Year 4 Autumn 2

Starter suggestions for Number

- Read and write numbers to 10 000.
- Count on and back in 1s, 10s or 100s from any number up to 10,000.
- Count forwards and backwards in equal steps and describe any patterns in the sequence.
- Order a set of random numbers to at least 10,000 including amounts of money and measures involving decimals.
- Recall addition and subtraction facts for 100.
- Recall multiplication facts for 2, 3, 4, 5, 6, 8 and 9x tables.
- Multiply and divide whole numbers by 10 or 100 (whole number answers).
- Double any number up to 100.
- Halve any number up to 200.
- Count in fraction steps, *e.g.* $^{1}/_{5}$, $^{2}/_{5}$, $^{3}/_{5}$ …

Starter suggestions for Measurement, Geometry and Statistics

- Recognise 2D and 3D shapes in different orientations and describe them.
- Use a variety of sorting diagrams to compare and classify numbers and geometric shapes based on their properties.
- Identify right angles and angles less than and more than a right angle.
- Measure the perimeter of simple 2-D shapes.
- Estimate and compare lengths, volumes/capacities and masses.
- Read measuring scales to an appropriate degree of accuracy.
- Know the number of mm in 1cm, cm in 1m, m in 1km, g in 1kg, ml in 1l, seconds in 1 minute, minutes in 1 hour, hours in 1 day, days in each month, days in a year and leap year.
- Tell and write the time from an analogue clock and 12 and 24-hour clocks.
- Interpret data in bar charts, pictograms and tables.

	Main learning	Rationale
Week 1 **Mental multiplication**	▪ Recall multiplication and division facts for the 6 times table and 9 times table. ▪ Use place value, known and derived facts to multiply mentally, including: multiplying by 0 and 1; multiplying together three numbers. ▪ Recognise and use factor pairs and commutativity in mental calculations. ▪ *Use partitioning to double or halve any number, including decimals to one decimal place.* ▪ *Select a mental strategy appropriate for the numbers involved in the calculation.*	Children use their knowledge of the 3 times table to derive the 6 times table. When learning multiplication tables, children should experience a blend of practical, visual activities, pattern spotting, generalising as well as rote learning. Children learn that the commutative law applies to multiplication (but not division) i.e. 5 x 3 = 3 x 5, and that factor pairs can support mental calculation e.g. to multiply by 6 it is possible to multiply by 2 and then by 3 as these are factor pairs for 6. Mental calculation is supported by practical equipment, pictures and jottings. When calculating, children should learn which methods suit the numbers involved and why.
Week 2 **Mental division**	▪ *Partition numbers in different ways (for example, 2.3 = 2 + 0.3 and 2.3 = 1 + 1.3).* ▪ Recall multiplication and division facts for the 6 times table and 9 times table. ▪ Use place value, known and derived facts to divide mentally, including dividing by 1. ▪ *Select a mental strategy appropriate for the numbers involved in the calculation.*	In preparation for mental division, children partition numbers in different ways to recognise multiples of the divisor when the dividend is partitioned e.g. when considering 96 ÷ 4 it is useful to think of 96 as 80 + 16 (both multiples of 4) rather than 90 + 6 (neither are multiples of 4). Children continue to develop their knowledge and confidence of the 6 and 9 times tables, including identifying rules of divisibility for multiples of 9 (digit sum is 9 when taken to a single digit). Mental calculation is supported by practical equipment, pictures and jottings. When calculating, children should learn which methods suit the numbers involved and why.
Week 3 **Written multiplication**	▪ Multiply two-digit and three-digit numbers by a one-digit number using formal written layout. ▪ *Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method).* ▪ *Use estimation and inverse to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.* ▪ Solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, division (including remainders), integer scaling problems and harder correspondence problems such as which n objects are connected to m objects.	Children build on their understanding of place value and multiplication facts to develop a written method for multiplication. Correspondence problems in which n objects are connected to m objects include a team sports kit with a shirt, shorts and socks and three possible colours for each. How many different combinations could there be? When calculating, children should learn which methods suit the numbers involved and why. Written methods should be agreed by the school and shared in the progression in written calculations policy. Efficient written methods are required to be taught by the end of Key Stage 2.
Week 4 **Measurement (length including perimeter)**	▪ Estimate, compare and calculate different lengths. ▪ Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres. ▪ Convert between different units of measure (e.g. kilometre to metre; hour to minute).	Children develop their estimating and measuring skills in the context of length. They relate length to distance including perimeter. The measures made could be used in the next unit as the context for handling data. Children relate their knowledge of multiplying and dividing by 10 and 100 to converting between different units of length.

	Main learning	Rationale
Week 5 **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	Children use the measures from the previous week to present and interpret in different forms. Children learn the difference between discrete and continuous data. Children apply their knowledge of mental and written calculations when answering questions about the data.
Week 6 **Assess and review**	Assess and review week	It is useful at regular intervals for teachers to consider the learning that has taken place over a term (or half term), assess and review children's understanding of the learning and use this to inform where the children need to go next.