



Fluency at Brookfield Primary School

Fluency in mathematics is about developing strong number sense and the ability to choose and apply the most appropriate method across a range of contexts. The National Curriculum states that pupils should become fluent in the fundamentals of mathematics through **varied and frequent practice**, so that knowledge can be recalled and applied efficiently.

Fluency includes:

- **Secure and efficient recall** of facts and procedures
- **Flexibility** to move between different contexts and representations
- **The ability to recognise relationships and make connections** across mathematics

Fluency is not simply speed, but the combination of **accuracy, efficiency and flexibility**. As outlined by Russell (2000), it consists of three key elements:

- **Efficiency** – pupils use methods that are manageable, keeping track of steps and making use of known facts to solve problems without becoming overwhelmed
- **Accuracy** – pupils apply their knowledge reliably, supported by secure understanding of number relationships and careful checking
- **Flexibility** – pupils draw on a range of approaches, selecting and adapting strategies to suit the numbers and context, and using alternative methods to verify their answers

Multiplication Teaching

Pre-requisites -What should children know about multiplication before they begin to learn times tables?

- Unitizing
- Understanding equal and unequal groups
- Combining equal groups
- Understanding the early relationship between repeated addition and the times sign

Focus on one time table each half term with opportunities built in to also practise those learnt previously.

	<u>Autumn 1</u>	<u>Autumn 2</u>	<u>Spring 1</u>	<u>Spring 2</u>	<u>Summer 1</u>	<u>Summer 2</u>
<u>EYFS</u>	Additive Fluency - Mastering Number					
<u>Year One</u>	Additive Fluency - Mastering Number					
	Experience of counting in 1s, 2s, 5s, 10s					
<u>Year Two</u>	Additive Fluency - Mastering Number					
	Additive Fluency - Mastering Number			Learn: 10x	Learn: 5x	Learn: 2x
					Revise: 5x	Revise: 5x
<u>Year Three</u>	Learn: 4x	Learn: 8x	Learn: 3x	Learn: 6x	Learn: 9x	Revision, Assessment, Intervention
	Revise: 2x, 5x, 10x	Revise: 4x	Revise: 8x	Revise: 3x	Revise: 6x	
<u>Year Four</u>	Learn: 7x	Learn: 11x	Learn: 12x	Learn: Squares	Revision, Assessment, Intervention	Multiplication Check
	Revise: 9x	Revise: 7x	Revise: 11x	Revise: 12x		

Termly Teaching Pattern

Week One: Revise and assess past times tables taught

Week Two–Five: Teach and revise new times table with weekly practice 3-5 times per week

Week Six: Assess and provide intervention where necessary

Three maths lessons per half term will be dedicated to learning each new times table – developing connections, exploring patterns and creating a deeper understanding of multiplicative reasoning with specific focus on this new times table.

Why do we focus on one times table per half term? Neuroscientists tell us it takes approximately 8 weeks of repetition to make a new neural pathway.

Mastering Number at EYFS and Key Stage One

In addition to daily mathematics lessons, all children in Reception, Year One and Year Two participate in the NCETM **Mastering Number Programme**, which is designed to develop **secure number sense and fluency with number facts** in the early years of schooling.

Through short, daily sessions, pupils engage in **frequent, structured practice** that supports the development of **automaticity and rapid recall** of key number facts. These sessions go beyond rote learning by using carefully chosen representations and stem sentences to build **deep conceptual understanding alongside fluency**, enabling children to make connections and apply their knowledge flexibly.

The use of manipulatives, such as the **rekenrek**, helps pupils to visualise number relationships and move from counting to efficient mental calculation. Over time, this consistent rehearsal and structured variation supports children in committing key facts to long-term memory, reducing cognitive load and allowing greater focus on reasoning and problem solving.

By the end of Key Stage One, the programme aims for all pupils to demonstrate:

- **Automatic recall** of key number facts
- **Fluent and efficient calculation** strategies
- **Confidence and flexibility** when working with number
- **Secure understanding of number structure and relationships**

Mastering Number at Key Stage Two

In Key Stage Two, Mastering Number builds on the strong additive foundations established in EYFS and Key Stage One, with a clear focus on developing **fluency and understanding in multiplicative relationships**. The programme supports pupils in Years 4 and 5 to develop **automaticity in multiplication and division facts**, alongside a deep conceptual understanding of how these facts are connected.

Daily short sessions, in addition to maths lessons, provide structured opportunities for pupils to revisit key facts, explore patterns and make connections between number relationships. This aligns with the Department for Education's guidance that pupils must develop **secure fluency through regular and varied practice**, enabling them to **recall and apply mathematical knowledge rapidly and accurately**.

The programme emphasises the development of **flexible, connected thinking**, rather than rote memorisation alone. Pupils use carefully sequenced representations, mathematical language and stem sentences to understand multiplicative structures, including scaling, comparison and correspondence problems. This approach reflects research-informed practice, where fluency is recognised as involving **recall, efficiency and flexibility**, reducing cognitive load and allowing pupils to focus on reasoning and problem solving.

Mastering Number at KS2 is designed to ensure that all pupils leave primary school with:

- **Secure recall** of multiplication and division facts
- **Confidence and flexibility** in applying these facts in different contexts
- **A deep understanding** of multiplicative relationships and structure
- **The ability to explain their thinking using precise mathematical language**

By prioritising automaticity and conceptual understanding, the programme supports pupils to access the wider mathematics curriculum successfully and provides a strong foundation for transition to Key Stage Three.