Maths overview – 2026/2027

Reception

Maths in a Reception follows the White Rose scheme, early topics develop comparing, matching and sorting skills through practical hands-on activities. Children build early number sense through practical activities like counting real objects, sorting and matching, and using manipulatives such as cubes, counters, tens frames, numicon and natural materials. Concepts are introduced in small, meaningful steps, with plenty of repetition and opportunities to talk about mathematical ideas. Storytelling, songs, and continuous provision all reinforce learning, helping children recognise patterns, compare quantities, and begin simple problem-solving. In autumn term children work with numbers to 5 before working within numbers to 10 in spring and summer term. Children rote count to 20 at least (sometimes beyond) and are exposed to numbers beyond 10, however maths learning is focused up to 10. Children are encouraged to represent numbers using dots until they are familiar with digits. Composition – children learn that numbers are made up of smaller parts, they are introduced to the part, part whole model in spring term and first then and now number stories in summer term in preparation for Year 1.
Mastery of number is also used in Reception taught as a separate small input session focusing on children's mathematical fluency and recall skills.

Year 1

Year 1 start the year by exploring number representations in depth first 0-5 then 6-10 looking at the composition, representations, subitising alongside stem sentences e.g. 3 and 2 make five. Composition of number from 0-100 comes later in the year. We have a focus of numbers as digits and words from 0-20, counting to 100 forwards and backwards and counting in 2's 5's and 10's.

Year 1 use lots of active learning – songs, rhymes and chants to help support fluency facts. Addition and subtraction is introduced in Year 1 as number stories- 'first, then and now' using practical representations to understand the adding and subtracting sequence. This then progresses with exposure from 0-20 later in the year.

NCETM spines are followed with the ethos of a mastery curriculum (CPA) where everybody has a learning journey together. Challenge is provided through careful teacher questioning. All children are exposed to True False/ misconceptions and problem solving/ reasoning throughout the lesson ensuring

no child's learning is capped. Shape, Time and Measure are taught as separate topics following the WRM scheme.

Children access provision independently which has challenges linked to their learning from that week. Continuous adaptive teaching alongside pre and post teaching and in the moment verbal feedback is used as a form of summative assessment to ensure all children are keeping up alongside professional teacher judgment/ assessment alongside small testing introduced in Summer term. Provision (both indoors and outdoors) has a range of math representatives which are modelled to children in provision, children often use these resources when learning through play; further exploring different manipulatives and their mathematical value. Throughout the year this progressing to including challenge-based tasks which follow on from the weekly learning in maths, these are modelled prior to provision so children can use these independently with their peers and may also be used as an intervention for children who need more consolidation during the week.

Mastery of number is also used in KS1 taught as a separate small input session focusing on children's mathematical fluency and recall skills.

Year 2

Warm up – each day to develop fluency, mastery, arithmetic, key skills.

We follow the structure of concrete, pictoral, abstract, using NCETM visuals and questions. Activities are varied, including using whiteboards, verbal responses, with practical equipment, frames, scaffolds, sentence STEMs.

Teacher models the main activity to help all children to access. Main activities can be written or practical activity, this varies throughout the week.

Challenge tasks are available to all pupils. This may be a game or an open ended question/reasoning. Our reasoning question bubbles are modelled regularly, and sometimes guided in small groups or one-to-one.

Peer marking, teacher marking and verbal feedback are all used within lessons as the teacher feels is appropriate.

Lesson plenaries often address misconception or consolidates the key learning, and misconceptions are also addressed the following day, or in flexible groupings where needed.

Year 3

Planning follows the Year 3 maths LTP and uses the NCETM spines, support materials and representations to help structure lessons and ensure progression. Lessons usually start with a short maths warm-up to revisit prior learning, practise number facts, develop fluency or address a common misconception. New learning is introduced through teacher modelling, with questioning and discussion used throughout to check children's understanding. Children have opportunities to work through examples together before moving on to independent work, allowing misconceptions to be identified and addressed during the lesson.

Lessons use a mixture of concrete, pictorial and abstract approaches. Resources include place value charts, part-whole models, bar models, number lines, arrays, Base 10, Numicon, cubes and counters. Children are encouraged to use practical resources when introducing new concepts before moving towards pictorial representations and formal written methods as their understanding develops. A mixture of teacher-made resources, NCETM activities, suitable online resources, practical activities and maths games are used to support learning and develop fluency.

Reasoning and problem solving are included throughout lessons rather than being taught separately. This can include odd-one-out activities, spotting mistakes, finding missing numbers, explaining methods, identifying patterns and solving problems in different ways. Children are given regular opportunities to talk about their maths, explain their thinking and compare different methods and answers. Practical activities such as matching, sorting, games, investigations and the use of manipulatives are also used to help children develop confidence and secure their understanding.

Independent tasks give children the opportunity to practise and apply the learning from the lesson, with activities adapted where needed to provide support, consolidation or further challenge. Lessons may finish with a short plenary or review, where children discuss what they have learnt, share different methods, revisit a misconception or complete a short reasoning or problem-solving activity.

Assessment is ongoing throughout lessons through questioning, discussion, observation, whiteboards and work in books. Misconceptions are picked up as they arise and addressed through further modelling, questioning, practical

resources or additional examples. Assessment information is used to inform future planning and identify children who need further support, consolidation or challenge. Formal assessment is based on the Year 3 objectives that have been taught, and previous SATs papers are not used for maths assessment.

Year 4

In Year 4 we follow NCETM, supplemented by WRM to ensure full coverage, according to the school's LTP. There is a significant focus on developing fluency of arithmetic, especially in terms of times tables. We begin the year with place value, moving to 4-digit numbers and then learning decimal tenths and hundredths before learning to apply previous formal methods of addition and subtraction to these more complex numbers. In multiplication and division children learn to use formal methods (short multiplication and short division) and informal methods to multiply 3-digit numbers by a 1-digit number before then moving through fractions, geometry, measurement and calculation of area and perimeter, money, time, capacity and statistics. Where appropriate, areas such as measure and money are also referred to within teaching of the four operations and fractions. To support understanding, lessons use pictorial representations and diagrams—including part-whole models, place value frames, bar models, and base ten. Where possible, children are introduced to concepts with concrete objects before moving to these pictorial and abstract stages. While most children move to abstract maths, pictorial resources remain available for those who need them.

Every Maths lesson starts with 4 'mental maths' questions as a warm-up and recaps previous learning before moving on to introduce new learning. Individual whiteboards are used throughout the input, to allow children to practice new methods in a 'low stakes' environment and allow teachers to adapt teaching input as needed (including adding challenge or support as required). Input sessions include reasoning questions from NCETM planning, other sources (e.g. classroom secrets), and the 'Now What' bubbles for Year 4 to encourage explanation of reasoning across all children. Independent activities may be practical or in books depending on topic, and all children are encouraged to attempt 'deeper thinking' tasks similar to those modelled in the input after their main independent task.

In addition to daily maths lessons pupils also have twice-weekly TTRS sessions and start the day with a times table song (our focus times table changes weekly).

Assessment is carried out daily from the work done during inputs, teacher marking and small group work with children. Summative assessment takes place termly through NFERs and through smaller end of unit assessments.

Year 5

In Year 5, maths takes a significant step up in complexity as students move away from basic calculations to tackle numbers up to one million, more intricate fractions, and the foundations of algebra. Our curriculum follows the Year 5 Long Term Plan and NCETM Spines, supplemented by White Rose Maths resources to ensure full coverage and depth. We begin by focusing on place value, which underpins all areas of maths, before moving through the four operations, fractions, decimals, percentages, geometry, measurement, and statistics. To support understanding, lessons use pictorial representations and diagrams—including part-whole models, place value frames, bar models, and base ten. Where possible, children are introduced to concepts with concrete objects before moving to these pictorial and abstract stages. While most children move to abstract maths, pictorial resources remain available for those who need them.

To manage cognitive load, every lesson begins with a recap of prior knowledge specifically linked to the day's objective, ensuring a solid foundation before new ideas are introduced. Initial work starts on whiteboards for low-stakes learning; this assessment for learning allows us to be flexible, quickly identifying students who require immediate small-group teacher support while offering challenges to those with a quick understanding.

Problem-solving is woven into the entire lesson rather than being a separate task. Warm-ups often feature: "odd one out," "non-examples," or "spot the mistake" activities to address common misconceptions and encourage a problem-solving approach. We follow the "I do, we do, you do" model to integrate foundational understanding and supporting the use of correct terminology. Depending on the objective, practical application and reasoning questions might be the focus of the lesson or used as a plenary to ensure all children are exposed to both fluency and reasoning. Children are encouraged to self-mark and address areas of misunderstanding. Finally, progress is monitored daily through whole-class questioning and work in books, while end-of-module quizzes and NFER papers provide formal summative data to identify any gaps.

Year 6

In Year 6, mathematics is taught using a range of high-quality resources, including White Rose Maths, NCETM Mastering Number and Mastery materials, Target Maths, Testbase, and previous SATs questions. Lessons are carefully structured to build fluency, reasoning and problem-solving skills while preparing pupils for end of Key Stage 2 assessments.

Lessons typically begin with a warm-up activity that revisits previous learning, helping pupils retain key concepts and make links across topics. This is followed by a teacher input introducing new learning, during which pupils respond to questions and examples in their books. Where appropriate, some higher-attaining pupils demonstrate independence by beginning tasks immediately, allowing learning to be tailored to individual needs.

Independent practice usually starts with carefully selected questions from White Rose or Target Maths before progressing to increasingly challenging reasoning activities and SATs-style questions from Testbase. Work is differentiated to ensure all pupils are appropriately challenged and supported. During lessons, the teacher works with targeted groups of pupils, providing additional support or challenge where needed.

Each lesson concludes with a whole-class review using three previous SATs questions completed in purple pen. These provide an ongoing assessment opportunity, enabling misconceptions to be identified quickly and informing future teaching.

In addition to daily mathematics lessons, pupils complete morning maths activities from 8:40am to 9:00am, which reinforce key skills and number fluency. Morning and afternoon work sessions are also used to complete one or two arithmetic papers each week, helping pupils develop confidence, accuracy and speed in calculation. This consistent approach ensures pupils gain a secure understanding of mathematical concepts while developing the resilience and problem-solving skills required for success in Year 6 and beyond.