MATHS SKILLS PROGRESSION

	YEAR R	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
NUMBER, ADDITION AND SUBTRACTION	**Cardinality** Counting: saying number words in sequence Counting: tagging each object with one number word Counting: knowing the last number counted gives the total so far Subitising: recognising small quantities without needing to count them all Numeral meanings Conservation: knowing that the number does not change if things are rearranged (as long as none have been added or taken away)	**1.1** Comparison of quantities and measures. **1.2** Introduce 'wholes' and 'parts' part- part-whole **1.3** Composition of numbers 0-5 **1.4** Composition of numbers 6-10 **1.5** Additive Structures aggregation and partitioning **1.6** Additive Structures augmentation and reduction **1.7** Addition and subtraction strategies within ten. **1.8** Composition of numbers multiples of 10 to 100. **1.9** Composition of numbers 20-100 **1.10** Composition of numbers 11-19	**1.9** Composition of numbers 20-100 **1.11** Addition and subtraction: Bridging ten **1.12** Subtraction as difference **1.13** Addition and subtraction: two-digit and single-digit numbers **1.14** Addition and subtraction: two-digit and multiples of ten **1.15** Addition: two-digit and two-digit numbers **1.16** Subtraction: two-digit and two-digit numbers	**1.17** Composition and calculation : 100 and bridging 100 **1.18** Composition and calculation: three-digit numbers **1.19** Securing mental strategies: calculation up to 999 **1.20** Algorithms: column addition **1.21** Algorithms: column subtraction	**1.22** Composition and calculation: 1,000 and four-digit numbers **1.23** Composition and calculation: tenths **1.24** Composition and calculation: hundredths and thousandths **1.25** Addition and subtraction: money	**1.26** Composition and calculation: multiples of 1,000 up to 1,000,0000 **1.27** Negative numbers: counting, comparing and calculating **1.28** Common structures and the part-part-whole relationship **1.29** Using equivalence and the compensation strategy to calculate	**1.30** Composition and calculation: numbers up to 10,000,000 **1.31** Problems with two unknowns

Gatcombe Park Primary School

	Comparison More than / less than Identifying groups with the same number of things Comparing numbers and reasoning Knowing the 'one more than/one less than' relationship between counting numbers **Composition** Part–whole: identifying smaller numbers within a number (conceptual subitising – seeing groups and combining to a total) Inverse operations						

MATHS SKILLS PROGRESSION

	YEAR R	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
MULTIPLICATION AND DIVISION	Continuing an AB pattern Copying an AB pattern Make their own AB pattern Spotting an error in an AB pattern Identifying the unit of repeat Continuing an ABC pattern Continuing a pattern which ends mid-unit Make their own ABB, ABBC patterns	**2.1** Counting, unitising and coins	**2.2** Structures: multiplication representing equal groups **2.3** Times tables:groups of 2 and commutativity (part 1) **2.4** Times tables:groups of 10 and of 5, and factors of 0 or 1 **2.5** Commutativity (part 2), doubling and halving **2.6** Structures: quotitive and partitive division	**2.7** Times tables:2,4 and 8 and the relationships between them **2.8** Times tables:3,6 and 9 and the relationships between them **2.9** Times tables:7 and patterns within/across times tables	**2.10** Connecting multiplication and division, and the distributive law **2.11** Times tables:11 and 12 **2.12** Division with remainders **2.13** Calculation: multiplying and dividing by 10 or 100 **2.14** Multiplication: partitioning leading to short multiplication **2.15** Division: partitioning leading to short division **2.16** Multiplicative contexts: area and perimeter 1 **2.17** Structures: using measures and comparison to understand scaling	**2.18** Using equivalence to calculate **2.19** Calculation: x/÷ decimal fractions by whole numbers **2.20** Multiplication with three factors and volume **2.21** Factors, multiples, prime numbers and composite numbers **2.22** Combining multiplication with addition and subtraction	**2.23** Multiplication strategies for larger numbers and long multiplication **2.24** Division: dividing by two-digit divisors **2.25** Using compensation to calculate **2.26** Mean average and equal shares **2.27** Scale factors, ratio and proportional reasoning **2.28** Combining division with addition and subtraction **2.29** Decimal place-value knowledge, multiplication and division **2.30** Multiplicative contexts: area and perimeter 2

Gatcombe Park Primary School

MATHS SKILLS PROGRESSION

	YEAR R	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
FRACTIONS		Name the fractions 'one-half', and 'one-quarter' in relation to a fraction of a length, shape or set of objects. Find half of numbers.	Name the fractions 'one-half', 'one-quarter' and 'one-third' in relation to a fraction of a length, shape or set of objects. Read and write the fraction notation $\frac{1}{2}$, $\frac{1}{3}$ and $\frac{1}{4}$, and relate this to a fraction of a length, shape or set of objects. Find $\frac{1}{3}$ or $\frac{1}{4}$ of a number. Find $\frac{2}{4}$ and $\frac{3}{4}$ of an object, shape, set of objects, length or quantity; recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$	3.1 Prepare for fractions:the part-whole relationship 3.2 Unit fractions: identifying representing and comparing 3.3 Non-unit fractions: identifying, representing and comparing 3.4 Adding and subtracting within one whole	3.5 working across one whole: improper fractions and mixed numbers 3.6 Multiplying whole numbers and fractions	3.7 Finding equivalent fractions and simplifying fractions 3.8 Common denomination: more adding and subtracting	3.9 Multiplying fractions and dividing fractions by a whole number. 3.10 Linking fractions, decimals and percentages

Gatcombe Park Primary School

MATHS SKILLS PROGRESSION

		YEAR R	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
MEASUREMENT	LENGTH/HEIGHT/ DISTANCE	Recognising attributes Comparing amounts of continuous quantities Showing awareness of comparison in estimating and predicting Comparing indirectly Recognising the relationship between the size and number of units Beginning to use units to compare things	compare, describe and solve practical problems for: lengths and heights [for example, long/short, longer/shorter, tall/short, double/half] measure and begin to record the following: lengths and heights	choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); using rulers, compare and order lengths and record the results using >, < and =	measure, compare, add and subtract: lengths (m/cm/mm)	Convert between different units of measure [for example, kilometre to metre; hour to minute]	convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre;) understand and use approximate equivalences between metric units and common imperial units such as inches, use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling	solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate use, read, write and convert between standard units, converting measurements of length from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places convert between miles and kilometres

Gatcombe Park Primary School

MEASUREMENT	MASS/WEIGHT	Recognising attributes Comparing amounts of continuous quantities Showing awareness of comparison in estimating and predicting Comparing indirectly Recognising the relationship between the size and number of units Beginning to use units to compare things	compare, describe and solve practical problems for: mass/weight [for example, heavy/light, heavier than, lighter than] measure and begin to record the following: mass/weight	choose and use appropriate standard units to estimate and measure mass (kg/g); scales, compare and order mass and record the results using >, < and =	measure, compare, add and subtract: mass (kg/g);		convert between different units of metric measure (for example, gram and kilogram;) understand and use approximate equivalences between metric units and common imperial units such as pounds use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling	solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate use, read, write and convert between standard units, converting measurements of mass from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places

MEASUREMENT	CAPACITY/VOLUME	Recognising attributes Comparing amounts of continuous quantities Showing awareness of comparison in estimating and predicting Comparing indirectly Recognising the relationship between the size and number of units Beginning to use units to compare things	compare, describe and solve practical problems for: capacity and volume [for example, full/empty, more than, less than, half, half full, quarter] measure and begin to record the following: capacity and volume	choose and use appropriate standard units to estimate and measure capacity (litres/ml) to the nearest appropriate unit, measuring vessels compare and order volume/capacity and record the results using >, < and =	measure, compare, add and subtract: volume/capacity (l/ml)		convert between different units of metric measure (for example, litre and millilitre) understand and use approximate equivalences between metric units and common imperial units such as pints. estimate volume [for example, using 1 cm^3 blocks to build cuboids (including cubes)] and capacity [for example, using water] use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling	solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate use, read, write and convert between standard units, converting measurements of volume from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm^3) and cubic metres (m^3), and extending to other units [for example, mm^3 and km^3]

MEASUREMENT	MONEY		recognise and know the value of different denominations of coins and notes .	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 money of the same unit, including giving change	add and subtract amounts of money to give change, using both £ and p in practical contexts	estimate, compare and calculate different measures, including money in pounds and pence	use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling	
MEASUREMENT	AREA/PERIMETER				measure the perimeter of simple 2-D shapes	measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres find the area of rectilinear shapes by counting squares	measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm^2) and square	recognise that shapes with the same areas can have different perimeters and vice versa recognise when it is possible to use the formulae for area and volume of shapes

							metres (m^2) and estimate the area of irregular shapes	calculate the area of parallelograms and triangles
	TEMPERATURE			choose and use appropriate standard units to estimate and measure temperature (°C); thermometers				

MATHS SKILLS PROGRESSION

	YEAR R	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
TIME	Beginning to use time to sequence events Beginning to experience specific time durations	sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening] recognise and use language relating to dates, including days of the week, weeks, months and years tell the time to the hour and half past the hour and draw the hands on a clock face to show these times. compare, describe and solve practical problems for: time [for example, quicker, slower, earlier, later] measure and begin to record the following:	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 know the number of minutes in an hour and the number of hours in a day.	Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight know the number of seconds in a minute and the number of days in each month, year and leap year compare durations of events [for example to calculate the time taken by particular events or tasks].	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.	solve problems involving converting between units of time use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling	solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate use, read, write and convert between standard units, converting measurements of time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places

Gatcombe Park Primary School

		time (hours, minutes, seconds)					

MATHS SKILLS PROGRESSION

		YEAR R	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
PROPERTIES OF SHAPE	2D and 3D SHAPE	Developing spatial awareness: experiencing different viewpoints Shape awareness: developing shape awareness through construction Representing spatial relationships Identifying similarities between shapes Showing awareness of properties of shape Describing properties of shape Developing an awareness of relationships between shapes	recognise and name common 2-D and 3-D shapes, including: 2-D shapes [for example, rectangles (including squares), circles and triangles]	identify and describe the properties of 2-D shapes, including the number of sides and line 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.	draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them	compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes	identify 3-D shapes, including cubes and other cuboids, from 2-D representations	draw 2-D shapes using given dimensions and angles recognise, describe and build simple 3-D shapes including making nets compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons illustrate and name parts of circle, including radius, diameter and circumference and know that the diameter is twice the radius

Gatcombe Park Primary School

PROPERTIES OF SHAPE	ANGLES				recognise angles as a property of shape or a description of a turn identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle identify horizontal and vertical lines and pairs of perpendicular and parallel lines.	identify acute and obtuse angles and compare and order angles up to two right angles by size	draw given angles, and measure them in degrees (°) identify: angles at a point and one whole turn (total 360°) angles at a point on a straight line and ½ a turn (total 180°) other multiples of 90° use the properties of rectangles to deduce related facts and find missing lengths and angles distinguish between regular and irregular polygons based on reasoning about equal sides and angles.	recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.

PROPERTIES OF SHAPE	SYMMETRY	Showing awareness of properties of shape Describing properties of shape		identify and describe the properties of 2-D shapes, including the line symmetry in a vertical line		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.		

MATHS SKILLS PROGRESSION

	YEAR R	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
POSITION, DIRECTION AND MOVEMENT	Developing spatial vocabulary	describe position, direction and movement, including whole, half, quarter and three-quarter turns	order and arrange combinations of mathematical objects in patterns and sequences use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise).		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	identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed.	describe positions on the full coordinate grid (all four quadrants) draw and translate simple shapes on the coordinate plane, and reflect them in the axes.

MATHS SKILLS PROGRESSION

	YEAR R	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
USING 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.	interpret and present data using bar charts, pictograms and tables solve one-step and two-step questions [for example, 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables.	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.	solve comparison, sum and difference problems using information presented in a line graph complete, read and interpret information in tables, including timetables.	interpret and construct pie charts and line graphs and use these to solve problems calculate and interpret the mean as an average

Gatcombe Park Primary School

MATHS SKILLS PROGRESSION

	YEAR R	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
ALGEBRA							use simple formulae generate and describe linear number sequences express missing number problems algebraically find pairs of numbers that satisfy number sentences involving two unknowns enumerate possibilities of combinations of two variables
RATIO							solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and use percentages for comparison solve problems involving similar shapes where the scale factor is known or can be found solve problems involving unequal sharing and grouping using knowledge of fractions and multiples

Gatcombe Park
Primary School