

Curriculum Statement

Our Numeracy curriculum allows children to better understand the world around them by making connections between mathematics and everyday life. Our policies, resources, and schemes support our vision and clearly outline where math can be incorporated across different curriculum areas. The structure of the mathematics curriculum across schools shows a clear progression in line with age-related expectations.

Intent

At North Road Academy, our intent for mathematics is to teach a rich, balanced and progressive curriculum using maths for reasoning, solving problems, and developing fluent conceptual understanding in each area. Our curriculum allows children to better make sense of the world around them by making connections between mathematics and everyday life. Our policies, resources, and schemes support our vision and clearly outline where maths can be incorporated across different curriculum areas. The structure of the mathematics curriculum across the school shows a clear progression in line with age-related expectations.

We aim to ensure that mathematics is a high-profile subject that children view positively and with a 'Can do' attitude.

Our curriculum is geared towards being inclusive and at the same time meeting all students' needs to ensure that all learners are able to access the curriculum and achieve, but also to challenge and engage the most able students.

Implementation

Teaching

Every class from Y1 to Y6 follows the White Rose Maths scheme of learning, which is based on the National Curriculum. Teachers use White Rose Maths SOL to plan lessons, choose suitable resources, and help children take small steps to progression. The Schemes of Learning make sure topics are introduced to children in a logical order and revisited throughout the year to encourage deep learning and ensure children have the foundational knowledge they need, before moving on to more advanced maths concepts and tackling more challenging number problems. Lessons may be personalized to address the individual needs and requirements of a class but coverage is maintained.

Teaching curriculum content in blocks using WRM, allows children to explore skills and knowledge in depth and gain a secure understanding of a particular subject matter. Key knowledge and skills are also revisited regularly allowing repetition to embed learning. A concrete, pictorial, abstract approach (CPA) provides children with a clear structure, in which they can develop their depth of understanding of mathematical concepts.

Years 1 & 2 have Pupil Books, covering a unit block of work - several blocks will make up a term's worth of work. Years 3 & 4 work on A4 1cm books whilst Years 5 & 6 transition onto 5mm books. All blocks build upon the main teaching points and objectives of a particular lesson. The blocks themselves are set out so that it allows all pupils in the class to practice and consolidate their skills and understanding.

Across KS1 and KS2 children are exposed to a variety of different types of learning to ensure coverage of fluency, problem-solving, and reasoning in different formats. Teachers also implement the school's agreed calculation policies for progression in written and mental calculations. Pre and post-unit assessments are used where appropriate along with termly assessments which help teachers to gather an understanding of their pupil's existing and developing knowledge and skills.

Topic Areas

Each year covers the main topic areas: Number, Measurement, Geometry and Statistics.

The focus of numeracy in key stage 1 is to ensure that pupils develop confidence and mental fluency with whole numbers, counting and place value. This includes working with numerals, words, and the four operations. Teaching focuses on other key areas also including shape, and measures to describe and compare different quantities such as length, mass, capacity/volume, time, and money.

In lower key stage 2 pupils become increasingly fluent with whole numbers and the four operations, including number facts and the concept of place value. Pupils also develop their ability to solve a range of problems, including with simple fractions and decimal place value. Teaching focuses on pupils' development in key areas such as developing mathematical reasoning so they can analyse shapes and their properties, and confidently describe the relationships between them.

In upper key stage 2 pupils extend their understanding of the number system and place value to include larger integers, developing connections between multiplication and division with fractions, decimals, percentages and ratios. Pupils build on their ability to solve a wider range of problems, including increasingly complex properties of numbers and arithmetic, and problems demanding efficient written and mental methods of calculation. With this foundation in arithmetic, pupils are introduced to the language of algebra as a means for solving a variety of problems. Further teaching of geometry and measures helps consolidate and extend knowledge from early key stage work. Pupils are able to classify shapes with increasingly complex geometric properties and that learn the vocabulary they need to describe them. By the end of key stage 2, our aim is to ensure all pupils are fluent in written methods for all four operations, including long multiplication and division, and in working with fractions, decimals and percentages.

Cross Curricular

Maths is taught across the curriculum ensuring that skills taught in these lessons are applied in other subjects.

Online Maths Tools

In order to advance individual children's maths skills in school and at home, we utilise MyMaths both as a teaching resource and for some year groups in KS2 maths homework, in order to consolidate learning.

Assessment

Through our teaching we continuously monitor pupils' progress against expected attainment for their age. Termly assessments are carried out based on each unit of work that is covered in class. Class teachers make use of Rising Stars to track pupil progress throughout the academic year. This also informs current levels of attainment and areas where further support may be needed.

Summative assessments from Rising Stars are completed at the end of every term: PUMA assessment is completed at the end of the third term to identify the maths age of each student and track progress against national averages in Mathematics. The main purpose of all assessments is to always ensure that we are providing excellent provision for every child.

Mental Maths

Years 1 through to 6 have weekly Mental Maths tests to build on their ability to do math "in their head" without using pencil and paper or a calculator. Mental math is useful in school and in everyday life - and this is the message we try to get across. Mental math also helps pupils to understand math concepts better and get to the answer quicker.

Times Tables

Weekly Times Tables tests are carried out for Year 1-6. The aim is that pupils in KS1 or KS2 work towards having an instant recall of their times tables.

Impact

The impact of our mathematics curriculum is that children understand the relevance and importance of what they are learning in relation to real-world concepts. Children know that maths is a vital life skill that they will rely on in many areas of their daily life.

Children have a positive view of maths due to learning in an environment where maths is promoted as being an exciting and enjoyable subject in which they can investigate and ask questions; they know that it is OK to be 'wrong' and that this can strengthen their learning because the journey to finding an answer is most important.

Children are always encouraged and feel confident to 'have a go'. They have a good understanding of their strengths and targets for development in maths and what they need to do to improve. Our maths books evidence work of a high standard of which children clearly take pride; the range of activities demonstrates good coverage of fluency,

reasoning and problem-solving. Our feedback and interventions support children to strive to be the best mathematicians they can be, ensuring a high proportion of children are on track or above.