Maths Curriculum Progression

What will our Mathematicians be able to do when they leave us?

By the end of their time at West Dean C of E Primary school, our Year 6 Mathematicians will have a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject. We would like all pupils to become fluent in the fundamentals of mathematics and to have the ability to recall and apply knowledge rapidly and accurately. It will be important that children can reason mathematically and use mathematical language to prove their understanding. At West Dean we want our Mathematicians to be able to solve problems by applying their mathematics to a variety of problems by breaking them down into a series of simpler steps and persevering in seeking solutions. They will also be able to apply their Mathematical knowledge to science and other subjects.

Curriculum Coverage (NC)
What are the most basic requirements from the National Curriculum?
Aims

The national curriculum for mathematics aims 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 nonroutine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

EYFS	KS1	KS2
Children should be able to count confidently, develop a deep understanding of the numbers to 10, the relationships between them and the patterns within those numbers.By providing frequent and varied opportunities to build and apply this understanding - such as using manipulatives, including small pebbles and tens frames for organising counting - children will develop a secure base of knowledge and vocabulary from which mastery of mathematics is built.In addition, it is important that the curriculum includes rich opportunities for children to develop their spatial reasoning skills across all areas of mathematics including shape, space and measures.It is important that children develop positive attitudes and interests in mathematics, look for patterns and	The principal focus of mathematics teaching in key stage 1 is to ensure that pupils develop confidence and mental fluency with whole numbers, counting and place value. This should involve working with numerals, words and the four operations, including with practical resources [for example, concrete objects and measuring tools]. At this stage, pupils should develop their ability to recognise, describe, draw, compare and sort different shapes and use the related vocabulary. Teaching should also involve using a range of measures to describe and compare different quantities such as length, mass, capacity/volume, time and money. By the end of year 2, pupils should know the number bonds to 20 and be precise in using and understanding place value. An emphasis on practice at this early stage will aid	The principal focus of mathematics teaching in lower key stage 2 is to ensure that pupils become increasingly fluent with whole numbers and the four operations, including number facts and the concept of place value. This should ensure that pupils develop efficient written and mental methods and perform calculations accurately with increasingly large whole numbers. At this stage, pupils should develop their ability to solve a range of problems, including with simple fractions and decimal place value. Teaching should also ensure that pupils draw with increasing accuracy and develop mathematical reasoning so they can analyse shapes and their properties, and confidently describe the relationships between them. It should ensure that they can use measuring instruments with accuracy and make connections between measure and number. By the end of year 4, pupils should have memorised their multiplication tables up to and including the 12 multiplication table and show precision and fluency in their

| relationships, spot connections, 'have a go', talk to adults and peers about what they notice and not be afraid to make mistakes. | fluency. Pupils should read and spell mathematical vocabulary, at a level consistent with their increasing word reading and spelling knowledge at key stage 1. | work. Pupils should read and spell mathematical vocabulary correctly and confidently, using their growing word reading knowledge and their knowledge of spelling.

The principal focus of mathematics teaching in upper key stage 2 is to ensure that pupils extend their understanding of the number system and place value to include larger integers. This should develop the connections that pupils make between multiplication and division with fractions, decimals, percentages and ratio.
At this stage, pupils should develop their ability to solve a wider range of problems, including increasingly complex properties of numbers and arithmetic, and problems demanding efficient written and mental methods of calculation. With this foundation in arithmetic, pupils are introduced to the language of algebra as a means for solving a variety of problems. Teaching in geometry and measures should consolidate and extend knowledge developed in number. Teaching should also ensure that pupils classify shapes with increasingly complex geometric properties and that they learn the vocabulary they need to describe them.
By the end of year 6, pupils should be fluent in written methods for all four operations, including long multiplication and division, and in working with fractions, decimals and percentages. Pupils should read, spell and pronounce mathematical vocabulary correctly. |

Mathematics Progression

See the following documents:

- White Rose Addition and Subtraction Policy
- White Rose Multiplication and Division Policy
- NC Ready to progress Mapping
- Primary Schemes of Learning
- National Curriculum Progression: Mixed Age

Yearly Overview of Mathematics					
	Apple Class		Maple Class	Beech Class	Chestnut Class
	EYFS	Year 1	Year 2	Year 3&4	Year 5&6
Autumn	Match, sort and compare. Talk about measure and patterns. It's me 1,2,3. Circles and triangles. 1,2,3,4,5. Shapes with 4 sides.	Place Value (within 10.) Addition and subtraction (within 10) Geometry - shape.	Place Value Addition and subtraction Shape	Place Value Addition and subtraction Multiplication and division	Place Value Four operations Fractions
Spring	Alive in 5. Mass and capacity. Growing 6,7,8. Length, height and time. Building 9 and 10. Explore 3-D shapes.	Place Value (within 20.) Addition and subtraction (within 20) Place Value (within 50) Length and height Mass and Volume.	Money Multiplication and division Length and height Mass, capacity and temperature	Multiplication and division Length, perimeter and area Fractions Y3: mass and capacity Y4: Decimals	Y5: Fractions Y6 : Ratio Decimals and percentages Y5: Decimals Y6: Algebra Converting Units Perimeter, Area and Volume Statistics
Summer	To 20 and beyond. How many now? Manipulate, compose and decompose. Sharing and grouping. Visualise, build and map. Make connections.	Multiplication and Division Fractions Geometry (Position and Direction) Measurement (Money) Time	Fractions Time Statistics Position and direction	Decimals (including money) Time Statistics Properties of shape (including Y4 Position and direction)	Properties of Shape Position and Direction Y6: SATS Y5: Four operations consolidation Y5: FDP consolidation Y5: Measure consolidation