Maths Curriculum Map (updated 2023-4)

John Clifford School

Autumn 1						
FS	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Recognising and understanding numbers 1-20 *40-60 months* 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, & beginning to count beyond 10. 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 & checks by counting them. Uses the language of 'more' & 'fewer' to compare	**Number: Place Value** Given a number, identify 1 more and 1 less. Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least. Read and write numbers from 1 to 20 in numerals and words. **Number: Addition and Subtraction** Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs.	**Number: Place Value** Recognise the place value of each digit in a two-digit number (10s, 1s). 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. **Number: Addition and Subtraction** Solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers,	**Number: Place Value** Count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number. Recognise the place value of each digit in a 3-digit number (100s, 10s, 1s). Compare and order numbers up to 1,000. Identify, represent and estimate numbers using different representations. Read and write numbers up to 1,000 in numerals and in words, Solve number problems and practical problems involving these ideas. **Number: Addition and Subtraction** Add and subtract numbers mentally, including: - a three-digit number and 1s	**Number: Place Value** Count in multiples of 6, 7, 9, 25 and 1,000. Find 1,000 more or less than a given number. Count backwards through 0 to include negative numbers. Recognise the place value of each digit in a four-digit number (1,000s, 100s, 10s and 1s). Order and compare numbers beyond 1,000. Identify, represent and estimate numbers using different representations. Round any number to the nearest 10, 100 or 1,000. Solve number and practical problems that involve all of the above and with increasingly large positive numbers.	**Number: Place Value** Read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit. Count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000. Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through 0. Round any number up to 1,000,000 to the nearest 10, 100, 1,000, 10,000 and 100,000. Solve number problems and practical problems that involve all of the above. Read Roman numerals to 1,000 (M) and recognise years written in Roman numerals.	**Geometry: Properties of Shape** 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 circles, including radius, diameter and circumference and know that the diameter is twice the radius. Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles. **Number: Place Value**

two sets of objects. *ELG* 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. .		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 1s.	Estimate the answer to a calculation and use inverse operations to check answers. **Multiplication and division** Recall and use multiplication and division facts for the 3 and 4 multiplication tables. Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods.	Read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of 0 and place value. **Number: Addition and Subtraction** 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.	**Number: Addition and Subtraction** Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction). Add and subtract numbers mentally with increasingly large numbers. Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy. Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.	Read, write, order and compare numbers up to 10 000 000 and determine the value of each digit. Round any whole number to a required degree of accuracy. Use negative numbers in context, and calculate intervals across 0. Solve number and practical problems that involve all of the above. **Number: Addition, subtraction, multiplication and division** Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication. Divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number, remainders, fractions, or by rounding, as appropriate for the context. Divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders

						according to the context. Perform mental calculations, including with mixed operations and large numbers. Identify common factors, common multiples and prime numbers. Use their knowledge of the order of operations to carry out calculations involving the 4 operations. Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why. Solve problems involving addition, subtraction, multiplication and division. Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy. **Number: Fractions** Use common factors to simplify fractions; use common multiples to express fractions in the same denomination. Compare and order fractions, including fractions >1.

						Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions. Multiply simple pairs of proper fractions, writing the answer in its simplest form. Divide proper fractions by whole numbers.
Mathematicians linked to each unit:						
Vocabulary to be taught:						
number, zero, one, two, three, …to twenty and beyond, zero, ten, twenty, one hundred, none, how many…? count, count (up) to count on (from, to) count back (from, to) count in ones, twos… tens… more, less, many, few odd, even, every, other, how many times? pattern, pair, guess, estimate, nearly, close to, about the same, as just over, just under too many, too few, enough, not enough, the same number as, as many as, of two objects/amounts, greater, more, larger, bigger less, fewer, smaller of three or more objects/amounts: greatest, most, biggest, largest least, fewest, smallest one more, ten more one less, ten less compare order size first, second, third… tenth, last, last but one, before, after, next, between, above, below	Topic specific – see knowledge organisers	Topic specific – see knowledge organisers	Topic specific – see knowledge organisers	Topic specific – see knowledge organisers	Topic specific – see knowledge organisers	Topic specific – see knowledge organisers
Topic links to:						

				Greeks: Who were the ancient Greek Gods and Goddesses?		What was the impact of the British Empire?
				Texts that link to the topic:		

Autumn 2

FS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
One more and one less	**Geometry: Shape**	**Number: Addition and subtraction**	**Number: Addition and Subtraction**	**Multiplication and division**	**Multiplication and division**	**Number: Fractions**
40-60 Months	Recognise and name common 2-D and 3-D shapes, including:	Add and subtract numbers using concrete objects, pictorial representations, and mentally, including:	Add and subtract numbers mentally, including:	Recall multiplication and division facts for multiplication tables up to 12 × 12	Identify multiples and factors, including finding all factor pairs of a number, and	Use common factors to simplify fractions; use common multiples to express fractions in the same denomination.
Says the number that is one more than a given number.	- 2-D shapes		- a three-digit number and		common factors of two numbers.	
Finds one more or one less from a group of up to five objects, then ten objects.	- 3-D shapes		10s	Use place value, known and derived facts to multiply and		Compare and order fractions, including fractions >1.
	Number: Place value within 20					

In practical activities and discussion, beginning to use the vocabulary involved in adding & subtracting. *ELG* 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 & objects, they add & subtract two single-digit numbers & count on or back to find the answer. **2D and 3D shapes** *40-60 Months* Beginning to use mathematical names for 'solid' 3D shapes and 'flat' 2D shapes, & mathematical terms to describe shapes. Selects a particular named shape. *ELG* They explore characteristics of everyday objects & shapes & use mathematical language to describe them.	Given a number, identify 1 more and 1 less. Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least. Read and write numbers from 1 to 20 in numerals and words. **Number: Addition and Subtraction** Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs. **Number: Addition and Subtraction within 20** Represent and use number bonds and related subtraction facts within 20. Add and subtract one-digit and two-digit numbers to 20, including 0. Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = ? - 9.	- a two-digit number and 10s - 2 two-digit numbers - adding 3 one-digit numbers. Show that addition of 2 numbers can be done in any order (commutative) and subtraction of one number from another cannot. Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems. **Money** 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. **Number: Multiplication and division** Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers.	- a three-digit number and 100s Add and subtract numbers with up to 3 digits, using formal written methods of columnar addition and subtraction. Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction. **Multiplication and division** Recall and use multiplication and division facts for the 3 and 4 multiplication tables. Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods.	divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together 3 numbers. recognise and use factor pairs and commutativity in mental calculations. **Converting units of measure** Convert between different units of metric measure. Solve problems involving converting between units of time.	Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers. Establish whether a number up to 100 is prime and recall prime numbers up to 19. Multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers. Multiply and divide numbers mentally drawing upon known facts. Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context.	Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions. Multiply simple pairs of proper fractions, writing the answer in its simplest form. Divide proper fractions by whole numbers. **Number: Decimals** Associate a fraction with division and calculate decimal fraction equivalents for a simple fraction. Identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1,000 giving answers are up to three decimal places. Multiply one-digit numbers with up to 2 decimal places by whole numbers. Use written division methods in cases where the answer has up to 2 decimal places. **Number: Addition, subtraction, multiplication and division** Multiply multi-digit numbers up to 4 digits by a two-digit whole

		Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs. Show that multiplication of 2 numbers can be done in any order (commutative) and division of 1 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				number using the formal written method of long multiplication. Divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number, remainders, fractions, or by rounding, as appropriate for the context. Divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context. **Measurement: Converting units** solve problems involving the calculation and conversion of units of measure, using decimal notation up to 2 decimal places where appropriate use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to 3 decimal places

						convert between miles and kilometres
Mathematicians linked to each unit:						
Vocabulary to be taught:						
One more and one less add, more, and, make, sum, total, altogether, one more, add, more, and make, sum, one more, two more, ten more… how many more to make… ? how many more is… than…? take (away), leave how many are left/left over? how many have gone? one less, two less… ten less… how many fewer is… than…? difference between, is the same as **2D and 3D shapes** circle, triangle, square, rectangle, star, cube, pyramid, sphere, cone, solid, flat, shape, pattern curved, straight, round, hollow, corner face, side, edge, end, sort, make, build, draw	Topic specific – see knowledge organisers	Topic specific – see knowledge organisers	Topic specific – see knowledge organisers	Topic specific – see knowledge organisers	Topic specific – see knowledge organisers	Topic specific – see knowledge organisers
Topic links to:						
	Where does my food come from?	**What was it like to be a Victorian?**	Would you survive the Stone Age?	Romans: How did the Romans impact Britain?	Is life in Space the future?	
Texts that link to the topic:						

Spring 1

FS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Addition and Subtraction *40-60 Months* Finds the total number of items in two groups by counting all of them. In practical activities and	**Number: Addition and Subtraction within 20** Represent and use number bonds and related subtraction facts within 20.	**Number: Multiplication and division** Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including	**Number: Multiplication and division** Recall and use multiplication and division facts for the 4 and 8 multiplication tables.	**Number: Multiplication and division** Multiply two-digit and three-digit numbers by a one-digit number using formal written layout.	**Measure: Perimeter and Area** Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres.	**Number: Fractions** Use common factors to simplify fractions; use common multiples to express fractions in the same denomination.

discussion, beginning to use the vocabulary involved in adding & subtracting.

ELG

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 & objects, they add & subtract two single-digit numbers & count on or back to find the answer.

They solve problems including doubling, halving & sharing

Measuring length

40-60 Months

Orders two or three items by length or height.

ELG

Children use everyday language to talk about size, weight, capacity, position, distance, time and money to compare quantities and objects and to solve problems.

Add and subtract one-digit and two-digit numbers to 20, including 0.

Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = ? - 9.

Number: Place value within 100

Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number.

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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.

Show that multiplication of 2 numbers can be done in any order (commutative) and division of 1 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.

Number: Fractions

Recognise, find, name and write fractions 1/3, 1/4, 2/4 and 3/4 of a length, shape, set of objects or quantity.

Write simple fractions, for example 1/2 of 6 = 3 and recognise the equivalence of 2/4 and 1/2.

Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods.

Solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects.

Number: Fractions

Count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10.

Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators.

Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators.

Recognise and show, using diagrams,

Solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by 1 digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects.

Area

Find the area of rectilinear shapes by counting squares.

Measurement: Length and Perimeter

Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres.

Calculate and compare the area of rectangles (including squares) including using standard units, square centimetres (cm2) and square metres (m2) and estimate the area of irregular shapes.

Statistics

Solve comparison, sum and difference problems using information presented in a line graph.

Complete, read and interpret information in tables, including timetables.

Number: Multiplication and division

Multiply and divide whole numbers and those involving decimals by 10, 100 and 1,000.

Recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3).

Solve problems involving multiplication and division, including using their knowledge of factors and multiples, squares and cubes.

Solve problems involving addition, subtraction, multiplication and division and a combination of these,

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Compare and order fractions, including fractions >1.

Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions.

Multiply simple pairs of proper fractions, writing the answer in its simplest form.

Divide proper fractions by whole numbers.

Number: Addition, subtraction, multiplication and division

Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication.

Divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number, remainders, fractions, or by rounding, as appropriate for the context.

Divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context.

			equivalent fractions with small denominators.		including understanding the meaning of the equals sign Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates. **Number: Fractions** Compare and order fractions whose denominators are all multiples of the same number. Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths. Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number.	**Statistics** Interpret and construct pie charts and line graphs and use these to solve problems. Calculate and interpret the mean as an average. **Number: Percentages** Solve problems which require answers to be rounded to specified degrees of accuracy. Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.
Mathematicians linked to each unit:						
Vocabulary to be taught:						
Addition and Subtraction add, more, and, make, sum, total, altogether, score, double, one more, two more, ten more… how many more to make… ? how many more is… than…? take (away), leave, how many are left/left over? how many have gone? one less, two less… ten less… how many fewer is… than…? Difference, between, is the same as	Topic specific – see knowledge organisers	Topic specific – see knowledge organisers	Topic specific – see knowledge organisers	Topic specific – see knowledge organisers	Topic specific – see knowledge organisers	Topic specific – see knowledge organisers

Measuring length measure, size, compare, guess, estimate, enough, not enough, too much, too little, too many, too few, nearly, close to, about the same as, just over, just under, length, width, height, depth, long, short, tall, high, low, wide, narrow, deep, shallow, thick, thin, longer, shorter, taller, higher, longest, shortest, tallest, highest, far, near, close.						
Topic links to:
		Who won the space race?	What can the Ancient Egyptians teach me?			
Texts that link to the topic:

Spring 2

FS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Doubling and halving *ELG* They solve problems including doubling, halving & sharing **Weight** *40-60 Months* Orders two items by weight or capacity. *ELG* Children use everyday language to talk about	**Measurement: Length, height, weight and volume** Compare, describe and solve practical problems for: - lengths and heights [for example, long/short, longer/shorter, tall/short, double/half] - mass / weight - capacity and volume Measure and begin to record the following:	**Position and Direction** 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	**Number: Fractions** Count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10. Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators.	**Number: Fractions and Decimals** Recognise and show, using diagrams, families of common equivalent fractions. Count up and down in hundredths; recognise that hundredths arise when dividing an object by a 100 and dividing tenths by 10. Solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide	**Number: Fractions, decimals and percentages** Add and subtract fractions with the same denominator and denominators that are multiples of the same number. Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams. Read and write decimal numbers as fractions.	**Number: Algebra** Use simple formulae. Generate and describe linear number sequences. Express missing number problems algebraically. Find pairs of numbers that satisfy an equation with two unknowns. Enumerate possibilities of combinations of 2 variables.

size and weight to compare quantities and objects and to solve problems.	- lengths and heights - mass/weight - capacity and volume **Multiples of 2,5 and 10** Count, read and write numbers to 100 in numerals; count in multiples of 2s, 5s and 10s.	turns (clockwise and anti-clockwise). **Statistics** Interpret and construct simple pictograms, tally charts, block diagrams and 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. **Properties of shape** 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. **Length and Height** Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm). Compare and order lengths, and record the	Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators. Recognise and show, using diagrams, equivalent fractions with small denominators. **Number: Fractions** Add and subtract fractions with the same denominator within one whole. Compare and order unit fractions, and fractions with the same denominators. Solve problems that involve all of the above. **Measurement: Length and perimeter** Measure, compare, add and subtract: - lengths (m/cm/mm) Measure the perimeter of simple 2-D shapes. **Statistics** Interpret and present data using bar charts, pictograms and tables. Solve one-step and two-step questions using information presented in scaled bar charts and pictograms and tables.	quantities, including non-unit fractions where the answer is a whole number. Add and subtract fractions with the same denominator. Recognise and write decimal equivalents of any number of tenths or hundredths. Recognise and write decimal equivalents to ¼; ½; ¾. 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. Solve simple measure and money problems involving fractions and decimals to 2 decimal places.	Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents. Recognise the per cent symbol (%) and understand that per cent relates to "number of parts per 100", and write percentages as a fraction with denominator 100, and as a decimal fraction. Solve problems which require knowing percentage and decimal equivalents of 1/2, 1/4, 1/5, 2/5, 4/5 and fractions with a denominator of a multiple of 10 or 25 **Measurement:** Convert between different units of metric measure. Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints.. Estimate volume [for example, using 1 cm³ blocks to build cuboids (including cubes)] and capacity [for example, using water]	**Measurement: Perimeter, Area and Volume** Recognise that shapes with the same areas can have different perimeters and vice versa. Recognise when it is possible to use formulae for area and volume of shapes. Calculate the area of parallelograms and triangles. Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm3) and cubic metres (m3), and extending to other units. **Number: 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 and the use of 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

		results using >, < and =				using knowledge of fractions and multiples. **Geometry: Properties of Shape** 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 circles, including radius, diameter and circumference and know that the diameter is twice the radius. Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles. **REVISION OF CORE SKILLS IN PREPARATION FOR KS2 SATS**
Mathematicians linked to each unit:						
						Al-Khwarizmi (House of Wisdom) – History link
Vocabulary to be taught:						
Doubling and Halving	Topic specific – see knowledge organisers	Topic specific – see knowledge organisers	Topic specific – see knowledge organisers	Topic specific – see knowledge organisers	Topic specific – see knowledge organisers	Topic specific – see knowledge organisers

double, half, halve, pair, count out, share out, left, left over **Weight** measure, size, compare, guess, estimate, enough, not enough, too much, too little, too many, too few, nearly, close to, about the same as, just over, just under, weigh, weighs, balances, heavy/light, heavier/lighter, heaviest/lightest balance, scales, weight.						
			Topic links to:			
Science Week	Science Week	Science Week	Science Week	Science Week Anglo-Saxons: How were the Anglo-Saxons different to the Romans?	Science Week	Science Week What was the Islamic Golden Age, and what has been its legacy on the modern world?
			Texts that link to the topic:			
						Golden Horsemen of Baghdad **The Islamic Golden Age**

Summer 1

FS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6

Sharing and repeated addition	Geometry: Shape	Length and Height	Measurement: Money	Number: Decimals	Number: Fractions, decimals and percentages	Statistics
Capacity *40-60 Months* Orders two items by weight or capacity. *ELG* Children use everyday language to talk about capacity to compare quantities and objects and to solve problems.	Recognise and name common 2-D and 3-D shapes, including: - 2-D shapes - 3-D shapes **Number: Place value within 100** Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number. **Measurement: Money** Recognise and know the value of different denominations of coins and notes. **Time** Sequence events in chronological order using language. 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 Measure and begin to record the following: - time (hours, minutes, seconds)	Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm). Compare and order lengths, and record the results using >, < and = **Measurement: 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. Know the number of minutes in an hour and the number of hours in a day. **Problem Solving** Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change. Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.	Add and subtract amounts of money to give change, using both £ and p in practical contexts. **Measurement: Time** 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, am/pm, 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.	Round decimals with 1 decimal place to the nearest whole number. Compare numbers with the same number of decimal places up to 2 decimal places. **Money** Estimate, compare and calculate different measures, including money in pounds and pence. Convert between different units of measure. **Time** 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.	Add and subtract fractions with the same denominator and denominators that are multiples of the same number. Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams. Read and write decimal numbers as fractions. Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents. Recognise the per cent symbol (%) and understand that per cent relates to "number of parts per 100", and write percentages as a fraction with denominator 100, and as a decimal fraction. Solve problems which require knowing percentage and decimal equivalents of 1/2, 1/4, 1/5, 2/5, 4/5 and fractions with a denominator of a multiple of 10 or 25.	Interpret and construct pie charts and line graphs and use these to solve problems. Calculate and interpret the mean as an average. **Geometry: Position and direction** Describe positions on the full coordinate grid (all 4 quadrants). Draw and translate simple shapes on the coordinate plane, and reflect them in the axes. **Geometry: Properties of Shape** 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 circles, including radius, diameter and circumference and know that the diameter is twice the radius.

	Multiples of 2,5 and 10					Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.
	Count, read and write numbers to 100 in numerals; count in multiples of 2s, 5s and 10s.					**Problem Solving**
						Solve problems involving the calculation and conversion of units of measure, using decimal notation up to 2 decimal places where appropriate.
						Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.
						Solve problems involving addition, subtraction, multiplication and division.
						REVISION OF CORE SKILLS IN PREPARATION FOR KS2 SATS
Mathematicians linked to each unit:						
Vocabulary to be taught:						
Capacity measure, size, compare, guess, estimate, enough, not enough, too much, too little, too many, too few, nearly, close to, about the same as, just over, just under, full, half full, empty, holds, container.	Topic specific – see knowledge organisers	Topic specific – see knowledge organisers	Topic specific – see knowledge organisers	Topic specific – see knowledge organisers	Topic specific – see knowledge organisers	Topic specific – see knowledge organisers
Topic links to:						

				Rivers: How do Humans live with rivers?	What is global trade and how does it impact me?	Could you live in a cave? Nottingham life in the 1940s.
			Texts that link to the topic:			

Summer 2

FS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Money _40-60 Months_ Beginning to use everyday language related to money. _ELG_ Children use everyday language to talk about money to compare quantities and objects and to solve problems. **Time** _40-60 Months_	**Number: Multiplication and division** Solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher **Fractions** Recognise, find and name a half as 1 of 2 equal parts of an object, shape or quantity.	**Measurement: Mass, capacity and temperature** Choose and use appropriate standard units to estimate and measure: - mass (kg/g); - temperature (°C); - capacity (litres/ml) to the nearest appropriate unit, using scales, thermometers and measuring vessels Compare and order mass, volume/capacity	**Measurement: Mass and Capacity** Measure, compare, add and subtract: - mass (kg/g) - volume/capacity (l/ml) **Geometry: Properties of Shape** Draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them. Recognise angles as a property of shape or a description of a turn.	**Volume** Ma5/3.1e estimate volume and capacity **Statistics** 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.	**Geometry: Properties of Shape** Identify: - angles at a point and 1 whole turn (total 360o) - angles at a point on a straight line and half a turn (total 180o) - other multiples of 90o Use the properties of rectangles to deduce related facts and find missing lengths and angles.	**Statistics** Interpret and construct pie charts and line graphs and use these to solve problems. Calculate and interpret the mean as an average. **Maths Investigations- Problem Solving** Solve problems involving the calculation and conversion of units of measure, using decimal notation up to 2 decimal places where appropriate.

Uses everyday language related to time. Orders & sequences Familiar events. Measures short periods of time in simple ways. *ELG* Children use everyday language to talk about time to compare quantities and objects and to solve problems.	Recognise, find and name a quarter as 1 of 4 equal parts of an object, shape or quantity. **Multiples of 2,5 and 10** Count, read and write numbers to 100 in numerals; count in multiples of 2s, 5s and 10s. **Consolidation**	and record the results using >, < and =. **Problem Solving** Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change. Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts. **Consolidation**	identify right angles, recognise that 2 right angles make a half-turn, 3 make three quarters of a turn and 4 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.	**Geometry: Properties of Shape** 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 2 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. **Position and Direction** 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.	Distinguish between regular and irregular polygons based on reasoning about equal sides and angles. **Position and Direction** 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. **Number: Fractions** Compare and order fractions whose denominators are all multiples of the same number. Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths. Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number.	Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why. Solve problems involving addition, subtraction, multiplication and division. **Number: Algebra** Use simple formulae. Generate and describe linear number sequences. Express missing number problems algebraically. Find pairs of numbers that satisfy an equation with two unknowns. Enumerate possibilities of combinations of 2 variables. **CONSOLIDATION OF ALL CORE SKILLS IN PREPARATION FOR TRANSITION TO Y7**
Mathematicians linked to each unit:						
Vocabulary to be taught:						
Money money, coin, penny, pence, pound, price, cost, buy, sell, spend,	Topic specific – see knowledge organisers	Topic specific – see knowledge organisers	Topic specific – see knowledge organisers	Topic specific – see knowledge organisers	Topic specific – see knowledge organisers	Topic specific – see knowledge organisers

spent, pay, change, dear, costs more cheap, costs less, cheaper, costs the same as, how much…? how many…? total **Time** time, days of the week: Monday, Tuesday… day, week, birthday, holiday, morning, afternoon, evening, night, bedtime, dinnertime, playtime, today, yesterday, tomorrow, before, after next, last, now, soon, early, late, quick, quicker, quickest, quickly, slow, slower, slowest, slowly, old, older, oldest, new, newer, newest, takes longer, takes less time hour, o'clock, clock, watch, hands					
Topic links to:					
Texts that link to the topic:					