

Mathematics at Newsham Primary School



At Newsham we advocate a spiral curriculum approach to the teaching in maths; this systematically builds mathematical knowledge and skills. This approach assists children in developing their conceptual understanding of mathematics by using concrete objects, pictorial representations and abstract thinking. This inclusive approach is based on the principles of cognitive psychology and child development. As a result, children gain greater depth of understanding and are able to apply this to problem solving and in reasoning situations.

Since children are at a host of different starting points, we have implemented a carefully planned, mixed approach to the teaching of maths across school. This is adapted and tailored to meet the needs of individuals.

As Newsham Primary School has STEM development as a key curriculum priority, it is important to us that we promote enjoyment in mathematics, and create life-long mathematical thinkers. As part of our programme to develop positive attitudes towards the subject, we have a parental support programme offered through our sister charity The Lighthouse Community Hub, and many parental drop in sessions throughout the year.

Early Years

Children in Early Years are taught in line with guidance from Development Matters and follow White Rose teaching sequences. This Mastery approach consists of very small steps with lots of repetition to embed concepts. The majority of the learning in EYFS is practical, using mathematical manipulatives. Additionally, in Reception, there is a daily session of Mastering Number, which is designed to help children embed good number sense, including fluency and flexibility with number facts. These sessions include lots of visuals and familiar activities.

Key Stage 1

Children in KS1 are following National Curriculum objectives which are aligned to the White Rose teaching sequences. Lessons include daily problem solving and reasoning elements and are predominantly practical. The amount of formal recorded mathematics increases as children move through the key stage. Additionally, KS1 pupils have a daily 10–15-minute session of the DfE program, 'Mastering Number' which focuses on securing firm foundations in the development of good, sound number sense that will enable them to access future learning more easily. These sessions include lots of visuals and use of familiar apparatus such as the Rekenrek. You can watch a Rekenrek session [here](#).

Key Stage 2

Children in KS2 are following National Curriculum objectives which are aligned to White Rose teaching sequences. Lessons include daily problem solving and reasoning elements. In lower KS2, there is an intense focus on multiplication calculations and reciprocal facts. More information about this and how you can help your child with this can be found [here](#). In upper KS2, preparation for secondary mathematics is key.

Maths Hub

We have two members of staff who are part of the Great North Maths Hub. This is an organisation made up of a partnership of schools, colleges and other organisations working together to provide support for maths teaching in a particular region of England.

A hub's work takes many forms and includes face-to-face CPD and online support. Every hub runs several projects each year which enable teachers and teaching assistants to work collaboratively with the support of local leaders of maths education (LLMEs). They support training and strategy implementation across the school as part of this initiative.

Assessment

In Early Years, teachers work with individual children to assess their mathematical knowledge and identify areas for development. In KS1 and KS2, termly White Rose Maths assessments and continual daily teacher assessment identify any gaps in learning and inform next steps. In KS2, pupils regularly complete Star Maths Assessments on a program we use called Accelerated Maths. This helps generate bespoke sessions at each child's ability level. You can find out more about this below (Freckle).

In Year 4 pupils complete a Multiplication Check. More information about this and how you can help your child can be found [here](#).

Intervention

Data analysis of maths assessments, combined with formative assessment, highlight areas for development for groups and individuals. From this analysis, those needing additional support are identified for Intervention programs which happen across the school.

Learning Programs

Here is some additional information about some of the learning programs we use in school.



[TTRockstars](#) is a web-based program to help every child learn their times tables in a unique and innovative manner. We use this for Year 3,4,5 and 6. The process is fun, inspiring and effortless and children can create their own avatar, compete against others and have fun, whilst learning and reinforcing multiplication and division facts.



Freckle
by Renaissance

[Freckle Maths](#) is a personalised learning journey created for individuals, based on a child's last Star Maths assessment results. This identifies gaps in skills and knowledge and provides practise materials, with hints to help, until mastery (80% accuracy) is achieved.

Freckle meets the needs of every pupil - Freckle continuously adapts for student practise in maths activities, allowing teachers to spend less time manually differentiating learning and more time helping students develop and progress.

Freckle keeps pupils engaged while learning - Incentives and age-appropriate designs provide a balance of fun and learning. Rewards for achievement recognise individuals' growth in ways they find fun.

Accelerates student growth - Freckle increases growth and proficiency through standards-based skill development in maths, personalised goal setting, and maths mastery. Freckle easily identifies skill gaps to determine where to focus teaching and learning.