Symphony Assessment System – **Mathematics** **Bold** = **end of KS Performance Descriptors** which are, other than in exceptional circumstances, deemed essential for a pupil to be assessed at that step
Bold and Underlined are essential but not end of KS performance descriptors

Year Group	**Year 3** (page 1 of 2) TAFs in orange (WTS) red (EXS) green (GDS)		
Point	19	21	23
Grade	3C	3B	3A
Assessment Milestone	**Step 1**	**Step 2**	**Achieved Y3** *Refer to non-statutory guidance for exemplification*
Number and Place Value	▪begin to count from 0 in multiples of 50 and 100 ▪**recognise the place value of each digit in a three-digit number (hundreds, tens, ones)** ▪identify and represent numbers up to 1000 using different representations (using counters, jottings, pictures) ▪**partition 3 digit numbers into hundreds, tens and ones** ▪**partition numbers in different ways e.g. 23 as 20+3 or 10+13 ®** ▪**estimate numbers on an empty number line ®** ▪round numbers to the nearest 10 ® ▪find 10 or 100 more or less than a given number ▪read numbers up to 1000 in numerals	▪count from 0 in multiples of 50 and 100 ▪ **understand importance of 0 as a place holder in numbers up to 1000** ▪name the value of any digit in whole numbers up to 999 ▪partition 3 digit numbers in different ways e.g. 342 becomes 300 +20 +22 ▪identify, represent and estimate numbers up to 1000 using different representations using counters, jottings, pictures) ▪compare and order numbers up to 1000, using >, < and = ▪round numbers to the nearest 100 ▪**find 10 or 100 more or less than a given number** ▪read and write numbers up to 1000 in numerals and in words ▪solve number problems and practical problems involving these ideas.	▪**count from 0 in multiples of 4, 8, 50 and 100** ▪**use partitioning up to 999 to solve problems** ▪identify, represent and estimate numbers using different representations including measures up to 1000 ▪compare and order numbers beyond 1000, using >, < and = ▪**round numbers to nearest 10 or 100** ▪confidently read and write numbers beyond 1000 in numerals and in words ▪read Roman numerals up to 20 ▪solve number problems and practical problems involving these ideas and explain reasoning
Addition and Subtraction	▪**add or subtract two 2-digit numbers where answers may exceed 100 (mentally)** ▪**solve 3 step problems with addition and subtraction within 100:** □**applying their increasing knowledge of mental and written methods ®** ▪ solve + and – in columns without crossing boundaries ▪use rounding to make estimates ▪**reason about addition e.g. the sum of 3 odd numbers will always be odd. ®** ▪**solve more complex missing number problems e.g. 14 + __ - 3 = 17. ®**	▪add and subtract numbers mentally, including: □a three-digit number and ones □a three-digit number and tens (multiples of 10) □a three-digit number and hundreds (multiples of 100) ▪**use columnar method for + and – with 2-digit numbers, crossing tens boundaries** ▪estimate the answer to a calculation ▪begin to solve problems, using number facts, place value, and multiple step addition and subtraction with numbers up to 100. ▪begin to solve missing number problems involving addition and subtraction with numbers bonds up to 100, which include balancing equations.e.g. 48 + ___ = 100	▪add and subtract numbers mentally, including: □a three-digit number and ones ® □a three-digit number and tens (multiples of 10) ® □a three-digit number and hundreds (multiples of 100) ® ▪**add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction up to 999** ▪estimate the answer to a calculation and use inverse operations to check answers ▪solve problems, using number facts, place value, and multiple step addition and subtraction (with numbers up to 100) ▪solve missing number problems involving addition and subtraction with numbers up to 100, which include balancing equations e.g. 48 + ___ = 100 - 32
Multiplication and Division	▪learn facts for 3 times tables and inverse ▪**learn multiplication facts up to 12x3** ▪derive facts for x4, x8 by doubling ▪solve mathematical statements for multiplication and division using known tables	▪recall and use multiplication and division facts for the 3, 4 and 8 times tables ▪begin to write and calculate mathematical statements for multiplication and division using the multiplication tables above, including for two-digit numbers times one-digit numbers, using mental methods and jottings ▪ begin to write and calculate mathematical statements for multiplication and division using the multiplication tables above, including for two-digit numbers times one-digit numbers, using formal written methods ▪solve missing number problems involving multiplication and division	▪**know facts for 2,3,4,5,8,10 times tables up to x12** ▪write and calculate mathematical statements for multiplication and division using the multiplication tables above, including for two-digit numbers times one-digit numbers, using mental methods and jottings ▪ write and calculate mathematical statements for multiplication and division using the multiplication tables above, including for two-digit numbers times one-digit numbers, using formal written methods ▪solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems
Problem Solving and Reasoning	**Pupils demonstrate mastery of the expectations of this year group by solving increasingly complex problems and reasoning mathematically, using the content above.**		

Year Group	Year 3 (page 2 of 2) TAFs in orange (WTS) red (EXS) green (GDS)		
Point	19	21	23
Grade	3C	3B	3A
Assessment Milestone	Step 1	Step 2	Achieved Y3
Fractions	■count up in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10 **■recognise the equivalence of $^1/_2$ and $^2/_4$ in practical contexts and when counting in fractions ®** **■find and compare fractions of amounts e.g. ¼ of £20 = £5 which is greater than ½ of £8 ®** ■solve problems that involve all of the above, with appropriate fractions	■count up and down in tenths **■recognise, find and write fractions of a discrete set of objects: unit fractions with small denominators** ■recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators **■compare and order unit fractions, and fractions with the same denominators** ■recognise and show, using diagrams, equivalent fractions with small denominators and place fractions on a number line ■add and subtract fractions with the same denominator within one whole [for example, $^5/_7 + ^1/_7 = ^6/_7$] with appropriate fractions ■solve problems that involve all of the above, with appropriate fractions	■count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10 **■recognise, find and write fractions of a discrete set of objects: non-unit fractions with small denominators** ■compare and order unit fractions, and fractions with the same denominators using <,> = ■solve problems that involve all of the above, with appropriate fractions, including measures
Measurement	■ read (and apply to problem solving) unlabelled divisions for measure - in 1s, 2s, 10s) **■reason about simple multiplicative relationships such as twice as long or 10 times as high (and drawing upon 2, 5 and 10 times table)** **■tell and write the time to five minutes and draw the hands on a clock face to show these times ®** ■estimate and read time with increasing accuracy to the nearest minute **■know the number of seconds in a minute**	■measure, compare: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) ■add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) **■measure the perimeter of simple 2-D shapes** ■ read (and apply to problem solving) labelled divisions for measure - in 1s, 2s, 5s, 10s, 100s) – and begin to do so for unlabelled divisions up to the same numbers ■estimate and read time with increasing accuracy to the nearest minute using vocabulary of am/pm ■tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12 hour clock ■compare durations of events [for example to calculate the time taken by particular events or tasks]	**■measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)** ■ read (and apply to problem solving) labelled and unlabelled divisions for measure - in 1s, 2s, 5s, 10s, 100s, and other multiples of 1000) **■add and subtract amounts of money to give change, using both £ and p in practical contexts using appropriate amounts up to £5** **■tell and write the time from an analogue clock, including using 12-hour and 24-hour clocks** ■estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, morning, afternoon, noon and midnight ■know the number of days in each month, year and leap year
Properties of Shapes	**■recognise and name prisms** ■draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them and **dentify right angles (as a quarter turn)**	■identify horizontal and vertical lines ■recognise angles as a property of shape or a description of a turn **■identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn**	**■identify vertical and horizontal lines of symmetry in common 2-D shapes.** **■identify pairs of perpendicular and parallel lines** ■identify whether angles are greater than or less than a right angle
Position and Direction	**■use the terms clockwise and anti-clockwise to describe position, direction and movement ®**	■know and use the terms 'North,' 'South,' 'East' and 'West'	**■know and use the terms 'North,' 'North-East,' 'East,' 'South-East,' 'South,' 'South-West,' 'West' and 'North-West'** ■be able to move between compass directions in half and quarter turns
Statistics	**■Interpret and construct pictograms (where the symbols show many-to-one correspondence) and block graphs (where the scale is divided into 2s and 5s) ®** ■understand and use simple scales (e.g. divisions 2, 5 and 10)	■interpret and present data using bar charts, pictograms and tables ■solve **one-step** questions [for example, 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables	**■solve two-step questions [for example, 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables**
Problem Solving	**Pupils demonstrate mastery of the expectations of this year group by solving increasingly complex problems and reasoning mathematically, using the content above.**		