Aberford C of E Primary School – KS1 & EYFS Maths Curriculum

	Reception	Year 1	Year 2
		Autumn	
Autumn	**Number** • Recognise some numerals of personal significance • Recognises numerals 1 to 5 • Counts up to three or four objects by saying one number name for each item • Counts actions or objects which cannot be moved • Counts objects to 10, and beginning to count beyond 10 **Shape, Space and Measures** • Beginning to use mathematical names for 'solid' 3D shapes and 'flat' 2-D shapes, and mathematical terms to describe shapes • Selects a particular named shape • Can describe their relative position such as 'behind' or 'next to'	**Number: Within 10** • count in multiples of 6, 7, 9, 25 and 1000 • find 1000 more or less than a given number • count backwards through zero to include negative numbers • recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) • order and compare numbers beyond 1000 • identify, represent and estimate numbers using different representations • round any number to the nearest 10, 100 or 1000 • solve number and practical problems that involve all of the above and with increasingly large positive numbers • read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value. **Addition and Subtraction: Within 10** • add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate • estimate and use inverse operations to check answers to a calculation • solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why **Shape** • measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres	**Number and Place Value** • count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward • recognise the place value of each digit in a two-digit number (tens, ones) • identify, represent and estimate numbers using different representations, including the number line *compare and order numbers from 0 up to 100; use and = signs • read and write numbers to at least 100 in numerals and in words • use place value and number facts to solve problems. **Addition and Subtraction** • add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) • solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures applying their increasing knowledge of mental and written methods • recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 • add and subtract numbers using concrete objects, pictorial representations, and mentally, including: a two-digit number and ones, a two-digit number and tens, two two-digit numbers, adding three one-digit numbers • show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot

		Place Value: Within 20	recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems

Place Value: Within 20
- recall multiplication and division facts for multiplication tables up to 12 × 12
- use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers
- recognise and use factor pairs and commutativity in mental calculations

- recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems

Money
- solve comparison, sum and difference problems using information presented in a line graph
- recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value
- find different combinations of coins that equal the same amounts of money
- solve simple problems in a practical context involving addition and subtraction of m

Multiplication and Division
- recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers
- calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs

Spring

Spring

Number
- Counts out up to six objects from a larger group. • Selects the correct numeral to represent 1 to 5, then 1 to 10 objects
- Counts an irregular arrangement of up to ten objects
- Estimates how many objects they can see and checks by counting them
- Uses the language of 'more' and 'fewer' to compare two sets of objects

Shape, Space and Measures
- Orders two or three items by length or height
- Orders two items by weight or capacity
- Uses familiar objects and common shapes to create and recreate patterns and build models
- Uses everyday language related to time.

Addition and Subtraction: Within 20
- multiply two-digit and three-digit numbers by a one-digit number using formal written layout
- solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects

Place Value: Within 50
- find the area of rectilinear shapes by counting squares

Fractions
- recognise and show, using diagrams, families of common equivalent fractions

Multiplication and Division
- show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot
- solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts

Statistics
- interpret and construct simple pictograms, tally charts, block diagrams and simple tables
- ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity
- ask and answer questions about totalling and comparing categorical data.

	- count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten - solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non unit fractions where the answer is a whole number - add and subtract fractions with the same denominator ### Length and Height - recognise and write decimal equivalents of any number of tenths or hundredths - find the effect of dividing a one or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths - recognise and write decimal equivalents to ¼, ½, ¾ ### Weight and Volume - recognise and write decimal equivalents of any number of tenths or hundredths	### Properties of Shape - identify and describe the properties of 2-D shapes, including the number of sides and symmetry in a vertical line - identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces - identify 2-D shapes on the surface of 3-D shapes, for example a circle on a cylinder and a triangle on a pyramid - compare and sort common 2-D and 3-D shapes and everyday objects. ### Fractions - recognise, find, name and write fractions ¼, , and of a length, shape, set of objects or quantity - write simple fractions e.g. of 6 = 3 and recognise the equivalence ### Length and Height - choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm)

Summer

Summer		
	### Number - Finds the total number of items in two groups by counting all of them - Says the number that is one more than a given number - Finds one more or one less from a group of up to five objects, then ten objects - In practical activities and discussion, beginning to use the vocabulary involved in adding and subtracting - Records, using marks that they can interpret and explain - Begins to identify own mathematical problems based on own interests and fascinations ### Shape, Space and Measures - Beginning to use everyday language related to money	### Multiplication and Division - round decimals with one decimal place to the nearest whole number - compare numbers with the same number of decimal places up to two decimal places - solve simple measure and money problems involving fractions and decimals to two decimal places. ### Fractions - estimate, compare and calculate different measures, including money in pounds and pence ### Position and Direction - read, write and convert time between analogue and digital 12- and 24-hour clocks - solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days.	### Position and Direction - order and arrange combinations of mathematical objects in patterns - use mathematical vocabulary to describe position, direction and movement including distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anticlockwise), and movement in a straight line. ### Problem solving and efficient methods ### Time - compare and sequence intervals of time - tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times ### Mass, Capacity and Temperature

- Orders and sequences familiar events
- Measures short periods of time in simple ways

Early Learning Goal: Numbers

Children count reliably with numbers from one to 20, place them in order and say which number is one more or one less than a given number. Using quantities and objects, they add and subtract two single-digit numbers and count on or back to find the answer. They solve problems, including doubling, halving and sharing.

Early Learning Goal: Shape, Space and Numbers

Children use everyday language to talk about size, weight, capacity, position, distance, time and money to compare quantities and objects and to solve problems. They recognise, create and describe patterns. They explore characteristics of everyday objects and shapes and use mathematical language to describe them.

Place Value: Within 100

- interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs
- solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.

Money

- compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes
- identify acute and obtuse angles and compare and order angles up to two right angles by size
- identify lines of symmetry in 2-D shapes presented in different orientations
- complete a simple symmetric figure with respect to a specific line of symmetry

Time

- describe positions on a 2-D grid as coordinates in the first quadrant
- describe movements between positions as translations of a given unit to the left/right and up/down
- plot specified points and draw sides to complete a given polygon

- choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperate re (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels

Investigations