



Maths Curriculum Statement

Mathematics is extremely important to us here at Thorndon. Our aim by the end of each child's primary education is to produce confident mathematicians who are able to calculate (using all four operations), reason, problem solve and competently make connections in all the maths that they do. Maths is more than just numbers and shapes and children need to be taught to look for patterns, make connections between things and also learn to generalise when answers are unknown.

Intent

At Thorndon Primary School, we believe mathematics is an important part of children's development throughout school, right from an early age. We intend on delivering a curriculum which:

- Allows children to be part of creative, well thought out and engaging lessons that will give them a range of opportunities to explore mathematics.
- Gives each pupil a chance to believe in themselves as mathematicians and develop the power of resilience and perseverance when faced with mathematical challenges.
- Recognises that mathematics underpins much of our daily lives and therefore is of paramount importance in order that children aspire and become successful in the next stages of their learning.
- Engages all children and entitles them to the same quality of teaching and learning opportunities, striving to achieve their potential.
- Makes rich connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems.
- Provides equal opportunities for children to apply their mathematical knowledge to other subjects (cross-curricular topic work).
- Allows children to learn from mistakes. Children are taught to embrace mistakes whilst looking for reasons why they are made in order to progress their understanding, be resilient and take risks while they work.



Implementation

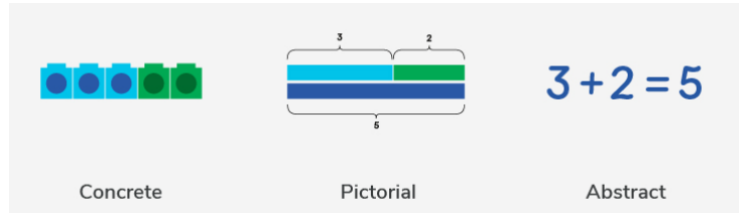
Our approach to the curriculum is designed to develop children's knowledge and understanding of mathematical concepts from Early Years through to the end of Year 6. We are a mixed age school, so children are split for their Maths lessons and taught at the age-appropriate level.

Teaching and Learning

- In Thorndon, we follow the National Curriculum and use White Rose Schemes of Work as a guide to support teachers with their mixed age planning and assessment alongside other good resources of our choice.
- An 'Operation Arithmetic' document is used to ensure a consistent approach to teaching arithmetic over time through years 3 – 6, linked with the National Curriculum
- Basic number and fraction skills are taught and regularly practiced in short 15 minute daily maths meetings (Monday – Thursday) focussing on these areas of maths each day.

Monday	Tuesday	Wednesday	Thursday
4 operations	Number facts	Fractions	Measures

- All lessons begin with a short White Rose Maths starter to support retrieval practice and develop long-term memory with numbers and counting and or flashback 4's.
- A teacher led activity followed by a partner practice session forms the main part of our maths lesson. The partner practice allows children to practice a skill in pairs using concrete materials (where possible) and or a game to 'practice' the skill of the day. This is then followed by independent work in the White Rose Maths workbooks.
- Children are taught through clear modelling and have the opportunity to develop their knowledge and understanding of mathematical concepts through a concrete, pictorial, abstract approach.



Using objects, pictures, words and numbers to help children explore mathematical ideas, enrich their learning experience and deepen understanding at all levels.

- Carefully differentiated 'challenges' set in each section of the White Rose workbooks support those who need it and additionally extend children who need to progress further.

Challenge 1 - 3	Fluency practice.
Challenge 4 - 5	Worded problem.
Challenge 6 -7	Worded problem, sometimes with a reasoning focus.
Challenge 8	Multi step worded problem/ investigative problem.

- Children move through these different 'challenges' of their learning at their own pace and learn to make choices (according to their individual needs) of the level of work they feel confident to complete that day.
- Children who have shown their understanding at a deep level within topics, will have opportunities to apply these skills in a GREATER DEPTH activities – Using Stretch books (CGP).
- For those who finish early a purple pen challenge is in place. The children have three choices to extend their learning.

Explain	Explain how you solved one of the challenges using excellent maths vocabulary in a worded sentence.
Another	Create another question in the style of one of the challenges.
Pick n Mix	Choose a worded problem card with a mathematical problem to solve.

- Resources are readily available to assist demonstration of securing a conceptual understanding of the different skills appropriate for each year group.
- A love of maths is encouraged throughout school via links with others subjects, applying an ever-growing range of skills with growing independence.



Leadership, Assessment and Feedback



- Formative maths assessment at Thorndon takes place every term using the NFER assessment papers, this informs the planning and teaching in a regular cycle. Gap analysis of any tests that the children complete is undertaken and fed into future planning.
- Children's scores are tracked alongside their previous achievements, this informs the intervention timetable which is regularly updated to keep children on track.
- Feedback is given on children's learning in line with our marking policy and much of it is completed in live marking. Children are encouraged to respond with green pen. Daily, ongoing assessment within every lesson helps teachers to identify the children who need more support to achieve the intended outcome and who are ready for greater challenge through planned questioning or additional 'challenge' activities.
- Children with additional needs are included in whole class lessons in a mastery approach and teachers provide scaffolding and relevant differentiation as necessary. For those children who are working outside of their year group curriculum, intervention activities are provided to ensure their progress.
- Within class, children between year 2 – 6 are given opportunities daily to practice times tables using TT Rockstars online learning.
- Summative assessments are completed at the end of the academic year and reported to parents in reports. Additionally, children in year 2 and 6 will receive their Sats scores.
- The maths leader has a clear role and overall responsibility for the progress of all children in maths throughout the school. Key data is analysed and regular feedback is provided, to inform on progress and future actions.

Impact

- Children demonstrate a quick recall of facts and procedures. This includes the recollection of the times table.
- Children show confidence in believing that they will achieve.
- Each child achieves objectives (expected standard or more) for year group.
- The flexibility and fluidity to move between different contexts and representations of maths.
- The chance to develop the ability to recognise relationships and make connections in maths lessons.
- Mathematical concepts or skills are mastered when a child can show it in multiple ways, using the mathematical language to explain their ideas, and can independently apply the concept to new problems in unfamiliar situations.
- Children show a high level of pride in the presentation and understanding of their work.
- Children look forward to and enjoy their maths learning.
- Children will leave Thorndon's Primary Education in year 6 with the skills and enthusiasm for Maths needed to progress confidently in high school.

