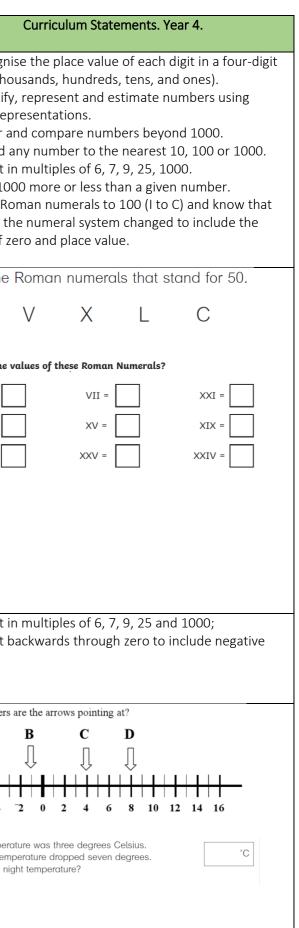


Week.	Mathematical aspect	Non-negotiable end points Year 3.	Non-negotiable end points Year 4	Curriculum statements – Year 3.	
1.	Number and place value: Roman Numerals Read, write and order and round two, three and four digit numbers, Negative numbers	Knows the standard form for writing numbers up to 1000. Knows how to write numbers in words.	Knows the symbols for Roman numerals up to C = 100. Knows the rules of Roman numerals i.e. rule of three symbols, rule of order. Knows the role of zero in the concepts of place value.	 To recognise the place value of each digit in a three-digit number (hundreds, tens, ones). To compare and order numbers up to 1000. To identify, represent and estimate numbers using different representations. To read and write numbers up to 1000 in numerals and in words. To solve number problems and practical problems involving these ideas. 	 To recogn number (the To identify different rep To order a To round a To count i To find 10 To read Re over time, the concept of z
Links to resources a 400 + 90 + 2 492 Four hundred an 500 + 40 + 7 547 Five hundred and 200 + 4 204 Two hundred and	d forty seven	Roman nume 100 29 33 94 75 26 51 48 68 99	ral match LI XCIX C XXVI LXVIII XLIXIII XXIX XXIX XXIX XXIII XXIV LXXVIII XXIX XXIX XXIX XXIX XXIX XXIV	Write the numbers in standard form 300 + 60 + 3 400 + 6 900 + 30 + 1 Now write the numbers in words. Which of these are not correct? 457 Four hundred and seventy five 600 + 8 Six hundred and eighty 719	Circle the
2. Links to resources a	Number and place value: Sequences Negative and positive numbers and policy documents:	Knows how to count in step sizes and estimate numbers	Knows how to find the difference between negative and positive numbers.	 Seven hundred and nineteen To count from 0 in multiples of 4, 8, 50 and 100, finding 10 or 100 more or less than a given number. To solve number problems and practical problems involving these ideas. 	To count i To count i To count b numbers. . What numbers
-9 -8 -7 -6 -5 -4 -3 -2	Negative Numbers -1 0 1 2 3 4 5 6 7 8 9 e difference between ?	Complete the number line -5 -4	$\begin{array}{c} 25 \\ \hline -1 & 0 & 1 & 3 \\ \hline -4 & 0 & 1 \end{array}$	24, 32, 40,,, 20, 24, 28, 32, 40,, 150, 200,, 300,, Explain the mistake 450, 500, 550, 600 , 700 , 800	$\begin{array}{c} \mathbf{A} \\ \hline \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 $



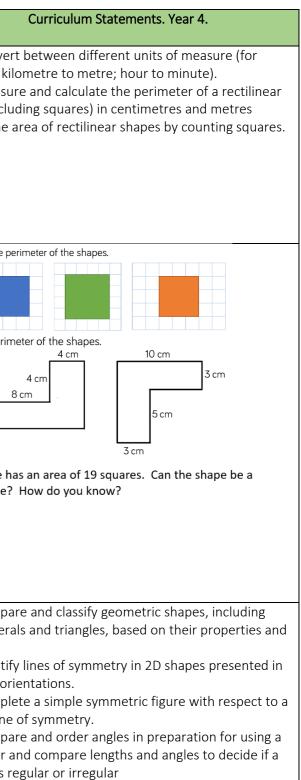


Week.	Mathematical aspect	Non-negotiable end points Year 3.	Non-negotiable end points Year 4	Curriculum statements – Year 3.	
3.	Addition and subtraction of three- digit numbers and 1s, 10s and 100s Solving problems	Knows the compact algorithms for addition and subtraction including regrouping and exchanging.	Knows how to choose the order of calculations in two step problems.	 To add and subtract numbers mentally, including: a three-digit number and ones a three-digit number and tens a three-digit number and hundreds. To estimate the answer to a calculation and use inverse operations to check answers. To solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction. 	 To add and the efficient of subtraction w To estimate answers to a To solve ad contexts, dec and why. To estimate including mo
inks to calculation Columnar addit 625 <u>+ 48</u> <u>673</u> 1 Regroup the 10	rolicy expanded and com cion Columnar subtraction		Question stems What is the question asking you to do? What calculation/s do you need to do? What methods would be best? Have you answered the question correctly? Have you used the correct unit in your answer?	812 115 736 515 617 Subtract these from 435 127 164 380 111 953 528 957 517 150 569 772 342 408 456 581 567 770 388 40 417 167 Choose two numbers that you can: add together in your head add using a written method subtract using a written method subtract using a written method	2. At a following Hannah I cha
4.	Multiplication and Division: Commutativity and associativity Solving problems including correspondence problems.	Knows how to represent problems including <i>four times as</i> <i>long, twice as high etc</i> Knows the commutative and associative laws for multiplication	Knows how to solve integer scaling problems and harder correspondence problems.	 To recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables. To 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. To solve problems, including missing number problems, involving multiplication and division, including integer scaling problems and correspondence problems in which <i>n</i> objects are connected to <i>m</i> objects. 	 To recall m to 12 × 12. To use plac and divide m dividing by 1; To multiply digit number To solve pr including usin multiplication connected to
either jam or Two people as There are four How many people jam jam marmalade marmalade marmalade	ny their favourite spread is jam. rmore marmalade-lovers than jam-lovers. ople are in the family altogether?	n packet contains 6 swee	ets. How many sweets	Sam has four times as many toy cars than Amy. If Amy has 16 toy cars, how many does Sam have? One weekend Sam played twice as many games of tennis than Alex did, and together they played 12 games. How many games did Alex play?	At the aquarium and ro house. The Wild and W TV camera crew filmed octopus tank and the l enclosure. The crew said they hav heads and 76 legs on o How many creatures a and how many are liza

Curriculum Statements. Year 4. nd subtract numbers with up to four digits using nt written methods of columnar addition and where appropriate. ate and use inverse operations to check a calculation. addition and subtraction two-step problems in deciding which operations and methods to use ate, compare and calculate different measures, noney in pounds and pence. a market stall by the seaside, Hannah can buy the ng items: postcard 25p lolly 35p ice cream 75p cake £1.20 cola 55p ah has £2. She buys three items and has less than £1 in hange. Which three items could she have bought? I multiplication facts for multiplication tables up lace value, known and derived facts to multiply mentally, including multiplying by 0 and 1; 1; multiplying together three numbers. ply two-digit and three-digit numbers by a oneper using formal written layout. problems involving multiplying and adding, using the distributive law and harder ion problems such as which *n* objects are to *m objects*. nd reptil nd Wonde Imed the the lizard y have 12 on camera. res are octop lizards? There are 36 angel fish at the aquarium. How many clown fish are there?

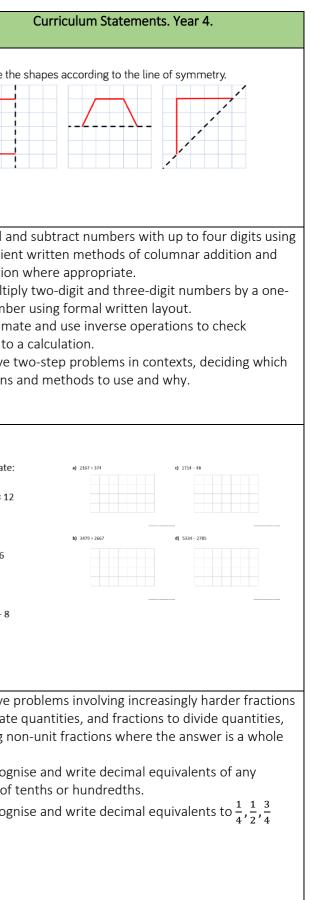


Week.	Mathematical aspect	Non-negotiable end	Non-negotiable end points	Curriculum statements – Year 3.	
		points Year 3.	Year 4		
5.	Measurement: converting between units of measure, area and perimeter, solving problems.	Knows how to add and subtract in the context of measures.	Knows how to use multiplication to convert from larger to smaller units. Knows perimeter can be expressed algebraically as 2(a + b) where a and b are the dimensions in the same unit.	• To measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml).	 To conver example, kil To measu figure (inclu To find the a
Links to resources	and policy documents:				Calculate the pe
Calculate the perimeter o		. Measure the perimeter of these shapes a) b)	s.	Amy has 400ml of juice in a jug. She pours two equal glasses of juice from the jug. She now has 50ml left on the jug. How much juice is in one glass?	Find the perim
		Perimeter = cm Perimeter	= cm Perimeter = cm	Which of the following statements make sense? Tick those that do. For those that don't,	8
Which of the two shap	bes covers most surface?	There are 4 so There are 3 rows of 4 so	ount the squares more efficiently. quares in 1 row. ows altogether. quares = 12 squares	Suggest an alternative. An apple has a mass of about 100 grams A child is about 120 millimetres tall	4 cm
How do you know?		Use Jack's method to find the a	area of this rectangle.	A sensible portion of cereal has a mass of about 40 metres	rectangle?
				A ruler is about 300 millilitres long	
6.	Geometry: Properties of shape, symmetry	Knows how to describe and classify shapes using mathematical properties.	Knows the properties of regular and irregular polygons.	 To draw 2D shapes and make 3D shapes using modelling materials; recognise 3D shapes in different orientations and describe them with increasing accuracy. To identify horizontal, vertical, perpendicular and parallel lines in relation to other lines. 	 To compa quadrilatera sizes. To identifi different ori To comple specific line To compa protractor a polygon is re



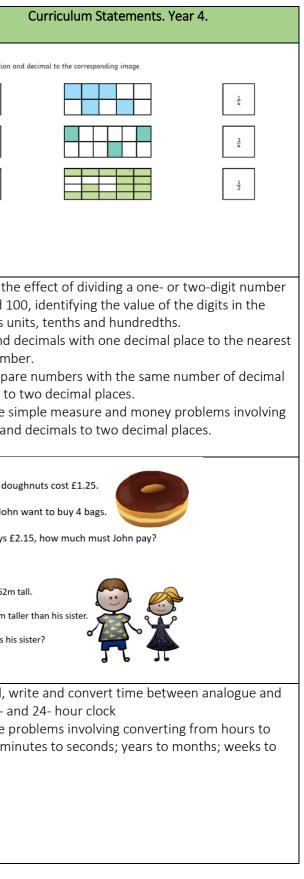


Week.	Mathematical aspect	Non-negotiable end points Year 3.	Non-negotiable end points Year 4	Curriculum staten	nents – Year 3.	
Shade three squares so that this design is symmetric	kal in the line of symmetry. Ine of symmetry Equilateral T (all sides effective) all angles effective	Triangle Isosceles Triangle (two sides equal,	(no sides equal,	Always, sometimes, never A square is also a rectangle. A triangle always has a right angle. A pentagon can have right angles.	Build three different 3d shapes. What is the same and what is different?	Complete the
7.	All four operations: Mental and written methods.	Knows how to multiply/divide two- digit numbers by one- digit numbers using expanded or formal written methods of short multiplication and division.	Knows the efficient written algorithms for addition and subtraction with increasing fluency for large numbers. Knows the formal written method of short multiplication and short division with exact answers.	 To write and calculate mathematica and division using the multiplication to for two-digit numbers times one-digit progressing to formal written method To solve problems, including missin multiplication and division, including correspondence problems in which n objects. To solve problems, including missin number facts, place value, and more subtraction. 	tables that they know, including t numbers, using mental and ds. ng number problems, involving integer scaling problems and objects are connected to <i>m</i> ng number problems, using	 To add ar the efficien subtraction To multip digit numbe To estima answers to To solve t operations
	then doubled for x2. 2 = 8, then 8 x 3. Commutative law 9 12 15 18 21 12 16 20 24 28 15 20 25 20 25	3		How would you do it? $4 \times 6 \times 3$ $3 \times 10 \times 8$ $2 \times 8 \times 4$ How many ways can you find to multiply three numbers and make 120? E.g. $5 \times 12 \times 2$ What is the missi $4 \times 0 \times 6 = 240$ $8 \times 2 \times 0 = 64$ $0 \times 3 \times 5 = 45$		Calculate: a) 4 × 3 × 12 b) 200 × 6 c) 2400 ÷ 8
8.	Fractions: Factors, multiples and simplifying Calculating Equivalence, addition and subtraction within 1	Knows unit and non- unit fractions as numbers on the number line and how to represent equivalence.	Knows how to make connections between fractions of a length, of a shape and as a representation of one whole or set of quantities. Knows how to use factors and multiples to recognise equivalent fractions and simplify where appropriate.	 To recognise and use fractions as n unit fractions with small denominator. To recognise and show, using diagr small denominators; To add and subtract fractions with one whole [for example, + =]; To compare and order unit fraction denominators; To solve problems that involve all one of the solve problems that involve problems the solve prob	rs; ams, equivalent fractions with the same denominator within ns, and fractions with the same	 To solve p to calculate including no number. To recogr number of t To recogr



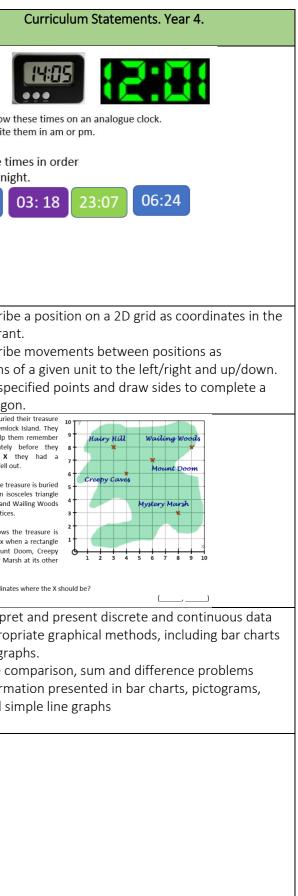


Week.	Mathematical aspect	Non-negotiable end points Year 3.	Non-negotiable end points Year 4	Curriculum statements – Year 3.	
Write three fraction model. Answer $\frac{3}{8} + \frac{4}{8} = \frac{5}{7} - \frac{2}{7} = \frac{5}{7} = \frac{2}{7} = \frac{1}{7}$	True or false? $\frac{5}{6} + \frac{2}{6} = \frac{7}{12}$ $\frac{13}{20} - \frac{3}{20} = \frac{1}{2}$	L		Do both of these of these models show $\frac{4}{10}$? Convince me that $\frac{5}{10} = \frac{1}{2}$	Match each fraction o
9.	Fractions: Decimals and fractions in the context of measurements.	Knows how to connect tenths to place value, decimal measures and to division by 10.	Knows that decimals and fractions are different ways of expressing numbers and proportions. Knows decimal notation and the language associated with it, including in the context of measurements.	• To 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;	 To find the by 10 and 10 answer as u To round of whole numb To compa places up to To solve s fractions and
$ \begin{array}{c} 1 \text{ t} \\ 1 \text{ t} $	en = ten ones 1 - 10 - 10 - 10 - 10	56 hundredths	Fraction Decimals 17 100 0.2	A fraction of each shape is shaded. Match each fraction to the correct place on the number line.	A bag of dou Liz and Johr If Liz pays £ Max is 1.62m He is 47cm ta How tall is his
10.	Measurement: time 12-hour, 24-hour clocks	Knows the time in 12- hour and 24-hour representations. Knows the number of seconds in a minute and the number of days in each month, year and leap year.	Knows how to read, write and convert time between analogue and digital 12- and 24- hour clocks.	 To tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks. To estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes, hours and o'clock; use vocabulary such as am/pm, morning, afternoon, noon and midnight. To know the number of seconds in a minute and the number of days in each month, year and leap year. To compare durations of events, for example to calculate the time taken by particular events or tasks. 	 To read, w digital 12- ar To solve p minutes; mi day.





Week.	Mathematical aspect	Non-negotiable end points Year 3.	Non-negotiable end points Year 4	Curriculum statements – Year 3.	
7 o'clock 19:00 7 00 pm 19:00 7 01:30	2 3 4 9 5 5 5 5 5 6 6 7 7 8 7 8 7 7 8 7 7 8 7 7 8 7 7 8 7 7 7 8 7 7 7 8 7 7 7 8 7 7 7 7 7 7 7 7 7 7 7 7 7	Draw these times on a clock face 26 minutes past one 14 minutes to seven 12 minutes past 9	Put these times on order starting at midnight 5 past two, am 7 minutes to 6, pm Quarter to 9, am Half past 11, pm 25 to 8, pm	What comes next? Complete the statements: IIIII There are	Show Write Put these the from midnig
11.	Geometry: Position and direction	Know how to describe positions and movement using the correct terms	Know how to describe positions as translations using the correct terms	• To describe movements between positions as translations of a given unit to the left/right and up/down.	 To describ first quadrar To describ translations To plot spe given polygo
• th	point of the shape must move: The same distance the same direction.			The Beebot is going to draw this rectangle. What instructions would you program in? You can use the word bank to help you. You can use the word bank to help you. Start Word bank: Forwards - Backwards - Clockwise - Quarter-turn - Clockwise - Quarter-turn -	The pirates have buried somewhere on Tremloo drew a map to help th where. Unfortunately could add the X disagreement and fell o Jolly Jane knows the tre at the corner of an isc that has Hairy Hill and at its other two vertices Mean Michael knows I also the final vertex wh is drawn with Mount Caves and Mystery Mai three vertices.
12.	Statistics; Reading timetables line graphs, read, present and interpret pictograms and tables	Knows how to present data in many contexts.	Knows how to use a greater range of scales in their representations. Knows the graphical representation of data to record change over time.	 To interpret and present data using bar charts, pictograms and tables To solve one-step and two-step questions such as 'How many more?' and 'How many fewer?' using information presented in scaled bar charts and pictograms and tables. 	 To interprovide the second seco
many visitor		me graph shows a person running a sprint r Graph A Graph B Graph C Graph C Graph B Graph C Graph C Graph B Time Time	race at Sports' Day? Explain why. Graph C	How many fewer children go to homework club than crafts?	





Week.	Mathematical aspect	Non-negotiable end points Year 3.	Non-negotiable end points Year 4	Curriculum statements – Year 3.	
					A family were driving they counted the diff Here is a table of resu bar chart of their resu

Diada 12
results for the first two minutes. Construct a Black 12
results. Black 12
results. Black 12