

At Burnside, pupils receive a high-quality mathematical education which equips them with a strong set of tools that they can use in everyday life to understand the world. Our pupils work with a wide range of teaching for mastery activities to build excitement and curiosity about the subject whilst becoming more fluent and confident in the field of mathematics.

Teaching for Mastery

Through teaching for mastery, pupils deepen their understanding of mathematics, rather than memorising key procedures or resorting to rote learning. The three key principles of mastery are:

- conceptual understanding is key;
- pupils must be able to speak in full sentences applying correct mathematical vocabulary;
- pupils can learn to think like mathematicians.

We use the Concrete-Pictorial-Abstract approach as one of our main mastery approaches and it is being implemented from Reception to Year 6. Concrete and pictorial representations of concepts are used before moving on to the abstract. Building these steps across a lesson helps pupils better understand the value of digits and the relationship between numbers and the real world.

Pupils then build fluency by learning their number bonds, times tables and increasing their knowledge and rapid recall of number facts.

How we teach mathematics

We look to ensure that all pupils develop firm mathematical foundations in a way that is engaging and appropriate for their age right from the start.

Early Years

In Nursery and Reception, mathematics learning focuses on the Early Year Foundation Stage Framework, following the interests of children and learning through play using indoor and outdoor continuous provision opportunities. There are six key areas of mathematics learning in the EYFS framework, which collectively provide a platform for everything Burnside children will encounter as they progress through their maths learning at our school, and beyond:

1. Cardinality and counting;
2. Comparison;

3. Composition;
4. Pattern;
5. Shape and space;
6. Measures.

In Reception, in addition to continuous provision, explicit maths teaching happens through:

- A daily maths lesson of up to 30 minutes via White Rose Maths and/or NCETM Mastering Number.
- Planned table activities support the skills covered in lessons and class adults record interactions and observations.

Key Stages 1 and 2

Mathematics is taught daily in the following sequence:

- A daily maths lesson of up to 1 hour.
- A daily number fluency or times table fluency session (depending on year group)
- One maths lesson per week dedicated to number fluency and arithmetic

Mental maths sessions follow two of the following programmes, depending on the year group:

- NCETM Mastering Number (EYFS - Year 3)
- NumberSense Times Tables Fluency Programme and Times Tables Rock Stars (KS2)

Pupils work with a wide range of activities that teach them key mathematical concepts, solve problems, develop their mental skills and reason mathematically.

Small-step teaching takes place to ensure all pupils understand key concepts before they are exposed to new ones. All key prior knowledge is regularly revisited and all pupils have the opportunity to apply their understanding to rich and deep mathematical problems.