

HfL Assessment Criteria for Phase B Steps 4/5/6 (based on curriculum expectations for Year 4)

Maths – Number

Understanding the number system	Calculating
<p>Fluency focus:</p> <p>Numbers up to and including 4 digits (whole numbers and decimal numbers with up to 2 decimal places) through a wide variety of models and representations</p> <ul style="list-style-type: none"> identifies, represents and estimates numbers using different representations (4N4a) counts fluently forwards and backwards to include: <ul style="list-style-type: none"> multiples of 6, 7, 9, 25 and 1000 (4N1) through zero to include negative numbers (4N5) in hundredths (4F1) intervals of 10, 100 and 1000 from a given number recognises the place value of each digit (4N3a) and uses this when ordering and comparing numbers: <ul style="list-style-type: none"> beyond 1000 and when finding 1000 more than a given number (4N2) with the same number of decimal places up to two decimal places (4F8) understanding the value of zero as a place holder rounds any number to the nearest 10, 100 or 1000 (4N4b) and decimals with one decimal place to the nearest whole number (4F7) recognises that hundredths arise when dividing an object by a hundred and dividing tenths by ten (4F1) recognises and shows, using diagrams, families of common equivalent fractions (4F2) reads Roman numerals to 100 (I to C) (4N3b) solves number problems and practical problems within the context of the fluency focus (4N6) 	<p>Arithmetical laws and relationships</p> <ul style="list-style-type: none"> understands and applies the commutative, associative and distributive ‘rules’ when solving calculations e.g. <ul style="list-style-type: none"> that $7 \times 8 = (5 \times 8) + (2 \times 8)$ (distributive) $= 7 \times 2 \times 4$ (associative) ‘balancing expressions’ including those using division, such as $20 + ? = 100 \div 4$ understands the relationship between non-unit fractions and multiplication and division, to include equivalence and fractions as operators <p>Mental fluency</p> <ul style="list-style-type: none"> uses a range of mental strategies for all four operations appropriate to context and within the fluency focus considers the reasonableness of results by reference to the context or to the size of the numbers using the skills of estimation and checks accuracy e.g. use of the inverse (4C3) uses mental recall of multiplication facts including all tables up to 12×12 and quickly derives corresponding division facts, e.g. uses their knowledge of tables and place value in calculations with multiples of 100, such as $600 \div 3 = 200$ can be derived from $2 \times 3 = 6$ (4C6a) uses place value, known and derived facts to multiply and divide, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers (4C6b) recognises and uses factor pairs and commutativity in mental calculations (4C6c) <p>Written fluency</p> <ul style="list-style-type: none"> combines knowledge of number facts and rules of arithmetic to solve written calculations within the fluency focus adds and subtracts numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate (4C2) estimates and uses inverse operations to check answers to a calculation (4C3) multiplies two-digit and three-digit numbers by a one-digit number using formal written layout (4C7) <p>Fractions, decimals and percentages</p> <ul style="list-style-type: none"> adds and subtracts fractions with the same denominator (4F4) recognises and writes decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$ 4F6a and of any number of tenths or hundredths (4F6b) calculates fractions of quantities, including non-unit fractions where the answer is a whole number e.g. find $\frac{3}{4}$ of 20 litres finds the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths (4F9) <p>Solving numerical problems (using a range of mental and written methods across routine and non-routine problems)</p> <ul style="list-style-type: none"> solves addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why (4C4) solves problems involving multiplying and adding, including using the distributive law to multiply two-digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects (4C8) solves problems involving increasingly harder fractions to calculate quantities and fractions to divide quantities, including non-unit fractions where the answer is a whole number (4F10a) and measure and money problems involving fractions and decimals to two decimal places (4F10b) <p>Algebra (in preparation for Year 6 statements)</p> <ul style="list-style-type: none"> begins to use simple formulae expressed in words e.g. rules for finding the perimeter of rectilinear shapes uses and interprets coordinates in the first quadrant

Measurement	Geometry
<p>Money</p> <ul style="list-style-type: none"> is fluent in the use of all denominations (2M3a,b) <p>Metric / imperial measures</p> <ul style="list-style-type: none"> converts different units of measure e.g. km to m (4M5) <ul style="list-style-type: none"> <i>builds on their understanding of place value and decimal notation to record metric measures accurately, including money</i> <i>uses multiplication to convert from larger to smaller units</i> <i>uses division to convert from smaller to larger units</i> <p>Perimeter, area, volume</p> <ul style="list-style-type: none"> measures and calculates the perimeter of a rectilinear figure including squares in centimetres and metres (4M7a) <ul style="list-style-type: none"> <i>expresses perimeter algebraically in the same units</i> finds the area of rectilinear shapes using counting squares (4M7b) <ul style="list-style-type: none"> <i>understands area as a measure of surface</i> <i>relates area to arrays and multiplication</i> <p>Chronology</p> <ul style="list-style-type: none"> reads, writes and converts between analogue (including clock faces using Roman numerals) and digital 12 and 24 hour clocks using am and pm where necessary (4M4a,b) converts between different units of measure e.g. hours to minutes (4M5) <p>Solves problems</p> <ul style="list-style-type: none"> estimates (4M2), compares (4M1) and calculates (4M9) different measures, including money in pounds and pence converts between hours and minutes; minutes to seconds; years to months and weeks to days (4M4c) <ul style="list-style-type: none"> calculates time durations that pass through the hour 	<p>Properties of Shape</p> <ul style="list-style-type: none"> compares and classifies geometric shapes based on their properties and sizes (4G2a) <i>e.g. quadrilaterals and triangles extending to parallelogram, rhombus and trapezium; isosceles and scalene</i> identifies acute and obtuse angles; compares and orders angles up to two right angles (180°) by size (4G4) decides if a polygon is regular or irregular identifies lines of symmetry in 2-D shapes presented in different orientations (4G2b) recognises line symmetry in a variety of diagrams including where the line of symmetry does not dissect the original shape <i>e.g. the original shape may be placed at a distance from and parallel to the axis</i> completes a simple symmetric figure with respect to a specific line of symmetry (4G2c) becomes familiar with different orientations of lines of symmetry <i>e.g. vertical, horizontal and diagonal axes</i> uses a variety of media <i>e.g. peg boards, geo-strips and ICT representation</i> <p>Position and Direction</p> <ul style="list-style-type: none"> describes positions on a 2-D grid as co-ordinates in the first quadrant (4P3a) <ul style="list-style-type: none"> <i>draws and describes a pair of axes in one quadrant, with equal scales and integer labels</i> <i>reads, writes and uses pairs of co-ordinates e.g.(2,5)</i> describes movements between positions as translations of a given unit to the left/right and up/down (4P2) plots specified points and draws sides to complete a given polygon (4P3b)
	Statistics
	<p>Processing, representing and interpreting data</p> <ul style="list-style-type: none"> completes, reads and interprets information presented in bar charts (e.g.: finds the difference between two bars showing temperatures, where one is 20°C and the other is 13°C, on a scale labelled in multiples of five) (4S1) interprets and presents discrete and continuous data using bar charts, and time graphs using a greater range of scales (4S1) solves comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs (4S2) relates the graphical representation of data to recording change over time

Evidence of none or just a few of these skills – refer to B1/2/3 sheet	Entering (some of these aspects secure, or occasional evidence across most skills) = B3	Developing (many of these aspects secure, or more frequent evidence across most skills) = B4	Securing (most of these aspects secure most of the time) = B5	Deepening (almost all of these aspects secure) = B6	All aspects secure, now going 'broader and deeper' = B+
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Please refer to the introduction to this document for further guidance about making judgements for tracking progress.