Year 4 Summer 2

Starter suggestions for Number

- Read and write numbers with one decimal place.
- Count on and back in 0.1s, 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 and use addition and subtraction facts for multiples of 100 totalling 1000.
- Derive and use addition and subtraction facts for 1 and 10 (with decimal numbers to one decimal place).
- Use partitioning to double or halve any number, including decimals to one decimal place.
- Recall multiplication facts for all times up to 12 x 12 and derive associated division facts.
- Identify patterns of similar calculations, e.g. if I know 7 x 8, I also know
- 0.7 x 0.8, 70 x 8, 70 x 80 etc.
- Multiply and divide numbers by 10, including those which have answers to one decimal place.
- Count in fraction steps, e.g. $\frac{1}{5}$, $\frac{2}{5}$, $\frac{3}{5}$ ...

Starter suggestions for Measurement, Geometry and Statistics

- Recognise 2-D and 3-D 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.
- Order and compare angles up to two right angles.
- Estimate and compare lengths, volumes/capacities and masses.
- Read measuring scales to an appropriate degree of accuracy.
- Convert between different units of measure.
- Describe positions on a 2-D grid as coordinates in the first quadrant.
- Tell and write the time from an analogue clock and 12 and 24-hour clocks.
- Calculate time durations in minutes, hours and days.
- Interpret continuous data presented in time graphs.

	Main learning	Rationale
Week 1 **Place value**	▪ Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens and ones). ▪ Order and compare numbers beyond 1000. ▪ Identify, represent and estimate numbers using different representations, including the number line. ▪ Round any number to the nearest 10, 100 or 1000. ▪ Solve number and practical problems that involve all of the above and with increasingly large positive numbers.	Understanding of the number system is necessary pre-requisite knowledge for any number work. Children should understand the Base 10 notion in which there are 10 numerals (0-9) and these can be organised in different ways to form any number. This is based on grouping in tens i.e. ten 1s are the same as one 10; ten 10s are the same as one 100; ten 100s are the same as one 1000 and so on. And vice versa.
Week 2 **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 other graphs.	Children understand the difference between discrete and continuous data. Children apply their knowledge of mental and written calculations when answering questions about the data. They should discuss the value of presenting information in tables, pictograms, bar charts and line graphs and evaluate the effectiveness of each type of presentation.
Week 3 **Addition and subtraction in the context of statistics**	▪ Add and subtract numbers with up to 4 digits and decimals with one decimal place using the efficient written methods of columnar addition and subtraction where appropriate. ▪ *Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method).* ▪ *Select a mental strategy appropriate for the numbers involved in the calculation.* ▪ Estimate and use inverse operations to check answers to a calculation. ▪ Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why. ▪ Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.	Children should secure their knowledge and understanding of mental and written calculation skills in a variety of contexts. The learning should include decision making around which method is most efficient (mental or written) given the numbers involved. The context of data allows children to experience interpreting all the forms of data mentioned across the previous week and this week. 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.

	Main learning	Rationale
Week 4 **Mental and written multiplication and mental division**	▪ *Partition numbers in different ways (for example, 2.3 = 2 + 0.3 and 2.3 = 1 + 1.3).* ▪ Use place value, known and derived facts to multiply and divide mentally, including: - multiplying by 0 and 1; - dividing by 1; - multiplying together three numbers. ▪ Recognise and use factor pairs and commutativity in mental calculations. ▪ *Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method).* ▪ *Select a mental strategy appropriate for the numbers involved in the calculation.* ▪ *Use estimation and inverse to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.* ▪ Multiply two-digit and three-digit numbers by a one-digit number using formal written layout. ▪ 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.	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 experience mental and written calculations in a variety of contexts, including money and measures. 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 5 **Shape**	▪ Use a variety of sorting diagrams to compare and classify numbers and geometric shapes, including quadrilaterals and triangles, based on their properties and sizes. ▪ *Continue to identify horizontal and vertical lines and pairs of perpendicular and parallel lines.* ▪ Identify acute and obtuse angles and compare and order angles up to two right angles by size. ▪ Identify lines of symmetry in 2-D shapes presented in different orientations. ▪ Complete a simple symmetric figure with respect to a specific line of symmetry.	Children apply their developing understanding of the properties of shapes to classify and name them. The terms regular and irregular should be used to describe shapes that have equal sides and angles and those that do not. The learning of symmetry develops further to include symmetry in vertical, horizontal and oblique lines.
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.