



## Maths

### Intent

Mathematics is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. A high-quality mathematics education therefore plays a key role and is essential for gaining an understanding of the world around us. We want all children to enjoy maths and to develop an enthusiasm and curiosity for learning.

The aim of the Mathematics Curriculum at Woodsetton is to ensure every child's full potential is developed and met and that it helps our pupils to develop the skills and processes necessary to use Mathematics as part of their everyday lives, in accordance with their individual needs and abilities. The curriculum will provide experiences which enable our pupils to construct and develop their own understanding of Mathematics. They will be taught skills in a context that provides purpose and meaning, making mathematical experiences enjoyable, practical, relevant, and realistic. This will help the pupils to develop a positive attitude towards Mathematics, and develop the ability to work independently, with confidence in their work. It will also ensure pupils' independent learning skills and strategies are improved, which in turn will promote progress rates and the ability to apply concepts and knowledge in a range of contexts.

It is important to recognise that Mathematics is a dynamic subject and should be used and applied in other areas of the curriculum. Pupils will be encouraged to see that mathematical knowledge and skills are inter-related with other subject areas and do not exist as discrete entities. Mathematics is an essential component of many other curriculum areas and mathematical activity can contribute significantly to the development of more general skills such as reasoning, communicating, and problem solving, therefore, even though maths is taught discretely, it is also expected to be used across the curriculum.

### Implementation

Children working in the Early Years Foundation Stage are encouraged to explore and learn through play. The children are able to explore, practice and enhance their learning and new skills through exciting activities, developing confidence and independent learning. This approach is continued into Year 1 during the Autumn term and beyond if deemed appropriate to individual needs.

In KS1 and KS2 Maths each child has individual targets. The children working within the DAPA S Scales (up to S8) cover Number, Shape, Space and Measure and Using and Applying. They are taught maths practically, using a range of resources, songs and games. They are given opportunities to explore, practice and enhance their learning by connecting what they are learning to real life experiences.

Once our children start to work within the National Curriculum, they are still taught in a practical manner, but more emphasis is placed on the recording of their learning.

At this point the curriculum is divided into:

- Number and place value
- Number – addition and subtraction
- Number – multiplication and division
- Number – fractions
- Measurement
- Geometry – properties of shapes
- Geometry – position and direction



**Scheme of work**

The Scheme of Learning at Woodsetton is structured by blocks of teaching that are taught over the course of an academic year. The blocks include all strands of Mathematics outlined in the Primary National Curriculum; Number, Measurement and Geometry. The ‘real world application’ of skills is paramount to our children and is therefore also included as a strand of Using and Applying that is embedded into every strand / concept.

Number is a constant block that is taught across the year and includes the 4 topic areas of Number and Place Value, Addition and Subtraction, Multiplication and Division and Fractions and Percentages. Learning Cards are used daily in workbooks to show the objective set out for the learner and the knowledge and skills that are expected to be achieved. Differentiated tasks and activities are planned for and delivered to suit the needs of our children from these blocks and work alongside our DAPA assessment system.

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Number strands	Number (Including Pre Number)		Number (Including Pre Number)		Number (Including Pre Number)	
	Number and Place Value Addition and Subtraction Multiplication and division Fractions and Percentages		Number and Place Value Addition and Subtraction Multiplication and division Fractions and Percentages		Number and Place Value Addition and Subtraction Multiplication and division Fractions and Percentages	
	Using and Applying Skills to be linked to Number and Focus Areas throughout the year					
	<b><i>*Statistics to be taught and incorporated across the year where appropriate*</i></b>					
Focus Areas	Measurement Length	Geometry Shape	Measurement Mass	Geometry Position and Direction	Measurement Capacity and volume	Geometry Shape
	Time	Money	Time	Money	Time	Money

**Number Strands**

Area	Aspects to be covered
Pre Number	<ul style="list-style-type: none"> <li>• Matching and sorting</li> <li>• Pattern</li> <li>• Songs and rhymes</li> <li>• Using and Applying linked to Pre-Number</li> </ul>
Number and Place Value	<ul style="list-style-type: none"> <li>• Counting</li> <li>• Number recognition</li> <li>• Number order</li> <li>• Writing numbers</li> <li>• More and less</li> <li>• Odd and even</li> <li>• Number words</li> <li>• Counting forwards and backwards</li> </ul>



	<ul style="list-style-type: none"> <li>• Place Value</li> <li>• Missing numbers</li> </ul>
Addition and Subtraction	<ul style="list-style-type: none"> <li>• Concepts of addition</li> <li>• Symbol recognition</li> <li>• Concepts of subtraction</li> <li>• Vocabulary</li> <li>• Number bonds</li> <li>• Writing and recording calculations</li> <li>• Recalling number facts</li> </ul>
Multiplication and Division	<ul style="list-style-type: none"> <li>• Grouping and sharing</li> <li>• Doubling and halving</li> <li>• Symbol recognition</li> <li>• Counting forwards and backwards in steps more than 1</li> <li>• Concepts of multiplication</li> <li>• Concepts of division</li> </ul>
Fractions and Percentages	<ul style="list-style-type: none"> <li>• Fractions of objects</li> <li>• Fractions of numbers</li> <li>• Recognising fractions</li> <li>• Writing fractions</li> <li>• Comparing fractions</li> <li>• Percentages of numbers</li> </ul>

**Measurement Strands**

Area	Aspects to be covered
Length	<ul style="list-style-type: none"> <li>• Big and small</li> <li>• Long and short</li> <li>• Tall and short</li> <li>• Fat and thin</li> <li>• Wide and narrow</li> <li>• Units of measure</li> <li>• Measurement comparisons</li> </ul>
Mass	<ul style="list-style-type: none"> <li>• Heavy and light</li> <li>• Heavier and lighter</li> <li>• Weighing</li> <li>• Units of measure</li> <li>• Measurement comparisons</li> </ul>
Capacity and Volume	<ul style="list-style-type: none"> <li>• Filling and emptying</li> <li>• Empty and full</li> <li>• Units of measure</li> <li>• Measurement comparisons</li> </ul>
Time	<ul style="list-style-type: none"> <li>• Passage of time</li> <li>• Visual timetable</li> <li>• Times of the day</li> <li>• Routines</li> <li>• Days of the week</li> <li>• Months of the year</li> <li>• Chronology and order</li> <li>• Sequencing</li> <li>• Seasons</li> <li>• Before and after</li> <li>• Fast and slow</li> </ul>



	<ul style="list-style-type: none"><li>• Knowledge of the clock</li><li>• Telling the time using the analogue clock</li><li>• Telling the time using the digital clock</li></ul>
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### Money Strand

Area	Aspects to be covered
Money	<ul style="list-style-type: none"><li>• Shop role play</li><li>• Awareness of payment</li><li>• Concept of money</li><li>• Coin recognition</li><li>• Value recognition</li><li>• Symbols and annotation</li><li>• Making amounts</li><li>• Note recognition</li><li>• Giving change</li></ul>

### Geometry Strands

Area	Aspects to be covered
Shape	<ul style="list-style-type: none"><li>• Manipulation of 2D shapes</li><li>• 2D shape recognition</li><li>• Properties of 2D shapes</li><li>• Manipulation of 3D shapes</li><li>• 3D shape recognition</li><li>• Properties of 3D shapes</li><li>• Shapes in the environment</li><li>• Symmetry</li></ul>
Position and Direction	<ul style="list-style-type: none"><li>• Moving and finding objects</li><li>• Prepositions</li><li>• Up and down</li><li>• Forwards and backwards</li><li>• Lines and order</li><li>• Left and right</li><li>• Clockwise and anti-clockwise</li><li>• Turns (half, quarter, full)</li><li>• Turns using angles</li><li>• Co-ordinates</li></ul>

### Statistics Strand

Area	Aspects to be covered
Statistics	<ul style="list-style-type: none"><li>• Lists</li><li>• Recording</li><li>• Tallying</li><li>• Pictograms</li><li>• Bar charts</li><li>• Reading and using information</li></ul>

### Using and Applying Strand

Area	Aspects to be covered
Using and applying mathematics is an element which	Using knowledge and skills related to quantities, space and time for learning and living



applies in all strands shown above.	Using experience of all aspects of number, calculation space, shape and measures in practical contexts, supporting learning, daily living, social and cultural activities, developing problem solving and reasoning
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The use of models and images in maths is seen as very important at Woodsetton. Numicon is regularly used to support the children's understanding of number. It can be used to help recognise a number, understand the value of a number, count and recognise patterns. Numicon is also used to support all aspects of addition, subtraction, multiplication and division.

### **Impact**

Evidence of impact in Maths at Woodsetton is collated using examples of work and activities in books, Learning Question Cards, assessment data using Dudley Attainment and Progress Assessment (DAPA) and through achievement or work towards outcomes outlined in individual EHC Plans. The ability to apply maths skills across the curriculum is paramount and staff are encouraged to utilise cross-curricular opportunities to support assessment judgements.

Assessment takes place in order to identify what the child can do, to discover what the child is learning, to monitor the pupil's rate of learning, to establish the child's needs in order for them to progress, and to inform others of their abilities. Every term each pupil's progress is reviewed using DAPA, which in turn provides data for teachers to access and use to inform their teaching and consequently improve pupils' learning and progress. In addition to this individual pupil targets are set and reviewed termly in line with teacher assessment.

From these, a range of targeted maths intervention strategies are identified and delivered across the school to promote and ensure swift progress is made by all pupils and any gaps in learning quickly identified and addressed.