge)
- Daily Arithmetic lessons have started to show an impact through the end of term data, this needs to be embedded this year, as is still inconsistent in some year groups (due to children's gaps / misconceptions)

Areas for Development / What needs improving

- Interventions are inconsistent throughout the school and need to be given the same priority as reading, writing and spelling. Number Sense has an individual intervention to support times tables, White Rose has TA Hub (and is introducing an intervention programme Pip this year)
- Confidence in using manipulatives to aid teaching some challenging domains (fractions, ratio & proportion, early algebra) varies across staff. White Rose Maths Scheme has mini CPD videos to aid teachers / TAs to understand the different domains that are covered. Transition from concrete to pictorial then pictorial to abstract representation is uneven: some pupils struggle to bridge the gap.
- White Rose uses a range of reasoning problems within their lessons / steps. This is still an area that we need to focus on as the children find it difficult to know 'what' to do (to then apply their arithmetic skills) The children's explanations need to be in greater depth, focusing on explaining why it is or isn't correct or how they know.
- Parental understanding and engagement in mathematics (methods, supporting at home) remains variable. Times Table Rock Stars is available for the children to support their times tables at home, engagement with this varies.
- Maths anxiety - there are a number of children across the school who have anxiety particularly related to their confidence and ability in Mathematics. To support these children and rebuild their confidence, we need to look into implement targeted, evidence-based strategies across the classroom (research indicates that 77% of children with high maths anxiety are actually normal-to-high achievers) meaning their distress is not an indicator of low intelligence or intrinsic lack of ability

Assessment, Monitoring & Leadership

Assessment in maths falls into two categories – assessment of learning and assessment for learning. Assessment for learning is used by teachers to assess throughout a lesson and unit of learning to identify prior learning, check for understanding and to discover misconceptions. Teachers then use this knowledge to adapt the learning to suit the needs of the children, this can then be fed into Flashback 4 and Arithmetic sessions. Assessment of learning is conducted at the end of a unit to assess what learning has taken place. White Rose has mini assessments at the end of each unit to assess the content that has been taught throughout the unit. More formal assessment occurs at the end of every term (again assessing the content that has been taught) and in Year 6 practice SATS papers. The data from these assessments is reviewed termly to analyse the progress, attainment and trends which are then used to inform next steps.

Monitoring for maths occurs every half term by a member of the senior leadership team and is linked to the School Improvement Plan. This is conducted via quality assurance walks, drop-ins, learning walks, book looks or pupil voice via interviews. Pupil interviews / voice help to assess how children perceive their mathematics learning, which tasks help their thinking, and where they need support. Feedback from these will be shared

with staff in a timely manner based on the monitoring policy and used to provide next steps for maths. If further support is needed by staff to provide high-quality teaching then mentoring will be provided in a swift, supportive way to ensure all children at Portsdown have access to good teaching to support their growth. This could include planning support, team teaching or peer modelling of good practice.

Governors receive an annual report on mathematics, with evidence of impact, priorities and resources.

Evaluation of targets 2025-2026

- Introduce White Rose across KS1 and KS2
- Introduce a daily arithmetic lesson (outside of the Maths lesson) focusing on 4 operations Yr1-4 (year 4 to add fractions / decimals when taught - Spring term) (Yr5 - Yr6 - to have 5 questions to include a fractions/percentages & decimals)
- Embed Number Sense (times Tables KS2 – to raise attainment and raise Yr4 MTC test). Introduced use of [timestable.co.uk](https://www.timestable.co.uk) weekly to practise (mirrors MTC)
- Work with Maths Hubs – CPA approach, task design, stem sentences
- Consistent use of manipulatives for all children (not just SEN, WTS) and for children to access them as and when needed.

Priorities, Targets & Action Planning for 2026-2027

Target	Actions	Timescale	Monitoring / Evidence	Success Criteria	Lead / Staff
Fluency & Recall of Number Facts	• Embed daily Arithmetic lessons (outside Maths lesson) Flashback 4 to be adapted to suit the needs of the cohort	Spring Term	Book looks, arithmetic data, Flashback 4, QA visits, drop in	Increased % pupils meeting fluency benchmarks; improved arithmetic results	Maths lead, class teachers
	• Run small-group / individual interventions for pupils with gaps (Number sense)	Reviewed each term			
Reasoning & Problem Solving	• Plan 'question of the week' problem solving and reasoning questions - to scaffold how to solve the question • Provide scaffolding & extension options	Spring term	Lesson observations, planning scrutiny, work samples, pupil talk	Increase in pupils being able to explain reasoning; more depth in assessments, use vocabulary taught	Maths lead, class teachers
	• Use question stems and modelling of reasoning • Peer-coaching / lesson study to share good practice	Throughout year			

Confidence in Teaching Complex Domains	• Run CPD on manipulatives and how they can be used for different areas for different year groups. • Peer observations, team teaching, lesson studies • Share exemplar planning and models	Across academic year	Staff surveys, observation feedback, teacher reflections	Improved confidence levels; consistency in approach in those domains	Maths lead, SLT
Diagnostic Assessment & Responsive Teaching	• Develop short mid-unit checks - use Flashback 4 / arithmetic to develop fluency / practise addressed misconceptions • Analyse misconceptions and errors • Plan 'fix-it mini lessons' or reteach sessions • Use insights to adapt subsequent planning	Each unit	Samples of checks, follow-up lessons, pupil progress data Pupil conferencing - where are their misconceptions / gaps	Reduced repeated misconceptions; smoother progression through units	Class teachers, maths lead
Consistency in CPA Approach	• Produce exemplar lessons / sequences with representations • Develop and share progression of representations document • Monitor pupil books for consistency • Provide feedback / coaching where necessary	Ongoing	Book looks, learning walks, leadership review	Greater consistency across year groups in use of concrete & pictorial scaffolds	Maths lead, phase leads
Monitoring, Evaluation & Leadership	• Establish a cycle of book looks, QA drop ins, learning walks, pupil voice • Regular data review meetings and trend analysis • Report to SLT and governors with evidence of impact • Reflect and adapt the plan annually	Termly cycles	Monitoring records, meeting minutes, progression reports	Clear evidence of impact over time; adaptive planning; improvement trends in pupil outcomes	Maths lead, SLT

Summary & Next Steps

- At the end of each term, review progress against the success criteria and refine actions accordingly.
- Use pupil voice in mathematics to reflect on which tasks support their learning and where they feel they need more support.
- Share successes, challenges and next steps with staff, governors and the school community to build ownership and transparency.
- In subsequent years, build on this plan: e.g. increasing mathematical problem-posing, cross-curricular mathematics, stronger home–school maths culture.
- Develop a systematic approach to teaching problem solving and reasoning, pick apart questions to find out ‘what’ they need to do to solve the problem, now that there is a clear progression shown within the children’s arithmetic skills.