



Maths Curriculum Statement

Intent

At Oaklands Infant School it is our intent to provide all children with a high-quality, broad and challenging Mathematics curriculum which encourages the children to make sense of the world around them by developing their ability to calculate, reason and solve problems. Our Maths curriculum reflects our school ethos of 'deep roots for future growth' with deep learning taking longer but lasting forever.

We aim to ensure that our Maths curriculum promotes a true love of the subject for boys and girls alike with pupils approaching the subject with a positive, can do attitude. During their time at Oaklands we want our pupils to:

- become **fluent** in the fundamentals of maths, developing their conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
- **reason mathematically** by justifying, making links to known facts, or providing proof using mathematical language.
- be challenged through **solving problems** demonstrating a deeper understanding by solving new problems in unfamiliar contexts.
- **think** like a mathematician being systematic, generalising and seeking out patterns; encouraging dialogue and discussion in each lesson
- **show** their thinking in different ways using multiple representations.
- make **real life**, cross curricular links so that they understand how their maths skills can be applied in and outside of the classroom.

We intend to teach a Maths curriculum which is coherently planned and sequenced, reviewed and successfully adapted to meet the needs of all our learners. Oaklands Infants seeks to develop numerate, resilient, problem-solvers of the future; instilling essential skills that can be used in all aspects of learning and in future life.

Implementation

Throughout the school, we use White Rose Maths as our foundation for teaching through a Mastery approach. These core resources are supplemented by additional material from Primary Stars, NCETM documentation and Deepening Understanding.

Curriculum content is taught in blocks allowing children to explore skills and knowledge in depth and gain a secure understanding of particular subject matter. Key knowledge and skills are also revisited regularly allowing repetition to embed learning.

Each block is a considered sequence of experiences including key vocabulary and knowledge. Concepts taught in mathematics follow a concrete, pictorial and abstract approach so that children can actively learn with visual supports.

Concrete – children have the opportunity to use concrete objects and manipulatives to help them understand and explain what they are doing.

Pictorial – children then build on this concrete approach by using pictorial representations, which can then be used to reason and solve problems.

Abstract – With the foundations firmly laid, children can move to an abstract approach using numbers and key concepts with confidence.

Children are taught the fundamental skills in mathematics through explicit taught sessions. Teachers effectively model ideas using manipulatives. They use conceptual and procedural representations to help children



Maths Curriculum Statement

understand concepts more deeply and identify patterns in the number system. Adults aim to address misconceptions in the moment and challenge children appropriately.

Our aim is to ensure that the three core areas of the national curriculum *fluency, reasoning and problem solving* are highly connected and interdependent. Children are taught to practise, use and apply these skills independently and collaboratively. Children develop their subject specific vocabulary through explicit teaching of vocabulary and definitions. Regular, brief, retrieval opportunities to revisit previously learned material are built in so that content becomes deeply embedded in children's memories.

Mathematics lessons allow for collaborative learning; encouraging children to talk in pairs, small groups or through class discussion and share learning. For those children who grasp concepts rapidly, they will be challenged through a range of deeper problems and reasoning tasks to build a more profound understanding whilst those not sufficiently fluent will be provided with opportunities to consolidate their understanding through additional help either during the lesson, before or afterwards.

In the Foundation Stage, our young mathematicians will be provided with many exciting opportunities, through planned purposeful play and a mix of adult-led and child-initiated activities, to develop and improve their skills in subitizing, counting, understanding and using numbers, calculating simple addition and subtraction problems; and to describe shapes, spaces, and measure. In EYFS we understand the need for high quality environments and meaningful interactions, which enable children to develop their mathematical thinking and talk.

In addition, in September 2021, the school started the Mastering Number Programme with the aim of supporting the development of mental fluency skills that underpin much of the mathematics curriculum. Time is dedicated at least 3 times each week, possibly in smaller, regular bursts, to deliver these sessions and **Key Instant Recall Facts (Learn Its)** are sent home each half term to be practiced and learnt so that children grow in confidence to recall their facts instantly. These KIRFs are currently sent out in Year 2 with a view to rolling this out across each year group by the end of the academic year.

Assessment and Monitoring

Teachers use formative assessment to evaluate the learning during a lesson. They may ask questions to check understanding, or scrutinise independent work in order to identify common misconceptions or share thinking. Such assessment allows teachers the flexibility to intervene in a lesson to remind, redirect or reteach pupils as required. Staff use their marking and feedback sheets to assess through each sequence of lessons whether or not a concept has been grasped; these are then used to feed back to pupils, to reinforce learning and to praise. Objectives are ticked and dated once achieved in the front of Year 1 books and TAFs are dated in Year 2.

From Year 1 onwards, children's attainment and understanding are partly measured through summative assessments using White Rose end of term assessments. At the end of the year, children in the Foundation Stage will be assessed against the Early Years Learning Goals. Children in Year 2 will be assessed against the End of Year 2 Teacher Assessment Framework with written SATs papers used as one part of this overall judgement.

Mathematics monitoring includes book looks, learning walks, pupil voice interviews/questionnaires in order to ascertain correct curriculum coverage, the quality of teaching and learning as well as the children's attitudes to and retention of maths learning. This information is then used to inform further curriculum developments and provision is adapted accordingly.

Through high quality first wave teaching, guidance and effective feedback, we aim for children to achieve age-related expectations by the end of each year group. Pupil results compared to their peers both locally and nationally should be in line or above.

CPD

Staff subject knowledge allows the intentions of our mathematics curriculum to be delivered successfully. We continually strive to build upon the good understanding of the expectations of the curriculum that our staff have.



Maths Curriculum Statement

All staff are encouraged to raise questions, seek support and request further training if needed in order to ensure everyone is confident in what they teach. Good practice is shared between staff. The school is a member of our Trust network and local Maths Hub which gives the subject leads access to support and allows them to keep up to date with current research and content using this knowledge to develop the expertise of other staff members.

Transition

In the summer term all classes have a thorough handover with the next year group including Year 2 to Year 3 at Oaklands Junior School. During these meetings key information is shared about children's learning that includes reading, writing, phonics and Maths. Teachers share year groups strengths and any gaps in their learning or areas of the curriculum that children aren't secure with. Foundation Stage have handover meetings with local pre-schools and have parent meetings before the new cohort of children start with us in the autumn term

SEN

Children identified with additional needs or disability are given the opportunity to minimise the barriers to learning by the implementation of reasonable adaptations as stated in the Code of Practice. These can be adaptations to the lesson content, methods of recording, grouping, positioning of seating, resources, time allocation or supervision as well as methods for assessment and evaluation. Pre-teaching, over teaching and practise time may need to be provided to embed learning. Specific interventions such as Numicon Breaking Barriers programme may be used.

Impact

By teaching Maths as we do at Oaklands, we believe we are achieving the best possible outcomes for all children. The **impact** of our teaching is evident in different ways.

Attainment - by the end of EYFS, we expect the vast majority of our children to achieve the ELGs in Number and Shape, Space and Measure. Our KS1 results will show we are in line with if not exceeding local and national data.

Pupil Voice – through discussion and feedback, children talk enthusiastically about their Maths lessons. They are able to articulate what they have learnt using correct mathematical language. Pupils are proud to show their maths learning and have a 'can do' attitude.

Evidence in knowledge and skills – children demonstrate a quick recall of facts and procedures allowing them to move between the different contexts and representations of Maths. They show their understanding in multiple ways, explaining their ideas and can independently apply the concept to a new problem in unfamiliar situations.

Breadth and depth – lessons sequenced and progressive with all learners suitably challenged. There is engagement and a buzz of talk in the classroom. Links are made with other subjects and the wider world.

This 3Is statement is a working document, one which is reviewed and adapted and reflects teaching improvement as an ongoing process.

Impact – July 2022

Attainment

At the end of the academic year 2021-22, pupils at Oaklands Infant school made good, and at times exceeding, progress from their own personal starting points to achieve their full potential. At the end of Key Stage 1 74% (44 pupils out of a cohort of 60) were working at expected or above in Maths. 21% (12 pupils) were working at greater depth. National data showed that 68% met the expected standard Nationally. 15% achieved greater depth. Therefore Oaklands Infant School achieved higher than the National Average.



Maths Curriculum Statement

Pupil voice

There is a unanimous enthusiasm for Maths, with most children believing they are good at Maths and want to do well in this subject. All children know their class environments well and where to find support on the display boards. They are keen to share their learning and are increasingly becoming more confident when approaching challenges.

Evidence of Knowledge and Skills

Monitoring showed that children were using mathematical language and were able to use a range of manipulatives and representations to show their thinking. Peer discussion and dialogue is a feature of lessons. Majority of children were engaged and keen to share responses. There is evidence of links being made with previous learning and misconceptions within lessons were addressed straightaway. Children's fluency and knowledge of key facts such as number bonds, halving/doubling, ability to count in steps of 2s and 10s has shown improvements with the use of the Mastering Number program introduced this year. Children now need to see patterns and use number facts outside of the Mastering Number sessions. Children need to know how to further their knowledge.

Breadth and Depth

Staff are using the White Rose Small Steps to plan coherent blocks of learning with a variety of fluency, reasoning and problem-solving tasks being evidenced.

OFSTED

A Section 8 Ofsted was carried out in May 2022 with a deep dive in Maths. The final report said: 'The mathematics curriculum is well designed and well taught. Leaders have made sure that pupils' knowledge builds well over time, starting in early years. Teachers introduce new ideas clearly and correct any misconceptions immediately. Pupils remember what they learn. Many can instantly recall important facts. Leaders make sure that pupils have the chance to practise new methods to help them calculate fluently and accurately. During the inspection, Year 2 pupils proudly showed and explained their column subtraction work.'