Mathematics

Vision

At Village Primary we believe that Mathematics should be progressive, thorough, stimulating and allow all pupils to develop Mastery in Maths. Teachers strive to provide high quality teaching which is engaging, interactive, built on prior learning and, if appropriate, physically active (Tagtiv8 etc.). Lessons are brought to life with hands on equipment, with technology and a cross curricula approach, where suitable. Meaningful links are made to Global Goals where relevant.

Mathematics is made relevant and motivational by placing it within real life contexts. This equips children with the necessary skills for later life, as well as the reasoning and thinking skills associated with solving problems. We recognise that Mathematics is key if our pupils are to truly be able to ***'Explore, Dream, Discover'*** and lead a fulfilling life, making valuable contributions to society. Our ***Heritage*** is built upon a foundation of Mathematics; Captain Cook, John Walker and George and Robert Stephenson all relied on some element of Mathematical skill in their endeavours.

Teachers and support staff are actively engaged in helping children to acquire and develop mathematical language, skills, knowledge and understanding across the Mathematics curriculum. Children are encouraged to make an active contribution towards their own learning by developing the skills of independence, enquiry and reasoned problem solving. Pupils are encouraged to develop a ***Growth Mindset*** in all of their learning, in Mathematics this a key attribute as it allows learners to be resilient, persistent and determined as they acquire new knowledge and skills in preparation for their future employment.

Explore, Dream, Discover
Maths

Year	Terms		
	Autumn	**Spring**	**Summer**
Nursery	**By the end of the Autumn Term Nursery children should be able to:** Counting ● Uses some number names and number language within play, number rhymes and stories. Cardinality ● Beginning to notice significant numerals (number symbols).	**By the end of the Spring Term Nursery children should be able to:** Cardinality ● Subitises one, two and three objects (without counting). Composition ● Through play and exploration, beginning to learn that numbers are made up (composed) of smaller numbers.	**By the end of the Summer Term Nursery children should be able to:** Comparison ● Compares two small groups of up to five objects, saying when there are the same number of objects in each group, e.g. You've got two, I've got two. Same! Counting ● Recites numbers in order to 10. ● Points or touches (tags) each item, saying one number for each item, using the stable order of 1,2,3,4,5. Cardinality ● Begins to subitise four objects (without counting)

			● Separates a group of three or four objects in different ways, beginning to recognise that the total is still the same. ● Begin to recognise numerals 0 to 10. Composition ● Explores using a range of their own marks and signs to which they ascribe mathematical meaning. ● Counts up to five items, recognising that the last number said represents the total counted so far (cardinal principle). ● Beginning to use understanding of number to solve practical problems in play and meaningful activities.
Reception	**By the end of the Autumn Term Reception children should be able to:** ● Matches the numeral with a group of items to show how many there are (up to 5). ● In practical activities, adds one and subtracts one with numbers to 10. Cardinality ● Engages in subitising numbers to four and maybe five. Composition ● Shows awareness that numbers are made up (composed) of smaller numbers, exploring partitioning in different ways with a wide range of objects.	**By the end of the Spring Term Reception children should be able to:** Comparisons ● Increasingly confident at putting numerals in order 0 to 10 (ordinality). ● Matches the numeral with a group of items to show how many there are (up to 10). ● Estimates of numbers of things, showing understanding of relative size. Cardinality ● Counts out up to 10 objects from a larger group Composition ● Begins to conceptually subitise larger numbers bysubitising smaller groups within the number, e.g. sees six raisins on a plate as three and three	**By the end of the Summer Term Reception children should be able to:** Comparison ● Uses number names and symbols when comparing numbers, showing interest in large numbers ● Begins to explore and work out mathematical problems including sharing, using signs and strategies of their own choice, including (when appropriate) standard numerals, tallies and “+” or “-“ ● Recall some doubling facts. ● Recall number bonds to 5 including subtraction facts. ● Recall some number bonds to 10. ● Begin to recognise odds and evens.

	● Beginning to recognise that each counting number is one more than the one before.		

Mathematics - Curriculum Map

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1	**Place Value Addition and Subtraction**	**Place Value Shape Consolidation**	**Place Value Addition and Subtraction**	**Measurement: Length and Height, Weight and Volume Consolidation**	**Multiplication and Division Fractions Position and Direction**	**Place Value Measurement: Money, time Consolidation**
Year 2	**Place Value**	**Measurement: Money**	**Multiplication and Division Statistics**	**Fractions Measurement: Length and Height**	**Position and Direction Problem Solving**	**Measurement: Mass, Capacity Temperature**

	Addition and Subtraction	Multiplication and Division	Properties of Shape	Consolidation	Measurement: Time Mass, Capacity Temperature	Investigations
Skills KS1	KS1 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 fluency. Pupils should read and spell mathematical vocabulary, at a level consistent with their increasing word reading and spelling knowledge at Key Stage 1.					
Year 3	**Place Value Addition and Subtraction**	**Multiplication and Division Consolidation**	**Multiplication and Division Measurement: Money Statistics**	**Measurement: Length and Perimeter Fractions Consolidation**	**Fractions Measurement: Time Properties of Shape**	**Properties of Shape Measurement: Mass and Capacity Consolidation**
Year 4	**Place Value Addition and Subtraction**	**Measurement: Length and Perimeter Multiplication and Division Consolidation**	**Multiplication and Division Measurement: Area**	**Fractions Decimals Consolidation**	**Decimals Measurement: Money Time**	**Statistics Properties of Shape Position and Direction Consolidation**

Skills LKS2	LKS2 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 work. Pupils should read and spell mathematical vocabulary correctly and confidently, using their growing word reading knowledge and their knowledge of spelling.					
Year 5	**Place Value Addition and Subtraction Statistics**	**Multiplication and Division Measurement: Perimeter and Area Consolidation**	**Multiplication and Division Fractions**	**Decimals and Percentages Consolidation**	**Decimals Properties of Shape Position and Direction**	**Measurement: Converting Units Volume Consolidation**
Year 6	**Place Value Addition, Subtraction, Multiplication and Division**	**Fractions Position and Direction Consolidation**	**Decimals Percentages Algebra**	**Measuring: Converting Units Perimeter, Area and Volume Ratio and Proportion**	**Properties of Shape Problem Solving**	**Statistics Investigations Consolidation**

				Consolidation		
Skills UKS2	UKS2 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.					


Village
Primary School
THE GLOBAL GOALS
For Sustainable Development
"Failure is an opportunity to grow"
GROWTH MINDSET
"Challenges help me to grow"
"Feedback is constructive"
"I like to try new things"