



Intent

The vision for mathematics at Naunton Park embraces the aims and content of the National Curriculum; champions a 'can do' attitude and embraces the principles of the mastery approach. Children at our school can articulate 'why' and not just 'what' we do or the resources we use.

Children at Naunton Park have many opportunities – in a lesson and within a unit – to solve problems by applying their mathematical understanding to a variety of problems, including in unfamiliar contexts and to model real life scenarios.

Our children are encouraged to become competent and independent mathematicians in classrooms where we 'like' both right and wrong answers in order to inspire risk taking and the development of inquisitiveness to secure mathematical foundations. Therefore, mathematical ideas are discussed and reasoned and not just passively 'received' by pupils. In our classrooms, lessons are planned to encourage pupils to describe, explain, justify, convince and/or prove mathematical concepts.

(Taken and adapted from the IIIMPACT self-evaluation signposted from the GLOW Maths Hub).

The National Curriculum for Mathematics aims to ensure that all pupils:

- 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.

By the end of Key Stage 1 our children will learn to:

- develop confidence and mental fluency with whole numbers, counting and place value. This should involve working with numerals, words and the four operations, including with practical resources [for example, concrete objects and measuring tools];
- develop their ability to recognise, describe, draw, compare and sort different shapes and use the related vocabulary. Teaching should also involve using a range of measures to describe and compare different quantities such as length, mass, capacity/volume, time and money;
- know the number bonds to 20 and be precise in using and understanding place value (an emphasis on practice at this early stage will aid fluency);
- read and spell mathematical vocabulary, at a level consistent with their increasing word reading and spelling knowledge at key stage 1.

By the end of Key Stage 2 our children will learn to:

- become increasingly fluent with whole numbers and the four operations, including number facts and the concept of place value (this should ensure that pupils develop efficient written and mental methods and perform calculations accurately with increasingly large whole numbers);
- develop their ability to solve a range of problems, including with simple fractions and decimal place value;
- draw with increasing accuracy and develop mathematical reasoning so they can analyse shapes and their properties, and confidently describe the relationships between them;
- use measuring instruments with accuracy and make connections between measure and number;
- read and spell mathematical vocabulary correctly and confidently, using their growing word reading knowledge and their knowledge of spelling.



By the end of year 4, pupils should have memorised their multiplication tables up to and including the 12 multiplication table and show precision and fluency in their work.

(Taken and adapted from the National Curriculum in England, Mathematics Programmes of Study, 2013)

Implementation

At Naunton Park, we recognise that in order for pupils to progress to deeper and more complex problems, children need to be confident and fluent across each yearly objective. We follow the White Rose Maths Hub schemes of learning to ensure that the coverage for the year is facilitated, but recognise that children progress at different rates and thus teachers move on to new concepts according to the needs of their class.

The timetable for the day includes a daily maths lesson of 45-60 minutes for all year groups in Key Stage 1 and Key Stage 2 and as part of continuous provision in EYFS. Further to this, additional curriculum time beyond the mathematics lesson is incorporated into the daily timetable – a Maths of the Day session – which is to support deliberate practice, consolidation, pre-teach and/or immediate intervention.

Within the White Rose scheme of learning, each National Curriculum objective is broken down into fluency, reasoning and problem solving; our teachers use the learning challenges to teach for mastery - an approach to extend and deepen the understanding of pupils within each year group. Our teaching staff uses this document in conjunction with a range of other useful resources. The progression document – Scheme of Learning 2.0 (updated November 2019) is outlined at: https://whiterosemaths.com/wp-content/uploads/2019/National-Curriculum-Progression-Primary_Nov2019.pdf

In EYFS, provision follows NCETM Number Blocks within two formal maths lessons each week with a whole class introduction followed by two adult-focussed group alongside independent maths activities and child initiated learning.

The teaching of this subject will be adapted as required to enable children with SEND to access this area of the curriculum, in line with their individual needs and through liaison with the school SENDCo. Wherever possible, SEND children should remain with the whole class in order for them to access the eloquent explanations of concepts available from other peers. Currently, interventions are led by teaching partners in additional sessions based on learning from that morning or from previous days' learning.

Impact

The impact of children's progress and attainment in Maths will be measured through:

- **Pupil conferencing:** pupils' enjoyment, interest, participation, confidence, preferences, opinions about lessons, resources and opportunities.
- **Observations:** pupils' learning; curriculum coverage; curriculum progression; teaching skills; teachers' skills audit.
- **Planning scrutiny:** curriculum coverage and progression against the NC requirements; teaching sequences; adaptation to pupils' needs; range of opportunities; range of experiences; cross-curricular links.
- **Resources:** audit resources available to children and teachers e.g. practical resources, supplementary schemes of work, online subscriptions.
- **Book/work scrutiny:** regular analysis of Maths books from each class (higher-attainers, average, and lower-attainers) to assess learning, attainment, progress, coverage, marking and feedback.
- **Learning Walks:** to gauge the ongoing experiences in learning.
- **Data:** analysis of termly data drops on Insight (learning objectives achieved, teacher assessments, (NTS Assessment); Baseline Tests in Reception; Key Stage 1 and 2 statutory test results; Y4 Times tables scores.

The impact of our curriculum is not always measured in the terms above – our learners leave Naunton Park equipped with the skills of an effective learner; content in challenging environments; and ready and excited for the next challenge in education.