



## How we teach maths at Strathmore



At Strathmore, we believe every child should have the opportunity to engage in the learning of maths in a fun and practical way. Our hope is to build their confidence and fluency in maths through opportunities to talk and being active in maths both indoors and outdoors. Each child will take their maths journey at their own pace and become fluent in concepts accessible to them. We are aware that not every child will master fluency at the same time and therefore, differentiation and understanding is key.

The National Curriculum states that pupils should become fluent in the fundamentals of mathematics through varied and frequent practice. The mastery curriculum for primary school's places problem solving at the heart of mathematics with the main aim that every child can learn to solve sophisticated multi-step word problems in an unfamiliar context.

Fluency in maths is about developing number sense and being able to use the most appropriate method for the task at hand; to be able to apply a skill to multiple contexts.

Our aim with fluency and mastery is that children will:

- ❖ know a range of strategies to support problem solving efficiently, accurately and flexibly
- ❖ grasp concepts and use fluently across a range of contexts
- ❖ use manipulatives to represent a mathematical concept through hands on experience
- ❖ talk: children are encouraged to talk through their reasoning and choice of calculations, sharing ideas and concepts

Fluency sessions are taught across Key Stage One (KS1) three times a week for 10 minutes following the NCETM framework. These are in addition to normal maths lessons and planned based on daily Assessment for Learning. The sessions do not include new learning but focus on consolidating previously taught arithmetic and concepts.

Across the school, pupils have visual reminders of maths learning both inside and outside in the early years, and on Fluency/Mastery displays in the KS1 classrooms.

### Curriculum focus across the school

<b>Early Years</b>	<p>Numbers: To have a deep understanding of numbers to 10, including the composition of each number. Subitise up to 5. Recall number bonds to 5 and some number bonds to 10, including double facts.</p> <p>Numerical patterns: Count reliably beyond 20. Compare quantities up to 10 in different contexts, recognising greater, less than or equal quantities. Explore and represent patterns within numbers to 10, including even and odds.</p> <p>Click <a href="#">here</a> for the EYFS Statutory Framework.</p>
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<b>Year 1</b>	Click <a href="#">here</a> for Year 1 National Curriculum Objectives
<b>Year 2</b>	Click <a href="#">here</a> for Year 2 National Curriculum Objectives

All concepts are taught through concrete, pictorial and abstract methods. Children focus on learning using concrete methods and manipulatives. This is then demonstrated through pictorial form and usually taught alongside each other, moving into abstract method once children are becoming more confident and fluent. For further information please see our Calculation Policies for [Addition and Subtraction](#) and [Multiplication and Division](#).

### Early Years

In the Early Years we begin teaching maths in a practical, hands on way, using manipulatives including 5s frames, 10s frames and rekenreks. There is a focus on basic skills to ensure a strong foundation of number in order to build on these key concepts as children move into Key Stage One. Maths is built into our day to day play and we ensure there is repetition of key vocabulary and concepts to further consolidate understanding. We use NCETM to teach our lessons which are broken down into two parts; revisiting previous learning then teaching and practising new skills.

### Key Stage One

In KS1 we use White Rose maths as a planning tool. The weekly lessons are broken down into a combination of practical, outdoor and in class sessions. Our outdoor maths lessons incorporate natural resources, larger equipment, chalk, recording in different ways and showing different representations. All of which strengthen our mastery curriculum.

### Assessment

In Early Years, pupils are assessed against the Early Learning Goals and the EYFS curriculum through observations and talk.

Maths Teaching Assessment Frameworks (TAFs) are used for KS1 pupils and these are shared with them and stored in their maths books. It allows pupils to understand what their maths curriculum will include but also gives them high expectations of themselves to know what they have achieved but also what they need to work on. Rather than target setting, it gives pupils an opportunity for personal best targets and knowing what their next step could be.

White Rose has baseline and end of unit assessments which we use in KS1 to help plan effectively. Additional support can also be sent home for those who may require pre-learning or confidence building with some mathematical concepts.