Suggested oral mental starters (ongoing, throughout the term):
- Count forwards and back in multiples of 2, 3, 4, 5, 10 and 50 up to the 12th multiple; begin to count in multiples of 8 up to the 12th multiple
- Count in multiples of 100 to 1,000
- Recall and use multiplication and division facts for the 2, 3, 4, 5 and 10 times tables up to the 12th multiple
- Recall and use addition and subtraction facts to 20 and within 20
- Recall addition and subtraction facts for multiples of 10 to 100 e.g. 40 + 60 = 100, 100 – 70 = 30
- Derive/recall addition and subtraction facts for multiples of five to 100 e.g. 45 + 55 = 100; 100 - 75 = 25 (use 100 square to support)
- Count on and back in 10s from any one- digit or two-digit number (within 500)
- Add/subtract 19 by adding/subtracting 20 and adjusting (within 500)
- Find ten or one hundred more/less than a given number (within 500)
- Read and write numbers up to at least 500 in numerals and words; compare and order numbers up to at least 500
- Count forwards and backwards in tenths (consider using a counting stick); recognise that tenths arise from dividing an object into ten equal parts
- Mentally add and subtract three-digit numbers and ones, tens **or** hundreds up to and including 500 e.g. 464 + 7; 348 – 30; 275 + 200
- Mentally add and subtract two two-digit numbers, using partitioning or empty number lines to support, including answers over 100
  (See Mental calculation Strategies, 2017)
- Derive doubles of one-digit and two-digit numbers; derive corresponding halves
- Tell the time from analogue and 12 hour digital clocks to the nearest 5 minutes (use daily routines to support this)

Areas of Study	No of days	Statutory requirements and non-statutory guidance	Suggested Key Vocabulary
Number Number and place value **Week 1**	3- 5	Read, write, compare (using < and >) and order numbers to at least 500 Given a number, identify the number that is 10/100 more or less within 500 (and beyond) Say the number that comes between two numbers within 500 (and beyond) Read and write numbers **in words** and match them to corresponding numerals to 500 Make estimates of quantities within 500 Recognise the place value of each digit in a three-digit number to at least 500 Partition three- digit numbers into hundreds, tens and ones/units Solve missing number problems using knowledge of place value e.g. 248 = 200 + ☐ + 8; 485 = ☐ + 80 + 5 Begin to partition three-digit numbers in different ways e.g. 356 = 300 + 40 + 16 **Reason** about numbers e.g. If you wrote these numbers in order, starting with the largest, which number would be third? 250, 520, 205, 195, 495. Explain how you ordered these numbers; 405 < 450 True or false? How do you know?	Order Partition, place value, digit, numeral Place value Hundreds, tens, ones/units More than/ greater than, less than, < ,>

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Number Addition **Week 2**	1	Using knowledge of place value, add a three-digit number and tens and a three digit number and hundreds, within 500, mentally and with jottings such as an empty number line	Digit, hundreds, tens, ones/units
		Solve word problems using addition of tens or hundreds to three digit numbers e.g. I had 325 stickers. My friend gave me 40 more. How many stickers do I have now? There were 246 children on the playground and then 200 children more came out to join them. How many children are on the playground now?	Add, sum of, addition, plus, altogether, total, count on
	1	Add 19 by adding 20 and adjusting (within 500) using jottings to support e.g. an empty number line **(See Mental calculation Strategies, 2017)**	Expanded written method Partition, recombine, column
	3	Introduce the **expanded written method** of addition of two two-digit numbers within 100, initially without bridging 10, then bridging 10; extend with addition of two two-digit numbers where the answer is greater than 100 e.g. 68 + 43 **(see Written Calculation Policy, 2017)**; estimate answers to calculations	Estimate Calculate, calculation
		Solve one-step (and extend with two-step) word problems, which involve the addition of two two-digit numbers, using the expanded written method	
Number Subtraction **Week 3**	1	Using knowledge of place value, subtract a three-digit number and tens and a three digit and hundreds, within 500, mentally and with jottings such as an empty number line	Digit, hundreds, tens, ones/units
		Solve word problems using subtraction of tens or hundreds to three-digit numbers e.g. I had 287 marbles but I gave 30 to my brother. How many marbles do I have now? There are 468 children on the playground. If 200 children are called in for lunch how many are left on the playground?	Subtraction, subtract, minus, difference, count back
	1	Subtract 19 by subtracting 20 and adjusting (within 500) using jottings to support e.g. an empty number line **(See Mental calculation Strategies, 2017)**	Expanded written method Partition, column
	3	Introduce the **expanded written method** of subtraction of two two-digit numbers within 100, initially where no exchange is required; extend with examples where exchange is required e.g. 92 -37 **(See Written Calculation Policy, 2017);** estimate answers to calculations and check using the inverse operation of addition	Estimate Inverse
		Solve one-step word problems, which involve subtraction of two two-digit numbers, using the expanded written method; extend with two-step problems involving addition and subtraction	Calculate, calculation

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Geometry Properties of 3-D shape & **Statistics** Data handling **Week 4**	3	**Consolidate** names and properties of common 3-D shapes and describe them using correct vocabulary, such as number of faces, vertices and edges; introduce tetrahedron and the term polyhedron Identify 2D shapes on the surface of 3D shapes e.g. triangular faces on a tetrahedron Make and describe 3D shapes using modelling materials (such as Polydron) and describe them using correct vocabulary	All vocabulary from previous years (including 3D shape, edges, faces, vertices, circular, rectangular, triangular (faces) cube, cuboid, sphere, cone, prism, pyramid) Extend with: tetrahedron, polyhedron
	2	Use simple scales e.g. 2 or 5 units per square, in bar charts with increasing accuracy Interpret information presented in scaled bar charts, in tallies and in tables to solve one and two- step questions e.g. How many more? How many fewer/less? **(Possible link to Science curriculum)**	Table, tally chart, bar chart, data, scale, interval
Number Multiplication **Week 5**	5	Recall and use multiplication facts for the 2, 3, 4, 5 and 10 times tables up to the 12th multiple- consider as mental/oral activities; through doubling, connect the 2, 4 and 8 times tables Begin to recall and use multiplication facts for the 8 times table Solve empty box problems e.g. $\square$ x $\square$ = 24. Is there more than one solution to this? Solve problems involving doubling; consider using the problem 'Jack's Magic Beans', which is linked to measuring height **(See Mathematical Challenges for all pupils booklet, 2016)** Use partitioning and/ or the grid method to multiply a teen number by a one-digit number **(See Written Calculation Policy, 2017 and Mental calculation Strategies, 2017)** Solve word problems involving multiplication e.g. There are 14 satsumas in a bag. I buy 3 bags. How many satsumas do I have altogether?	Multiply, multiplication, times Double Partition Tens, ones/units Grid method Problem, solution
Number Division **Week 6**	5	Recall and use division facts for the 2, 3, 4, 5 and 10 times tables up to the 12th multiple - consider as mental/oral activities Begin to recall and use division facts for the 8 times table Solve missing number problems using known division facts and the inverse operation of x Continue to use the empty number line to divide numbers of known tables including the 4 and 8 times tables **(See Written Calculation Policy, 2017 and Mental calculation Strategies, 2017)** Begin to determine remainders, using known facts e.g. recognise that 13 ÷ 4 will have a remainder of 1; 17 ÷ 5 = 3 r 2 Solve word problems involving division e.g. There are 28 children in my class. I put them into groups of 4. How many groups are there? I have 14 satsumas and share them between four children. How many will I have left for myself? Introduce the **formal layout** for division using known multiplication facts e.g. 32 ÷ 4 = 8 **(See Written Calculation Policy, 2017)**	Divide, division, divided by Value, tens, ones/units Inverse Count forwards/ count backwards Remainder Problem, solution Formal layout)

Number Fractions **Week 7**	5	Introduce the terms **numerator** and **denominator**		Numerator, denominator Fraction Half, third, quarter, fifth and tenth (1/2, 1/3, 1/4, 1/5, 1/10) Whole Unit fractions, non-unit fractions Equivalent fractions Divide, part, equal parts
		Recognise and show simple equivalent fractions of a half**,** using diagrams and/or fraction walls to support (1/2 = 2/4; 1/2 = 5/10)		
		Introduce fifths (and the notation 1/5) and recognise that fifths arise from dividing an object or shape into five equal parts		
		Compare fractions using < and > signs e.g. 4/10 < 1/2 (use diagrams such as a fraction wall to support)		
		Connect finding a **unit fraction** of a number with division e.g. 1/10 of 40 is 4 because $40 \div 10 = 4$; 1/5 of 30 = 6; 1/3 of 36 = 12		
		Find simple **non-unit** fractions of small numbers or quantities using practical resources, pictures and/or diagrams**,** to support e.g. 2/3 of 18 apples; 3/4 of 16 children		
		Reason about fractions e.g. would you rather have 1/5 of £30 or 2/3 of £12? Why?		
		Find pairs of fractions with the same denominator that total 1 e.g. 2/5 + 3/5 = 1; 3/4 + ☐ = 1		
		Add **and** subtract fractions with the same denominator within one whole e.g. 3/5 + 1/5 = 4/5; 8/10 − 3/10 = 5/10		
		Solve problems involving fractions e.g. Anne has an apple. She gives one quarter to Jane. How many quarters does she have left? I have a cake. I give 4/10 of the cake to Joe and I give 1/10 to Lucy. What fraction of my cake have I given away? How much cake do I have left?		
Measurement Time **Week 8**	5	**Consolidate** Roman numerals from I-XII (1-12)		Roman numerals I, V, X Analogue, 12 hour digital clock, minutes, hour seconds O'clock, half past, quarter past, quarter to, five to, five past… a.m. p.m. noon, midday, midnight Year, leap year, month Calendar
		Tell and write the time to the nearest 5 minutes using an analogue clock (including clocks with Roman numerals) and 12 hour digital clocks; convert between analogue and 12 hour digital time; continue to use noon/midday, midnight, a.m. and p.m.		
		Know the number of seconds in a minute Know the number of minutes in an hour Know the number of days in each year **and** leap year Know the number of months in a year **Begin** to know the number of days in **each** month		
		Solve problems connected to time e.g. How many minutes in half an hour? How many seconds in two minutes? How many months in 3 years? How many days altogether in March and April? What date is it on the 40th day of the year? How will you find out? (Consider using the book '365 Penguins')		

Number Addition (and subtraction) **Week 9**	5	Derive pairs of multiples of five that total 100 and give related addition and subtraction facts; **extend** by deriving any pair of numbers that total 100 and give related addition and subtraction facts, using a 100 square to support -consider as mental/oral starters	Partition, recombine Calculate, calculation	
		Reason about addition and subtraction e.g. Is it always, sometimes or never true that if you subtract a multiple of 10 from any number the unit's digit of that number stays the same. How do you know?		
		Consolidate addition of two two-digit numbers, using the expanded written method, where it is necessary to bridge across the tens and where the answer bridges 100, e.g. 87 + 45	Expanded written method Formal written method	
		Introduce the **formal written method of addition**, initially where it is not necessary to bridge ('carry'), then where it is necessary to 'carry' ten from the units to the tens column; use base ten materials to support understanding **(See Written Calculation Policy, 2017)**		
		Solve one and two-step word problems, which involve addition e.g. There are 68 girls and 47 boys in the park. How many children are in the park altogether? There are 24 people upstairs on the bus and 29 people downstairs.19 more people get on at the next stop. How many people are on the bus now?	Problem, solution Estimate	
		Estimate answers to problems		
Number Subtraction **Week 10**		Consolidate subtraction of two two-digit numbers, using the expanded written method, where exchange is required e.g.73 – 38	Partition, recombine Calculate, calculation	
		Introduce the **formal written method of subtraction,** initially where it is not necessary to exchange and then examples where exchange is required; use base ten material to support understanding **(See Written Calculation Policy, 2017)**	Expanded written method Formal written method Exchange	
		Solve one and two-step word problems, which involve subtraction (and addition with subtraction) e.g. There are 94 children having lunch. 45 of these children are girls. How many boys are having lunch? There are 65 boys and 58 girls in the playground. 36 children are called into school. How many children are left on the playground?	Problem, solution Estimate	
		Estimate answers to problems		

Measurement Mass and Capacity	2	Consolidate understanding of kilograms (kg) and grams (g) as units of measure, using practical and real life objects Measure, compare, add and subtract quantities in practical context; read scales in kilograms and/or in grams Introduce mixed units of mass using practical apparatus e.g. How much do you weigh in kilograms and grams? How much do these five books weigh altogether in kilograms and grams?	Weight, mass, measure Kilograms, kg, grams, g Scale Compare Heavier than, lighter than
	2	Consolidate understanding of litres (l) and millilitres (ml) as units of measure, using practical and real life containers Measure, compare, add and subtract quantities in practical contexts; read scales in litres and/or in millilitres Introduce mixed units of capacity using practical apparatus e.g. How much does this bottle of water hold? 1 litre and 500 ml	Capacity, measure Litre, (l), millilitre, ml
Week 11	1	Introduce simple scaling e.g. my pencil case weighs 120 grams and my friend's pencil case weighs twice as much. How much does her pencil case weigh? I have 100ml of water in my bottle. My brother has three times as much. How much water does my brother have?	Scaling Twice (as much)
Number Multiplication and Division	5	Recall and use multiplication facts for the 2, 3, 4, 5, 8 and 10 times tables -consider as mental/oral starters	Multiply, multiplication, times
		Multiply a one digit number and two-digit number by 10 e.g. 14 x 10 = 140; 35 x 10 = 350 (by shifting digits one place to the left and placing zero in the units column as a place holder)	Partition, value, hundreds, tens, ones/units
		Divide a two-digit or three digit multiple of ten by 10 e.g. 380 ÷ 10 = 38 (by shifting digits one place to the right) **(See Mental Calculation Strategies, 2017)**	
		Consolidate using partitioning method and/ or the grid method of multiplication to multiply a teen number by a one-digit number); extend by introducing **the expanded written method** of short multiplication **(See Written Calculation Policy, 2017)**	Grid method Expanded written method of short multiplication
Week 12		Begin to solve **correspondence problems** in which n objects are connected to m objects e.g. I have 2 t-shirts (one red and one blue) and 2 pairs of shorts (one red pair and one blue pair). How many different outfits can I make? (4 possibilities) What if I also had a green t-shirt and a green pair of shorts? (9 possibilities) What if I had 2 t-shirts and 3 pairs of shorts? (6 possibilities) (Encourage children to record systematically, make predictions and begin to identify relationships)	Problem, solution Systematic recording

Additional weeks

To be used for:
- assessment, consolidation and responding to AfL
- additional using and applying activities