Suggested oral mental starters (ongoing, throughout the term):

- Count from (and back to) 0 in multiples of 3, 6, 4, 8, **7, 9,** 25, 50, 100
- Recall and use multiplication and division facts for the 2, 3, 4, 5, 6, **7**, 8, **9**, 10 times tables (including x 0, x 1 and ÷ 1) **(See 'Multiplication Tables Guidance, 2020')**
- Find factor pairs of numbers (using known multiples) e.g. 6 and 4 are factor pairs of 24
- Recognise and use inverse operations and commutativity to derive other related facts e.g. 4 x 6 = 24 to calculate 6 x 4 = 24; 24 ÷ 6 = 4; 24 ÷ 4 = 6
- Use known multiplication and division facts and place value to derive other related facts e.g. 4 x 9 = 36 to calculate 4 x 90 = 360; 40 x 9 = 360
- Multiply and divide numbers by 10 (including numbers with one decimal place)
- Compare and order numbers up to 10,000
- Derive addition and subtraction facts for multiples of 50 to 1000 (e.g. 450 + 550 = 1000, 1000 - 750 = 250)
- Given a number, identify the number that is 10 or 100 more or less within 5,000 (and beyond)
- Use mental calculation strategies for addition and subtraction **(See 'Mental Calculation Strategies, 2017')**
- Find doubles of three-digit numbers (using knowledge of partitioning and place value); find the corresponding halves
- Count backwards through zero to include negative whole numbers (refer to number line)
- Count forwards and backwards using simple fractions going beyond one
- Tell the time to the nearest minute on an analogue clock (including using Roman numerals I-XII) and relate to 12/24 hour digital clocks
- Convert between different units of measurement e.g. cm to m, ml to l, kg to g, minutes to hours, weeks to days

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 and write numbers to at least 5,000 in numerals and words Given a number, identify the number that is 100/ 1000 more or less to at least 5,000 Order and compare numbers to at least 5,000 Recognise the place value of each digit in a four-digit number Partition four-digit numbers into thousands, hundreds, tens and ones/units; continue to use place value/arrow cards and Dienes apparatus to support understanding Partition numbers **in different ways** (to support understanding of calculation methods) e.g. 865 = 800 + 60 + 5 = 800 + 50 + 15; 525 = 500 + 20 + 5 = 400 + 120 + 5 Round three-digit and four-digit numbers to the nearest 10 or 100; extend by rounding four-digit numbers to the nearest 1,000 **Reason** about numbers and place value e.g. a number rounded to the nearest ten is 450. What is the smallest/largest number it could be?	Partition, Place value Digit, number Units/ones, Tens, Hundreds, Thousands Order Compare More than, greater than, less than, <, > Round

Number Negative Numbers & Roman Numerals **Week 2**	2 3	Count backwards through zero to include positive and **negative whole numbers** e.g. 3, 2 ,1 ,0, -1, -2 Use negative numbers in context e.g. link to temperature (today the temperature is - 2 º C) Respond to questions about negative numbers e.g. fill in the missing numbers on a number line; put these temperatures in order, from coldest to warmest (4 º C, - 2 º C, 0 º C, 2 º C) Consolidate reading and writing **Roman numerals** to 12 (XII) and relate to analogue clocks Read and write Roman numerals to 20 (XX), to 50 (L) and to 100 (C) e.g. XXVI = 26 ; identify where we see Roman numerals in everyday life e.g. on clocks, on buildings, after the name of a king or queen; know that, over time, the numeral system changed to include the concept of zero and place value (Possible link to History topic)	Positive, negative (numbers) Temperature, º C Roman numerals I, V, X, L, C
Number Addition and Subtraction **Week 3**	5	Use **place value** to add/subtract hundreds or thousands to three and four-digit numbers, within 5,000- consider the use of an empty number line Solve word problems involving addition/subtraction of hundreds and/or thousands to three and four-digit digit numbers, within 5,000 e.g. There are 3,525 people at a football match. 200 leave at half time. How many are people are left at the match? Use the **formal written method of addition** to add a three-digit number and a two-digit number; two three-digit numbers; extend to two four-digit numbers **(See Written Calculation Policy, 2017)** Use the **formal written method of subtraction** to subtract two two-digit numbers; a two-digit number from a three-digit number; a three-digit number from a three-digit number; extend to four-digit numbers **(See Written Calculation Policy, 2017)** Solve addition and subtraction one-step and two-step word problems (including money problems), deciding which operations to use e.g. There are 235 girls on the playground and 228 boys. 125 children were called into the classroom. How many children are on the playground now?	Digit Hundreds, tens, ones/units Addition, plus, altogether, add, sum of, total Subtraction, subtract, minus, less than, difference Calculate, calculation, operation Problem, solution
Geometry Properties of Shape (2D) and Position and Direction **Week 4**	3 2	Consolidate names and properties of 2D shapes (including special triangles); sort, compare and classify 2D shapes (including regular/ irregular shapes; acute/obtuse/right angles; pairs of parallel lines) Compare and classify **different quadrilaterals** (parallelogram, rhombus and trapezium) Identify lines of symmetry in 2D shapes, including shapes presented in different orientations; identify lines of symmetry in other images e.g. designs, logos, flags Complete a **simple** symmetric figure or drawing with respect to a specific line of symmetry (horizontal or vertical) where the shape/figure touches the line of symmetry; complete a **simple** symmetric figure or drawing where the shape/figure does not touch the line of symmetry Describe positions on a grid as co-ordinates in the first quadrant e.g. (4,2); plot specified points using co-ordinates in the first quadrant; extend by plotting specified points and drawing sides to complete a given polygon	Vocabulary from previous term/years including: regular, irregular, polygon Isosceles, equilateral, scalene, right-angled (triangles), parallelogram, rhombus, trapezium Parallel (lines) Symmetry, lines of symmetry, symmetric/symmetrical Co-ordinates, first quadrant

Number Multiplication **Week 5**	5	Count in multiples of 9, forwards and backwards; count in multiples of 7, forwards and backwards - consider as mental/oral starters Derive, write and use multiplication facts for the 9 times table; look at patterns in the 9 times table Derive, write and use multiplication facts for the 7 times table **(See Multiplication Tables Guidance, 2020)** Solve missing number problems (empty boxes) using 7 x table, 9 x table and other known tables e.g. ☐ x 9 = 27 Find factor pairs of numbers e.g. 6 and 9 are a factor pair of 54; 3 and 7 are a factor pair of 21 **Reason** about multiplication e.g. If you know that 5 x 9 = 45, what other facts do you know? Use the **formal written method of short multiplication** to multiply a two-digit number by a single digit number e.g. 34 x 7 = 238 **(See Written Calculation Policy, 2017)** Solve word problems, which involve multiplication e.g. How many days are there in 15 weeks? There are 35 biscuits in a packet. I have 9 packets of biscuits. How many biscuits do I have altogether?	Multiply, multiplication, times, product Factor pairs, factors Formal method of short multiplication Calculation Problem, solution
Number Division **Week 6**	5	Count in multiples of 9 and multiples of 7, forwards and backwards -consider as mental/oral starters Recall, write and use division facts for the 9 times table Recall, write and use division facts for the 7 times table **(See Multiplication Tables Guidance, 2020)** Solve missing number problems (empty boxes) using all known facts; use the inverse operation of x to check answers Use the **partitioning method** to divide a two-digit number by a single-digit number (in preparation for formal method of short division) e.g. 48 ÷ 3 = 16; 85 ÷ 5 = 17 **(See Written Calculation Policy, 2017 and Mental calculation Strategies, 2017)** Introduce the **formal written method of short division** to divide a two-digit number by a single-digit number **(See Written Calculation Policy, 2017);** extend with examples that give rise to remainders Solve word problems, which involve division, using the partitioning method or the formal written method e.g. I have 65 stickers and I share them equally between five friends. How many stickers do they each have? I picked 84 apples from my tree and want to put them in bags of 6. How many bags do I need? I won £60 in a raffle. I shared the money equally between myself and three friends. How much money did each of us get?	Divide, division Partition, partitioning method Inverse Formal written method Remainder Calculation Problem, solution

Number Fractions (including decimals) **Week 7**	5	Consolidate finding **unit fractions** of numbers and quantities, making the connection with division Find **non-unit fractions** of numbers and quantities, using diagrams and resources to support; e.g. 7/10 of 90; 4/5 of £20; 2/3 of 27cm Solve problems involving non-unit fractions e.g. What is 2/3 of 90cm? There are 30 children in the class. 3/10 of them walk to school. How many children walk to school? Would you rather have 3/10 of £90 or 2/3 of £60? Recognise and show, using diagrams and fraction walls**,** families of common equivalent fractions e.g. 1/4 = 2/8 = 3/12; 1/3 = 2/6 = 3/9 Add and subtract fractions with the same denominator within one whole e.g. 3/5 + 1/5 = 4/5, 7/8 – 3/8 = 4/8 = 1/2; and then beyond one e.g. 4/5 + 3/5 = 7/5 (using diagrams to support) Consolidate the connection between **tenths** and decimal fractions and use **decimal notation** (to one decimal place); recognise and write the decimal equivalent of any number of tenths; recognise that 0·5 = 5/10 = 1/ 2 Round numbers with one decimal place to the nearest whole number; compare and order numbers with one decimal place Introduce **hundredths** and the connection between hundredths and decimal fractions; begin to use decimal notation to two decimal places, initially in the context of money and length Begin to recognise and write the decimal equivalent of any number of hundredths e.g. 1/100 = 0·01, 2/100 = 0·02 … , 15/100 = 0.15 … 100/100 = 1 (consider the use of the 100 square to support understanding) Recognise the decimal equivalent of 1/ 4 (1/ 4 = 25/100 = 0.25), using a 100 square to support	Whole Unit fraction, non-unit fraction Numerator, denominator Tenths, hundredths, decimal notation round, order, compare
Measurement Time **Week 8**	5	Consolidate writing and telling the time to the nearest 1 minute using an analogue clock and digital clock (12 hour); continue to use noon/midday, midnight, a.m. /p.m. Convert between analogue and digital clocks (12 hour) Convert between 12 hour digital clocks and 24 hour digital clocks Solve word problems relating to time (consider using a time line to solve), e.g. Abbie arrives at school at 9:00 am and leaves at 3:35 pm. How long does she spend at school? My train leaves at 11:30 and arrives at 14:00. How long is my train journey? The plane takes off at 15:50 and lands at 18:10. How long is the flight? Reason about time e.g. True or false? 6.35 am is nearer to 7.00 am than 6.00 am. How do you know? Consolidate the number of days in a week, days in each month, months in a year; days in a year (including leap year) Use a calendar to solve problems relating to time e.g. How many Wednesdays are there in March this year? Which months of the year have 31 days? How many days altogether in months beginning with J? What is the date on the 100th day of the year?	All relevant vocabulary from previous years relating to time including: 12 hour digital clock, 24 hour digital clock Leap year Calendar Problem, solution

Measurement Length, Perimeter and Area **Week 9**	5	Consolidate understanding of metres (m), centimetres (cm) and millimetres (mm) as units of measurement and the relationship between units Convert between units of length e.g. 5m = 500cm; 80mm = 8cm Introduce **kilometre** (km) as a unit of measurement and know that 1,000m =1km, 2,000m = 2 km… Measure the **perimeter** of rectilinear shapes using cm or m Calculate the perimeter of rectilinear shapes (where the length of the sides is given) Extend by calculating perimeter using mixed units and/or decimal notation e.g. the perimeter of the white board is 6.86 m Solve problems relating to perimeter e.g. Draw a rectangle with a perimeter of 16cm. Is there more than one way to do this? How do you know? Find the **area** of rectangles by counting squares; use the notation for square centimetres (cm^2); relate finding area to arrays and to multiplication	Perimeter Area metre (m), centimetre (cm), millimetre (mm), kilometre (km) Square centimetres, cm^2
Number Addition and Subtraction (Mental Methods) **Week 10**	5	Add/subtract 99 (then 98 etc) by adding/subtracting 100 and adjusting (within 1,000 and then beyond) using jottings to support e.g. an empty number line; extend with add/subtract 999 (within 10,000) Find a **small difference** by counting up on an empty number line e.g. 906 – 885 = 21; 1005 – 890 = 115 Add mentally several small numbers, using known number facts to support e.g. 8 + 15 + 12 = 20 + 15 = 35 Use mental methods, with jottings such as an empty number line, to add two three-digit numbers Use mental methods, with jottings such as an empty number line, to subtract two three-digit numbers **(See Mental Calculation Strategies, 2017)** Solve one-step and two-step addition and subtraction word problems using **mental methods** with jottings, deciding which operations and methods to use e.g. 1,545 people visited the zoo on Monday. On Tuesday there were 99 fewer people at the zoo. How many people visited the zoo on Tuesday? I had £902 in my savings account. I need to take £795 out to pay for my holiday. How much money will I have left in the account? Solve problems involving mental calculation; consider using the problem 'Card tricks' **(See 'Mathematical challenges for all pupils' booklet, 2016)**	Digit, thousands, hundreds, tens, ones/units Addition, plus, altogether add, sum of, total Subtraction, subtract, minus, difference (between), count up Empty number line Calculate, calculation Problem, solution

Measurement Mass & Capacity **Week 11**	2 2 1	Consolidate understanding of kilograms (kg) and grams (g) as units of measurement for **mass** using practical and real life objects e.g. Approximately, how much does an apple weigh? What unit of measurement would you use to weigh yourself? What weighs about 1 kg? Know the relationship between units **(1kg = 1,000g**); convert between different units of measurement, including mixed units e.g. 3kg = 3000g; ½ kg = 500g; 1,500kg = 1kg and 500g Begin to use decimal notation for mass e.g. An average cat weighs about three and a half kilograms = 3kg and 500g = 3.5 kg Estimate and measure mass (weigh) using appropriate units and equipment and record using mixed units (and decimal notation when appropriate), in practical contexts Consolidate understanding of litres (l) millilitres (ml) as a unit of measurement for **capacity** using practical and real life containers e.g. Approximately, what is the capacity of this bucket? What unit of measurement would you use to measure the capacity of this cup? Know the relationship between units **(1l = 1,000ml);** convert between different units of measurement, including mixed units e.g. 2 litres = 2000ml; ½ litre = 500 millilitres; 2,500ml = 2l and 500ml Begin to use decimal notation for capacity e.g. This bottle contains one and a half litres = one litre and 500 millilitres = 1.5 litres Estimate and measure capacity using appropriate units and equipment and record using mixed units of measurements (and decimal notation when appropriate), **in practical contexts** Solve word problems involving mass and capacity e.g. I make a drink using 250ml of orange squash and 850ml of water. How much drink do I have? If I drink half of my drink now, how much will I have for later?	Weight, mass, kilograms, kg, grams, g Estimate, measure, weigh Mixed units Decimal notation Capacity, litre, l, millilitre, ml Problem, solution
Statistics Data handling **Week 12**	5	Interpret **continuous** data using time graphs, with a range of scales, and relate to recording change over time Interpret **discrete** data presented in bar charts, using a greater range of scales e.g. 2, 5 ,10, 20, 25 Solve comparison, sum and difference problems using information presented in a bar chart Follow a line of enquiry e.g. linked to the science curriculum; collect data, using a table or tally chart, from their own observations and measurements, make decisions about the most appropriate way to record and present the data	Discrete data, continuous data Scale Bar charts, time graphs Table Tally chart

Additional weeks

To be used for:

- assessment, consolidation and responding to AfL
- additional using and applying activities