

To be the best we can be: for God, for others and for ourselves

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Number and Place value	Recite numbers past 5 Say one number for each item order: 1,2,3,4,5 Know that the last number reached when counting a small set of objects tells you how many there are in total (cardinal principle) Use language associated with counting such as 'more' 'less' Subitise small amounts of objects arranged in a regular patterns such as a dice pattern Subtise small amount of objects arranged in a irregular patterns such as nobjects arranged in a irregular pattern of objects arranged in a irregular pattern whove or touch an object when counting Know that when objects are moved, spread out or moved closer together that the total remains the same Begin to make an estimate such as choosing the group with more or less- or choosing the group which has the closest to ten objects Recognise when a group of objects is more than one Use number language such as 'fewer' 'less' more' 'a lot' Can indicate for example by pointing which group of objects has 'fewer' objects	Count to and across 100, forwards and backwards and from any given number Count, read and write numbers to 100 in numerals; count in multiplies of 2s, 5s and 10s Identify 1 more and 1 less than a given number 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 1-20 in numerals and words	Count in steps of 2,3 and 5 from 0 and in 10s from any number, forward and backward 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	Count from 0 in multiples of 4, 8, 50, 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 lidentify, represent and estimate numbers using different representations Read and write numbers to 1,000 in numerals and in words Solve number problems and practical problems using these ideas	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, 10s, 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, 1,000 Solve number and practical problems that involve all of the above and with increasingly large positive numbers Read Roman numerals to 100 (1 to C) and know that over time, the numeral system changed to include the concept of 0 and 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 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, 100, 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	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



To be the best we can be: for God, for others and for ourselves

Recognise groups with			
one, two or three			
objects and begin to			
make comparisons			
between quantities,			
using the language			
'fewer' and 'more'			
Match groups of			
objects with the same			
number			
Compare two groups			
of objects saying			
when they have the			
same number			
Say the number that			
comes before a given			
number in the			
sequence one to five,			
progressing to			
numbers from one to			
ten			
Can find one more			
than a number to five			
progressing to			
numbers of greater			
value			
Can find one less than			
a number to five,			
progressing to			
numbers of greater			
value			



To be the best we can be: for God, for others and for ourselves

Addition and Subtractionidentify how manyinterpretaddition andnumbers mentally, includingnumbers with up to 4 digits using formalnumbers with up to 4 digits using formal	d and subtract whole mbers with more than Multiply multi-digit numbers up to 4 digits by a two-digit whole number using
three or four objects in different ways, beginning to beginning to recognise that the total is still the same total is still the same of things changes in quantity when something is added one digit numbers to objects, saying when they have the same number objects. Saying which has more objects of operations and subtraction, including those involving numbers, including those involving numbers, and the equals (=) signs including those involving numbers, and the equals (=) signs including those involving numbers, and the equals (=) signs including those involving numbers, and the equals (=) signs including those involving numbers, and the equals (=) signs including those involving numbers, and the equals (=) signs including those involving numbers, and the equals (=) signs including those involving numbers, and the equals (=) signs including those involving numbers, and the equals (=) signs including those involving numbers, and the equals (=) signs including those involving numbers, and the equals (=) signs including those involving numbers, and the equals (=) signs including those involving numbers, and the equals (=) signs including those involving numbers, and the equals (=) subtract on number involving numbers, and the equals (=) subtract on number involving numbers, and the equals (=) subtract on number involving numbers, and the equals (=) subtract on number involving numbers, and the equals (=) subtract on number involving numbers, and the equals (=) subtract on number involving numbers, and the equals (=) subtract on number involving numbers, and the equals (=) subtract on number involving numbers, and the equals (=) subtract on number involving numbers in number involving numbers, and the equals (=) subtraction involve addition and subtract on number involving numbers in number involv	the formal written method of long multiplication a dand subtract mibers mentally with reasingly large mbers erounding to check swers to calculations determine, in the netext of a problem, eles of accuracy we addition and straction multi-step oblems in contexts, ciding which erations and methods use and why 1. We addition and otractions and methods use and why 1. We are to a problem, elesting to the context of the problems in contexts, ciding which erations and methods use and why 1. We are to a problem, electing to the context of the problems in context, or the problems in context, or the problems in context of the problems in context of the problems in context of the problems in context, deciding which operations to carry out calculations involving the 4 operations 1. Solve addition and subtraction multistep problems in contexts, deciding which operations and methods to use and why 1. Solve problems in contexts, deciding which operation, multiplication and division of the context of a problem, an appropriate degree of accuracy



To be the best we can be: for God, for others and for ourselves

Recognise the number			
of objects without			
counting (0-5)			
Find out the 'total' or			
'how many			
altogether' after two			
sets have been			
combined			
Count on to add			
Uses vocabulary			
equals, makes,			
balances, same total,			
plus more			
Understand addition			
as an increase			
Know that numbers			
identify how many			
objects are in a set			
Know that a group of			
things changes in			
quantity when			
something is taken			
away			
Count out objects			
from a larger group			
Compare sets of			
objects, saying which			
has fewer objects			
Compare sets of			
objects, saying how			
many fewer are in			
each set			
Subtract by counting a			
group of objects,			
counting out the			
number to remove			
and then recounting			
all			
Find one less than a			
number from one to			
ten			
Know that numbers			
are made up of			
different numbers,			
For example four can			
be four and zero one			
and three or two and			
two			
Represent numbers in			
different ways using			
equipment, such as			
five or ten frames,			
part-whole models,			



To be the best we can be: for God, for others and for ourselves

	number lines or						
	stories						
	 Understand the effect 						
	of subtracting zero						
	 Understand the effect 						
	of subtracting the full						
	amount						
	 Compare groups of 						
	objects, saying how						
	many belong and how						
	many don't belong in						
	a set						
	 Count back to 						
	subtract						
	Use vocabulary of						
	equals, leaves,						
	balance, same, total,						
	take away, how many						
	left, minus, subtract						
	Use vocabulary of						
	comparison in						
	practical contexts,						
	how many fewer'?						
	How much						
	shorter/cheaper than?						
	shorter/encaper than:						
Number:	Can understand the	Solve one step	Recall and use	Recall and use	Recall multiplication	Identify multiples and	
Multiplication	vocabulary of	problems involving	multiplication and	multiplication and	and division facts for	factors, including finding	
and Division	'matching' and 'same'	multiplication and	division facts for the	division facts for the 3,	multiplication tables	all factors pairs of a	
3.14 2.11.0.011	through picture	division, by	2, 5 and 10	4 and 8 multiplication	up to 12 x 12	number and common	
	matching or number	calculating the	multiplication tables,	tables	Use place value,	factors of 2 numbers	
	shapes	answer using	including recognising	Write and calculate	known and derived	Know and use the	
	Compares two groups	concrete object,	odd and even	mathematical	facts to multiply and	vocabulary of prime	
	of objects saying	pictorial	numbers	statements for	divide mentally,	numbers, prime factors	
	when they have the	representations	Calculate	multiplication and	including multiplying	and composite (non-	
		. cp. csctat.ons	Calculate		meraami marapiying	and composite (non-	1
		and arrays with the	mathematical	division using	by 0 and 1: dividing by	prime) numbers	
	same number	and arrays with the support of the	mathematical statements for	division using multiplication tables	by 0 and 1; dividing by 1: multiplying	prime) numbers • Establish whether a	
		and arrays with the support of the teacher	mathematical statements for multiplication and	division using multiplication tables that they know,	by 0 and 1; dividing by 1; multiplying together 3 numbers	prime) numbers • Establish whether a number up to 100 is	



To be the best we can be: for God, for others and for ourselves

	<u>ivia circiri</u>	iatics i rogression	iviap		
 hoord comes ar such	division within the	including for two dig!+		arima and recall arima	
board games or spot pattern doubles on	multiplication tables	including for two-digit numbers times one-	Recognise and use	prime and recall prime	
· · · · · · · · · · · · · · · · · · ·	· ·		factor pairs and	numbers up to 19	
dominoes Regin to use the term	and write them using multiplication (x),	digit numbers using mental and	commutatively in mental calculations	Multiply numbers up to 4 digital has one parties.	
 Begin to use the term 'double' 	division (÷) and	progressing to formal		digits by a one- or two-	
	equals (=) signs	written methods		digit number using a formal written method,	
Can recognise when a	Show that	Solve problems,	three-digit numbers	including long	
set of objects or pictures are not a	multiplication of 2	including missing	by a one-digit number using formal written	multiplication for two-	
double	numbers can be done	number problems,	layout	digit numbers	
Can complete the	in any order	involving	Solve problems	Multiply and divide	
second part of a	(commutative) and	multiplication and	involving multiplying	numbers mentally,	
double through	division of 1 number	division, including	and adding, including	drawing upon known	
mirroring activities	by another cannot)	positive integer scaling	using the distributive	facts	
Can use the langue of	Solve problems	problems and	law to multiply two-	Divide numbers up to 4	
doubling such as 'two	involving	correspondence	digit numbers by 1	digits by a one-digit	
of the same' 'same	multiplication and	problems	digit, integer scaling	number using the formal	
again' and 'double'	division, using	p. canama	problem and harder	written method of short	
Can calculate doubles	materials, arrays,		correspondence	division and interpret	
when working	repeated addition,		problems such as n	remainders appropriately	
practically with	mental methods and		objects are connected	for the context	
concrete resources	multiplication and		to m objects	Multiply and divide whole	
Can solve problems	division facts,			numbers and those	
involving doubles	including problem			involving decimals by 10,	
Can recall some small	contexts			100, 1000	
doubles				Recognise and use square	
Can recognise regular				numbers and cube	
patterns within				numbers and the	
numbers				notation for squared (2)	
Understand fair and				and (³)	
unfair when objects or				Solve problems	
snacks are shared				involving multiplication	
Children can share				and division, including	
fairly though practical				using their knowledge	
activities, sharing toys				of factors and multiples,	
equally				squares and cubes	
 Use the vocabulary of 				Solve problems	
sharing such as 'equal				·	
groups', 'sharing				involving addition,	
fairly', 'shared				subtraction,	
between' 'fair' and				multiplication and	
'unfair'				division and a	
Compare groups of				combination of these,	
objects saying when				including	
they have the same				understanding the	
number				meaning of the equals	
Count the groups they				sign	
have made and count				Solve problems	
how many objects are				involving multiplication	
in each group				and division, including	
Children are aware				scaling by simple	
that the original				fractions and problems	
quantity remain				involving simple rates	
				g	
L				L L	



To be the best we can be: for God, for others and for ourselves

	unchanged, but it has been shared equally • Solve problems, including sharing						
Number: Fractions	 Understand equal parts and whole of shapes and objects through practical activities Split counters and everyday objects into two equal groups. Identify groups which are not fair Understand and use the language of half, halves, equal parts, share fairly and whole Halve a number using equipment and explain their thinking Compare two groups of objects saying when they have the same number Understand and explain what is not a half Practically find half of 2,4,6,8 and 10 Solve problems involving halving 	Recognise, find and name a half as 1 of 2 equal parts of an object, shape or quantity Recognise, find and name a quarter as 1 of 4 equal parts of an object, shape or quantity The part of the part	 Recognise, find, name and write fractions 1/3, ¼, 2/4 and ¼ of a length, shape, set of objects or quantity Write simple fractions, for example ¼ of 6 = 3 and recognise the equivalence of 2/4 and ½ 	 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 nonunit fractions with small denominator Recognise and use fractions as numbers: unit fractions and nonunit fractions with small denominators Recognise and show using diagrams, equivalent fractions with small denominators Add and subtract fractions with the same denominator within one whole (e.g. 5/7 + 1/7 = 6/7) Compare and order unit fractions, and fractions with the same denominators Solve problems that involve all of the above 	 Recognise and show, using diagram, families of common equivalent fractions Count up and down in hundredth; recognise that hundredth; recognise that hundredths arise when dividing an object by 100 and dividing tenths by 10 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 Recognise and write decimal equivalents of any number of tenths or hundreds Recognise and write decimal equivalents to ½, ½, ½ 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 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 	 Compare and order fractions whose denominators are all multiples of the same number Identify, name and write equivalent 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 (for example 2/5+ 4/5=6/5 = 11/5) Add and subtract fractions with the same denominator 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 (for example, 0.71 = 71/100) Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents Round decimals with 2 decimal places to the nearest whole number and too 1 decimal place Read, write, order and compare numbers with up to 3 decimal places Solve problems involving number up to 3 decimal places 	 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 (for example ¼ x ½ = 1/8) Divide proper fractions by whole numbers (for example 1/3 +2 = 1/6) Associate a fraction with division and calculate decimal fraction equivalents (for example 0.375 for a simple fraction (3/8) Identify the value of each digit in numbers given to 3 decimal places and multiply and divide numbers by 10, 100 and 1,000 giving answers up to 3 decimal places Multiply one-digit numbers with up to 2 decimal places Multiply one-digit numbers with up to 2 decimal places 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



To be the best we can be: for God, for others and for ourselves

				Solve simple measure and money problems involving fractions and decimals to 2 decimal places	Recognise the percent symbol (%) and understand that percent 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 ½, ¾, 1/5, 2/5, 4/5 and those fractions with a denominator of a multiple of 10 and 25.	
Measurement	Recognise attributes of length./weight/height, stating 'that stick is long', 'adults are tall' Comparing amounts of continuous quantities, orders and sequences Show awareness of comparison in estimation and predictions Recognise the relationship between size and the number of units Begin to use every language related to money Begin to use units to compare things and to solve problems	• Compare, describe and solve practical problems for: -Lengths and heights (for length/height example, long/short, longer/shorter, tall/short, double/half) -mass/weight (for example, leavel, lighter than) -capacity and volume (for example, full/empty, more than, less than, half, half full, quarter) -time (for example, quicker, slower, earlier, later) • Measure and begin to record the following: -lengths and heights -mass/weight -capacity and volume -time (hours, minutes, seconds) -recognise and know the value of the record time denote the record time following: -tengths and heights -recognise and know the value of the record time denote the record time following: -tengths and heights -recognise and know the value of the record time dand subtraction to record sand subtraction involving add and subtraction money of the unit, includin change	and lengths (m/cm/mm); mass (kg/g); volume (l/ml) Measure the perimeter of simple 20 shapes Add and subtract amounts of money to give change, using both £ and p in practical contexts Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12- hour and 24-hour clock of the standard time with increasing accuracy to the nearest minute; record and compare time I terms of seconds, minutes and hours; use vocabulary such as o'clock, am/pm, morning, afternoon and midnight Know the number of seconds in a minute and the number of days in each month,	Convert between different units of measure (for example, kilometre to metre; hour to minute) Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres Find the area of rectilinear shapes by counting squares Estimate, compare and calculate different measures, including money in pounds and pence 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	Convert between different units of measure (for example, kilometre to metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre) Understand and use approximate equivalence between metric units and common imperial units such as inches, pounds and pints Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres Calculate and compare the area of rectangles (including squares), including suing standard units, square centimetres (cm²) and square metres (m²) and square metres (m²) and estimate the area of irregular shapes Estimate volume (for example, using 1 cm³ blocks to build cuboids (including cubes) and capacity (for example using water) Solve problems involving converting between units of time	Solve problems involving the calculation and conversion of units of measure, using decimal notation up to 3 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 3 decimal places Convert between miles and kilometres 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, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm³) and cubic metres (m³) and extending to other units (for example, mm³ and km³)



To be the best we can be: for God, for others and for ourselves

	different denominations of coins and notes -sequence events in chronological order using language (before, after, next, first, yesterday) 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 and draw the hands on a clock face to show these times	Compare and sequence intervals of time Tell and write the time to five minutes, including quarter past/to the hour ad 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	Compare durations of events (for example, to calculate the time taken by particular events or tasks)		Use all four operations to solve problems involving measure (for example length, mass, volume, money) using decimal notation, incusing scaling	
Geometry	Use positional language Can describe their relative position as 'behind' or 'next to' Explore repeating patterns Pattern spotting in the environment Beginning to se mathematical terms of describe shapes Selects a particular named shape Uses familiar objects and common shapes to create and recreate patterns and builds models Predict what shapes will be seen if 2D shapes are folded in half Identify 2sd faces n 3d shapes Identify similarities between shapes Recognise and name common 2D and 3D shapes on Describe position, direction and movement, including whole, half, quarter and three-quarter turns Poscribe position, direction and movement, including whole, half, quarter and three-quarter turns Selects and shapes Uses familiar objects and common shapes to create and recreate patterns and builds models Predict what shapes will be seen if 2D shapes are folded in half Identify 2sd faces n 3d shapes	Geometry: Properties of shape Identify and describe the properties of 2D shapes, including the number of sides and line symmetry in a vertical line Identify and describe the properties of 3D shapes, including the number of edges, vertices and faces Identify 2D shapes on the surface of 3D shapes (for example, a circle on a cylinder and a triangle on a pyramid) Compare and sort common 2D and 3D shapes and everyday objects Geometry: Position and direction Order and arrange combinations of mathematical objects in patterns and sequences Use mathematical vocabulary to describe position,	Properties of shapes Praw 2D shapes and make 3D shapes using modelling materials; recognise 3D shapes in different orientation and describe them Recognising angles as a property of shape or description of a turn 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 line	Geometry-Properties of shapes Describe positions on a 2D 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	Geometry-Properties of shapes Identify 3D shapes, including cubes and other cuboids, from 2D representations Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles Draw given angles and measure them in degrees (") Identify: -angles at a point and 1 whole turn (total 360") -angles at a point on a straight line and half 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 Geometry-Properties of shapes	Draw 2-D shapes 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 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



To be the best we can be: for God, for others and for ourselves

	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 anticlockwise)			 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 	
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	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 comparisons, 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	Solve comparison, sum and difference problems using information presented in a line graph Interpret and construct pie charts and line graphs and use these to solve problems Calculate and interpret the mean as an average
Ratio and Proportion					Solve problems involving the relative sizes of 2 quantities where the 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 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 using knowledge of fractions and multiples
Algebra					Use simple formulae Generate and describe linear number sequences Express missing number problems algebraically Find pairs of numbers that satisfy an equation with 2 unknowns



To be the best we can be: for God, for others and for ourselves

						Enumerate possibilities of combinations of 2 variables
--	--	--	--	--	--	---