Mathematics

at the

Forest Edge Learning Federation

Our Vision

Our children will become confident mathematicians who have acquired conceptual understanding and procedural fluency by recalling known facts and using efficient methods. They will solve problems and reason mathematically; applying their knowledge and making connections.

Curriculum Overview

Our Aim

At the Forest Edge Learning Federation, we aim to ensure that all pupils:

- become fluent in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
- reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language.
- can solve problems by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

Our Curriculum

We adopt a teaching for mastery approach which involves all children (where possible) **working together and progressing at the same rate**. Teachers track each child's movement towards mastery to ensure children are fully **grasping topics before moving onto new material**. Regular assessment means teachers can be confident the class as a whole is ready to learn a new topic. Children of different abilities are given **different levels of support and different resources** to help them achieve mastery and consolidate knowledge. **Pre-teaching** is used as a method of intervention to ensure children who are at risk of falling behind are ready to progress onto new content. **Maths Meetings** are a vital part of our Mathematics curriculum. Their purpose is to **consolidate key areas of mathematics or introduce new topics**. Maths Meetings occur daily for 10–15 minutes and cover several curricular areas. Children at the Forest Edge Learning Federation become fluent in the fundamentals of mathematics through **varied and frequent calculation practice**. Calculations occur 2-3 times a week in addition to the daily Mathematics lesson. They focus on **recall and method efficiency**. Fluency allows pupils to delve much deeper and tackle more complex problems with greater confidence and resilience.

Our Resources

At the Forest Edge Learning Federation, we follow the **White Rose Schemes of Learning** which break the learning down into small steps. This is complemented by the **Maths No Problem textbooks and workbooks** which are used as a resource to support teaching for mastery. Other teaching and learning resources include **NRICH** and the **NCETM mastery materials** . Our concrete representations make use of the **range of manipulatives and practical apparatus**. These are accessible and used to help pupils make sense of the mathematics for themselves. Learning programmes such as **Mathletics** and **TTRockstars** are used to help children consolidate knowledge and understanding and become fluent in the recall of facts. We believe that the resources we use enrich and enhance the experience of the mathematics curriculum for all learners.

Mastery

At the Forest Edge Learning Federation, we understand the importance of children acquiring a **deep, long-term, secure and adaptable understanding of mathematical procedures and concepts.** We adopt a **teaching for mastery** approach that gives pupils the best chances of mastering maths. We believe that pupils should obtain a **greater level of understanding**, beyond being able to meet the objectives outlined in the National Curriculum, and be able to **apply learning in different contexts**.

Our Approach

Our approach focuses on the following **Five Big Ideas of Mastery: Coherence, Mathematical Thinking, Fluency, Variation, Representation and Structure.** Learning is broken down into **small steps**. Explicitly **connecting new ideas to concepts that have already been understood** and carefully planning the order of learning to facilitate this. Pupils work on ideas to develop deep understanding rather than passively receiving them. They are taught to **reason and discuss**. This includes using **mathematical terminology and notation** as soon as it is relevant. There is heavy focus on quick and efficient **recall of facts** and the ability to use them in different contexts in Mathematics. Varying the way a concept is presented to a pupil and **varying practice questions** so that mechanical repetition is avoided. This includes the use of **different methods** and misconceptions. **Concrete, Pictorial and Abstract representations** expose pupils to the mathematical structure so they truly understand why mathematical algorithms work and can therefore adapt to different scenarios.

Curriculum Overview

	Autumn 12 weeks	Spring 12 weeks	Summer 12 weeks
EYFS White Rose Maths			
	Getting to know you **(3 weeks)** Just like me! **(3 weeks)** It's me 1,2,3 **(3 weeks)** Light & Dark **(3 weeks)**	Alive in 5! **(3 weeks)** Growing 6,7,8 **(3 weeks)** Building 9 & 10 **(3 weeks)** **Consolidation**	To 20 and beyond **(3 weeks)** First, then, now **(3 weeks)** Find my pattern **(3 weeks)** On the move **(3 weeks)**
Year 1 Maths No Problem			
	Number and Place Value: Numbers to 10 **(2 weeks)**	Calculations: Addition and Subtraction within 20 **(1 Week)**	Calculations: Multiplication **(1 Week)**
	Calculations: Addition and Subtraction **(5 Weeks)**	Geometry – Properties of Shape: Shapes and Patterns **(1.5 Weeks)**	Calculations: Division **(1 Week)**
	Geometry – Position and Direction: Positions **(1.5 Weeks)**	Measurement: Length and Height **(1.5 Weeks)**	Fractions: Fractions **(1 Week)**
	Number and Place Value: Numbers to 20 **(2 Weeks)**	Revision and Mid Year Tests (A) **(1 Week)** Review and Remediation **(2 Weeks)**	Number and Place Value: Numbers to 100 **(1.5 Weeks)**
	Calculations: Addition and Subtraction within 20 **(1.5 Weeks)**	Number and Place Value: Numbers to 40 **(2 Weeks)**	Measurement: Time **(1.5 Weeks)**
		Calculations: Addition and Subtraction **(2 Weeks)**	Measurement: Money **(1 Week)**
		Calculations: Multiplication **(1 Week)**	Measurement: Volume and Capacity **(1 Week)**
			Measurement: Mass **(1 Week)**
			Geometry – Position and Direction: Space **(1 Week)**

Curriculum Overview

			Revision and End-of-year (B) Tests **(1 Week)** Review and Remediation **(1 Week)**
<u>Year 2</u> Maths No Problem			
	Number and Place Value: Numbers to 100 **(1.5 Weeks)**	Statistics: Picture Graphs **(1 Week)**	Measurement: Volume **(3 Weeks)**
	Calculations: Addition and Subtraction **(2.5 Weeks)**	Mid-year (A) Tests and Remediation **(1 Week)**	KS1 SATs **(1 Week)**
	Calculations: Multiplication 2,5 and 10 **(2 Weeks)**	Calculations: More Word Problems **(1 Week)**	Review and Revisit Topics **(4 Week)**
	Calculations: Multiplication and Division 2, 5 and 10 **(2 Weeks)**	Measurement: Money **(2 Weeks)**	Revision and End-of-year (B) Tests **(1 Week)**
	Measurement: Length **(2 Weeks)**	Geometry – Properties of Shapes: 2-D Shapes **(2 Weeks)**	Review and Revisit Topics **(3 Weeks)**
	Measurement: Mass **(1 Week)** Measurement: Temperature **(1 Week)**	Geometry – Properties of Shapes: 3-D Shapes **(1 Week)**	
		Fractions: Fractions **(3 Weeks)**	
		Review and Revisit Topics **(1 Week)**	
<u>LKS2</u> White Rose Maths (3.0 SOL)			

Curriculum Overview

	Year 3 **Number (3 weeks)** Place Value Year 3 Autumn Block 1 **Number (5 weeks)** Addition & Subtraction Year 3 Autumn Block 2 **Number (4 weeks)** Multiplication & Division A Year 3 Autumn Block 3 **Year 4** **Number (4 weeks)** Place Value Year 4 Autumn Block 1 **Number (3 weeks):** Addition & Subtraction Year 4 Autumn Block 2 **Measurement (1 Week)** Area Year 4 Autumn Block 3 **Number (3 Weeks)** Multiplication & Division A Year 4 , Autumn Block 4 **Consolidation (1 Week)**	**Year 3** **Number (3 Weeks)** Multiplication & Division B Year 3 Spring Block 1 **Measurement (3 Weeks)** Length, Perimeter & Area Year 3 Spring Block 2 **Number (3 Weeks)** Fractions Year 3 Spring Block 3 **Measurement (3 Weeks)** Mass & Capacity Year 3 Spring Block 4 **Year 4** **Number (3 Weeks)** Multiplication & Division B Year 4 Spring Block 1 **Measurement (2 Weeks)** Length & Perimeter Year 4 Spring Block 2 **Number (4 Weeks)** Fractions Year 4 Spring Block 3 **Number (3 Weeks)** Decimals Year 4 Spring Block 4	**Year 3** **Number (2 Weeks)** Fractions Year 3 Summer Block 1 **Measurement (2 Weeks)** Money Year 3 Summer Block 2 **Measurement (3 Weeks)** Time Year 3 Summer Block 3 **Geometry (2 weeks):** Shape Year 3 Summer Block 4 **Statistics (2 weeks)** Year 3 Summer Block 5 **Consolidation (1 Week)** **Year 4** **Number (2 Weeks)** Decimals Year 4 Summer Block 1 **Measurement (2 Weeks)** Money Year 4 Summer Block 2 **Measurement (2 Weeks)** Time Year 3 Summer Block 3 **Consolidation (1 Week)** **Geometry (2 weeks):** Shape Year 4 Summer Block 4 **Statistics (1 Week)** Year 4 Summer Block 5 **Geometry (2 Weeks):** Position & Direction Year 4 Summer Block 6

Curriculum Overview

UKS2
White Rose Maths
(3.0 SOL)

Year 5

Numer (3 Weeks)
Place Value
Year 5 Autumn Block 1

Number (2 Weeks)
Addition & Subtraction
Year 5 Autumn Block 2

Number (3 Weeks)
Multiplication & Division
Year 5 Autumn Block 3

Number (4 Weeks)
Fractions
Year 5 Autumn Block 4

Year 6

Number (2 Weeks)
Place Value
Year 6 Autumn Block 1

Number (5 Weeks)
Four Operations
Year 6 Autumn Block 2

Number (2 Weeks)
Fractions A
Year 6 Autumn Block 3

Number (2 Weeks)
Fractions B
Year 6 Autumn Block 4

Measurement (1 Week)
Converting Units
Year 6 Autumn Block 5

Year 5

Number (3 Weeks)
Multiplication & Division
Year 5 Spring Block 1

Number (2 Weeks)
Fractions B
Year 5 Spring Block 2

Number (3 Weeks):
Decimals & Percentages
Year 5 Spring Block 3

Measurement (2 Weeks):
Perimeter & Area
Year 5 Spring Block 4

Statistics (2 Weeks)
Year 5 Spring Block 5

Year 6

Number (2 Weeks)
Ratio
Year 6 Spring Block 1

Number (2 Weeks)
Algebra
Year 6 Spring Block 2

Number (2 Weeks)
Decimals
Year 6 Spring Block 3

Number (2 Weeks)
Fractions, Decimals & Percentages
Year 6 Spring Block 4

Measurement (2 Weeks)
Area, Perimeter and Volume
Year 6 Spring Block 6

Statistics (2 Weeks)
Year 6 Spring Block 7

Year 5

Geometry (3 Weeks):
Shape
Year 5 Summer Block 1

Geometry (2 Weeks):
Position & Direction
Year 5 Summer Block 2

Number (3 Weeks)
Decimals
Year 5 Spring Block 3

Number (1 Week)
Negative Numbers
Year 5 Spring Block 4

Measurement (2 Weeks):
Converting Units
Year 5 Spring Block 5

Measurement (1 Week):
Volume
Year 5 Spring Block 6

Year 6

Geometry (3 Weeks):
Shape
Year 6 Summer Block 1

Geometry (1 Week):
Position & Direction
Year 6 Summer Block 2

Year 6 SATs

Themed Projects
Consolidation
Problem Solving