Maths Assessment – Year 4

Name: ....

Bold = Ready-to-progress criteria	Band 4 Maths Assessment		
Autumn Term (Beginning)	**Spring Term (Working Within)**	**Summer Term (Secure)**	**Greater Depth**
B / **B+**	**W** / **W+**	**S** / **S+**	(Ongoing Assessment)

Autumn Term (Beginning) — B / B+

Number and Place Value
- **4NPV–1 Know that 10 hundreds are equivalent to 1 thousand, and that 1,000 is 10 times the size of 100; apply this to identify and work out how many 100s there are in other four-digit multiples of 100.**
- **4NPV–2 Recognise the place value of each digit in four-digit numbers, and compose and decompose four-digit numbers using standard and nonstandard partitioning.**
- **4NPV–3 Reason about the location of any four digit number in the linear number system, including identifying the previous and next multiple of 1,000 and 100, and rounding to the nearest of each.**
- **4NPV–4 Divide 1,000 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 1,000 with 2, 4, 5 and 10 equal parts.**
- Count in multiples of 6, 25 and 100
- Find 1000 more or less than a given number
- Count backwards through zero including negative numbers
- Order and compare numbers beyond 1000
- Identify, represent and estimate numbers
- Round any number to the nearest 10, 100 or 1000

Addition and Subtraction
- Add 4 digit numbers using columnar addition
- Subtract 4 digit numbers using columnar subtraction
- Use inverse and estimation to check answers to a calculation
- Solve two-step problems involving addition and subtraction, identifying which operation to use from the context
- **4NF–3 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 100)**

Spring Term (Working Within) — W / W+

Number and Place Value
- Count in multiples of 7 and 9

Addition and Subtraction
- Continues to build on and apply taught concepts from autumn term

Properties of Shape
- Identify and classify quadrilaterals, including parallelograms, rhombuses and trapeziums) based on their properties
- **4G–2 Identify regular polygons, including equilateral triangles and squares, as those in which the side-lengths are equal and the angles are equal. Find the perimeter of regular and irregular polygons.**
- Identify and classify triangles, including equilateral, isosceles, right angle and scalene, based on their properties
- **4G–3 Identify line symmetry in 2D shapes presented in different orientations. Reflect shapes in a line of symmetry and complete a symmetric figure or pattern with respect to a specified line of symmetry.**
- Complete a simple symmetrical figure

Multiplication and Division
- Recall multiplication and division facts up to 12 x 12
- **4MD–1 Multiply and divide whole numbers by 10 and 100 (keeping to whole number quotients); understand this as equivalent to making a number 10 or 100 times the size.**
- **4NF–1 Recall multiplication and division facts up to 12 x 12, and recognise products in multiplication tables as multiples of the corresponding number.**
- **4MD–2 Manipulate multiplication and division equations, and understand and apply the commutative property of multiplication.**
- **4MD–3 Understand and apply the distributive property of multiplication.**
- **4NF–2 Solve division problems, with two-digit dividends and one-digit divisors, that involve remainders, and interpret remainders appropriately according to the context.**
- **4NF–3 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 100)**
- Use known facts to multiply and divide mentally
- Multiply and divide by 0 and 1
- Multiply 3 numbers together
- Recognise and use factor pairs
- Multiply 2digit and 3 digit numbers by a 1digit number using formal written layout.
- Divide 3 digit numbers by a 1 digit number using formal written layout
- Solve 2 step problems involving multiplying and adding, choosing the appropriate operation

Fractions and Decimals
- Use fractions to divide quantities, including non-unit fractions where the answer is a whole number.
- Add and subtract fractions with the same denominator.

Measurement
- To measure and calculate the perimeter of a rectilinear shape (including squares) in cm and m. Express algebraically eg 2(a+b)
- Find the area of rectilinear shapes by counting squares
- Articulate the difference between perimeter and area using mathematical terminology.

Summer Term (Secure) — S / S+

Number and Place Value
- Read roman numerals to 100

Properties of Shape
- Describe positions on a 2D grid as coordinates in the first quadrant using co-ordinates
- Describe movements between positions as translations of a unit to the left/right and up/down
- Plot specified points and draw sides to complete a given polygon
- **4G–1 Draw polygons, specified by coordinates in the first quadrant, and translate within the first quadrant.**

Multiplication and Division
- Continues to build on and apply taught concepts from spring term

Fractions and Decimals
- Recognise and show, using diagrams, families of common equivalent fractions.
- Count up and down in hundredths.
- Recognise that tenths arise when dividing an object by ten.
- Recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten.
- Recognise and write decimal equivalents of any number of tenths or hundredths.
- Recognise and write decimal equivalents to ½, ¼ and ¾.
- Round decimals with one decimal place to the nearest whole number.
- Compare numbers with the same number of decimal places up to two decimal places.
- Solve simple problems involving fractions and decimals (e.g. time, money, measures, calculate and divide quantities).
- **4F–1 Reason about the location of mixed numbers in the linear number system.**
- **4F–2 Convert mixed numbers to improper fractions and vice versa.**
- **4F–3 Add and subtract improper and mixed fractions with the same denominator, including bridging whole numbers.**

Measurement
- Estimate and compare different measures
- Convert between different units of measure (eg km – m)
- Read, write and convert time between analogue and digital 12 and 24 hour clocks
- Solve problems involving converting hours to minutes, minutes to seconds,, years to months, weeks to days.

Statistics
- Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time charts.
- Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.

Greater Depth (Ongoing Assessment)

General
- Make connections between different areas of maths when problem solving
- Demonstrate a depth of understanding by finding the most efficient method when solving addition and subtraction problems
- Explain the effect of different approaches when solving addition and subtraction problems
- Use a variety of concrete and visual representations to explain arithmetic and reasoning problems
- Solve number and practical problems that involve increasingly large numbers

Number and Place Value
- Use a variety of concrete and visual representations to explain the place value of 4 digit numbers
- Use rounding as part of problem solving
- Generalise using knowledge of 6s, 7s, 9s and 1000s beyond (e.g.I know that 18 is a multiple of 6 therefore it must also be a multiple of 3)

Properties of Shape
- Explain the differences between geometric shapes based on their properties and its lines of symmetry.
- Explain strategies for comparing and ordering angles using correct mathematical language.
- Use x and y axis to describe translation of coordinates.

Multiplication and Division
- Reason methods when using distributive law, explaining how this makes mental calculation easier
- Explain links between known tables and other multiples (e.g. 24s, 20s, 18s, 33s etc.)

Fractions and Decimals
- Explain how to calculate decimal equivalents of simple fractions.
- Recognise equivalent fractions, including decimal equivalents, to quickly identify solutions to problems

Measurement
- Explain relationships between different units of measure and the calculations needed to convert between them

Statistics
- Suggest appropriate questions based on data in graphs or table
- Understand data from unfamiliar contexts