



Curriculum Statement – 2021/2022

Mathematics

Intent

- Fulfil the potential of all our pupils; intellectually, socially, morally, emotionally and culturally
- Foster and encourage a love of learning based around our core values of self-motivation, teamwork, resilience, independence, vision and emotional intelligence
- The children engage in a curriculum that is creative and engaging. All children have access to this curriculum and make progress in lessons.
- All our pupils, regardless of ability or age, are explicitly taught the key knowledge and skills which underpin all mathematical content outlined in the national curriculum: fluency, reasoning and problem solving. These three areas are key to creating a 'well-rounded' mathematician which is vital to develop confidence and ambition for all, ultimately leading to the enjoyment and curiosity of Maths.
- Our children make rich connections across mathematical ideas and show competence in solving problems of increasing sophistication.
- Our children understand the significance of Maths and its relation to the wider curriculum including Science and Technology and in the wider world.
- Our children understand the purpose behind their learning and can apply their knowledge to their everyday lives.
- Through the study of Maths, our pupils develop skills essential for success in their future lives to enable them to be financially literate citizens who are prepared for employment in Modern Britain.
- Our teaching enables children to:
- Be fluent in the fundamentals of mathematics through varied and frequent practice with increasingly complex problems over time.
- Develop a 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
- 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.
- For all children to leave Newton-le-Willows Primary both confident and competent with numbers and measures and ready for their next stage in learning.

Implementation

- Through the use of expert knowledge from teachers and consultants, our mathematics curriculum has been carefully and thoroughly planned and sequenced. In EYFS, the foundations of number are introduced, explored and embedded which allows pupils to build upon this within each year group.
- Teaching is underpinned by a belief in the importance of mathematics and that the vast majority of children can succeed in learning mathematics in line with national expectations for the end of each key stage.
- On the whole, the class is taught mathematics together, with differentiation by depth and not

acceleration to new content. The learning needs of individual pupils are addressed through careful scaffolding, skilful questioning and appropriate rapid intervention, in order to provide the necessary support and challenge. This includes additional provision where necessary before the following lesson.

- Factual knowledge (e.g. number bonds and times tables), procedural knowledge (e.g. formal written methods) and conceptual knowledge (e.g. of place value) are taught in a fully integrated way and are all seen as important elements in the learning of mathematics.
- The reasoning behind mathematical processes is emphasised. Teacher/pupil interaction explores in detail how answers were obtained, why the method/strategy worked and what might be the most efficient method/strategy.
- Mathematical vocabulary is always demonstrated and used by teachers, so that mathematical ideas are conveyed with clarity and precision. Pupils are required to do emulate this.
- Carefully devised activities are used employing variation are used. These provide practice that develops and embeds fluency and conceptual knowledge.
- Sufficient time is spent on key concepts (e.g. multiplication and division) to ensure learning is well developed and deeply embedded before moving on.
- Children are exposed to CPA in order to fully understand each learning aim.
- Programmes of study and lesson content are carefully sequenced, in order to develop a coherent and comprehensive conceptual pathway through the mathematics.
- Learning is broken down into small, connected steps, building from what pupils already know.
- Key questions are planned, to challenge thinking and develop learning for all pupils.
- Contexts and representations are carefully chosen to develop reasoning skills and to help pupil's link concrete ideas to abstract mathematical concepts.
- The use of high quality materials and tasks to support learning and provide access to the mathematics, is integrated into lessons
- More-able pupils are challenged appropriately and effectively through careful planning, questioning and daily chilli challenges.
- There is a clear and consistent teaching sequence which is followed from Year One through to Year Six.
 1. Counting Stick
 2. Review and Do
 3. Hook
 4. Guided Practise
 5. Independent
 6. Plenary
- All lessons will cater for the individual needs of the children and to include some element of reasoning and problem solving. Questioning is a key part of the maths lesson – letting the children demonstrate what they know and challenging them every step.
- Hooks are used at the start of each lesson. They are an opportunity for children to reason and think mathematically from the start of the lesson and provide the teacher with the chance to listen to and observe pupil's mathematical thinking.
- Discussions between teacher and pupil is interspersed with short tasks involving pupil to pupil discussion and completion of short activities.
- Formative assessment is carried out throughout the lesson; the teacher regularly checks pupils' knowledge and understanding and adjusts the lesson accordingly. Summative assessment gaps inform future planning.
- Gaps in pupils' knowledge and understanding are identified early by in-class questioning. They are addressed rapidly through individual or small group intervention, either on the same day or the next day to ensure all pupils are ready for the next lesson.
- Teachers discuss their mathematics teaching regularly with colleagues, sharing teaching ideas and classroom experiences in detail and working together to improve their practice.

Impact

- Teachers regularly assess pupil understanding through a range of formative assessment strategies, observations and looking at completed work.

- Summative assessment is recorded for all pupils, showing pupils attainment in relation to specific learning objectives.
- In the EYFS, class teachers assess children's development and progress in computing by making judgements as they observe children.
- In Key Stage 1/2, class teachers gather evidence of what individual pupils know, understand and can do in Maths by observing them at work, listening to and discussing with them, and evaluating and responding work they produce.
- At regular intervals throughout the year, an assessment of learning outcomes is recorded and pupil's attainment and progress data is gathered. This is used to identify which children need further support or enhanced challenge
- Children will leave with specific subject knowledge and skills to prepare them for the next phase in their educational journey and able to integrate into a modern British society
- Through a wide range of assessment strategies, teachers will ensure that pupils retain knowledge, understanding and vocabulary so that they not only achieve their age-related expectation, but are also confident in overcoming the challenges and barriers that mathematics presents.
- Pupils will develop a healthy and enthusiastic attitude towards maths that this will stay with them throughout their lives.