



The Talentum  
Learning Trust

# Mathematics Assessment Grids

## **Attainment Expectations.**

This assessment system uses four 'bands' of attainment: Entering, Developing and Secure, and Greater Depth. It also considers six different stages of progression: Entering, Entering+, Developing, Developing+, Secure, and Greater Depth to support effective tracking. Learners who are assessed to have met age related expectations at the end of the year will be judged to be Secure. The assessment grids are designed to be used as a visual, *best-fit* model. As a guide for teachers, at least half the objectives within each band should be achieved to be judged as working within the band, and a very large majority should be achieved to be working at the '+' stage within the band. Children assessed as 'Greater Depth' will be secure in their year group AND will demonstrate the secure skills in a variety of situation which enrich their learning and show that they can apply the skills with fluency and flair within different contexts

Year 1			
Entering	Entering +	Developing      Developing+	Secure
<b>Number and Place Value</b>			
Continue counting forwards and backwards within 20 from 0, 1, or any given number.	Continue counting forwards and backwards within 50 from 0 or 1, or any given number.	Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number.	
Count and recognise numbers as numerals to 30.	Count, read and write numbers to 50 in numerals	Count, read and write numbers to 100 in numerals; Count in multiples of 2s, 5s and 10s from 0	
Order numbers correctly to 50.	Say a number that is 1 more or 1 less to 50	Given a number within 100, identifies 1 more and 1 less.	
Identify numbers using objects and use the language of: more than, less than (fewer), most, least	Identify and <b>represent</b> numbers using objects and <b>pictorial representations</b> And numerals, and use the language of: <b>equal to</b> , more than, less than (fewer), most, least	Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least	
Read and match numerals to words from 1-10.	Read and begin to write number words from 1-20	Read and write numbers from 1 to 20 in numerals and words, with phonetically plausible spelling.	
<b>Addition and Subtraction</b>			
Understand the vocabulary related to addition (+), subtraction (-) and equals (=) signs.	Use the correct vocabulary when reading and interpreting a simple number sentence.	Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs.	
Explore and represent number bonds within 10	Begin to use number bonds within 10, understand the link to number bonds within 20	Represent and use number bonds and related subtraction facts within 20.	
Add three single digit numbers and subtract two 1-digit numbers within 20.	Add a one-digit number to a two-digit number Subtract a one-digit number from a 2digit number using apparatus	Add and subtract one-digit and two-digit numbers to 20, including 0.	
Solve one-step problems that involve addition and subtraction with support.	Solve one-step problems that involve addition and subtraction, using pictorial representations or apparatus.  Begin to work out the value of a missing number	Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and solve missing number problems such as $7 = ? - 9$	

Year 1			
Entering	Entering +	Developing      Developing +	Secure
<b>Multiplication and Division</b>			
Know doubles to double 5. Recognise a pattern counting in 2s.	Know doubles to double 10. Recognise a pattern counting in 10s. Group objects in 2s, 10s and 5s for counting.	Solve one-step problems involving multiplication and division, applying counting in 2s, 5s or 10s calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.	
<b>Fractions</b>			
Recognise and find a half as 1 of 2 equal parts of a shape.  Use objects to begin to find half of a quantity to 6	Recognise, find and name a half as 1 of 2 equal parts of an object or shape  Find half of quantities to 6	Recognise, find and name a half as 1 of 2 equal parts of an object, shape or quantity.  Find half of quantities to 10	
Recognise and find a quarter as 1 of 4 equal parts of a shape.	Recognise, find and name a quarter as 1 of 4 equal parts of an object or shape.	Recognise, find and name a quarter as 1 of 4 equal parts of an object, shape or quantity.	
<b>Measurement</b>			
Use everyday language to talk about size, weight, capacity, position, distance, time and money.  Compare quantities and objects	Begin to use the correct mathematical language for measurement when comparing quantities and objects	Compare, describe and solve practical problems for: <ul style="list-style-type: none"> <li>lengths and heights [for example, long/short, longer/shorter, tall/short, double/half]</li> <li>mass/weight [for example, heavy/light, heavier than, lighter than]</li> <li>capacity and volume [for example, full/empty, more than, less than, half, half full, quarter]</li> <li>time [for example, quicker, slower, earlier, later]</li> </ul>	
	Compare different types of quantities and measures using non-standard units	Measure and begin to record the following using common standard units: <ul style="list-style-type: none"> <li>lengths and heights</li> <li>mass/weight</li> <li>capacity and volume</li> <li>time (hours, minutes, seconds)</li> </ul>	
Know that 10p is more than 1p.  Total 2 coins, adding 1p to another coin up to 20p	Recognise different denominations of coins to 20p, ordering based on value  Total 2 coins with values up to 20p	Recognise and know the value of different denominations of coins and notes  Total coins to the value of 20	

Year 1			
Entering	Entering +	Developing      Developing +	Secure
		Describe ordering using terms: Before/after, now/next, yesterday/today/tomorrow morning/afternoon/evening	Sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening]
Know that each day has a different name		Say the days of the week in order	Recognise and use language relating to dates, including days of the week, weeks, months and years
Know what month their birthday is in		Begin to name some of the months	
Begin to recognise and use the vocabulary of time Begin to understand that an hour is longer than a minute		Know a clock has an hour and a minute hand Know that a minute is less than an hour	Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times
Geometry-Properties of shape			
Explore the characteristics of everyday 2D objects and shapes and use mathematical language to describe them.		Use mathematical language to describe common 2D shapes.	Recognise and name common 2-D shapes, including: 2-D shapes from objects or pictures of them [for example, rectangles (including squares), circles and triangles]
Explore the characteristics of everyday 3D objects and shapes and use mathematical language to describe them.		Use mathematical language to describe common 2D shapes.	Recognise and name common 3-D shapes, including: 3-D shapes [for example, cuboids (including cubes), pyramids and spheres]
Geometry Position and Direction			
Recognise, create and describe simple patterns.		Use the language of position, direction and motion, including: <ul style="list-style-type: none"> <li>Left/right                      Top/middle/bottom</li> <li>on top of/in front of/ above/ between/ around</li> <li>near/close and far              up/down</li> <li>forwards/backwards              inside/outside.</li> </ul>	Describe position, direction and movement, including whole, half, quarter and three-quarter turns
Year 1			
Greater Depth			
Fluently recall and apply all expected number skills in contexts, explaining working or techniques. Children have successfully completed a range of independent problem solving in varied contexts extending expected level knowledge, use reasoning to explain how the answer has been found/how the problem was solved and why the answer is correct.			

## Year 2

Entering	Entering +	Developing	Developing +	Secure
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### Number and Place Value

Count in multiples of 2's, 5's and 10 from different starting points	Count in steps of 2, 3, 5 and 10 from 0 forwards.	Count in steps of 2, 3, 5 and 10 from 0, forwards and backwards.
Understand that a two digit number is made up of tens and ones, using apparatus to begin to partition	Partition a 2 digit number using pictorial/written representations	Recognise the place value of each digit in a two-digit number (tens, ones) partitioning in different ways eg <b>25</b> – 20 and 5, 10,10,5, 10 and 15 etc
Estimate number of objects to 20.	Identify, represent and estimate numbers up to 20 using different representations, including the number line.	Identify, represent and estimate numbers using different representations, including the number line for numbers up to 100.
Compare and order numbers of objects to 20 using more/less, most/least. Find 10 more than a given 2 digit number	Compare and order 2 numbers up to 100 using more/less, most/least Find 10 more or less than 2 digit numbers	Compare and order numbers from 0 up to 100; use <, > and = signs
Read and match numerals to words up to 50	Read and match numerals to words up to 100	Read and write numbers to at least 100 in numerals and words. *more accurate spelling/some plausible attempts
Use pictorial representations to solve problems involving number facts.	Use number facts to solve problems.	Use place value and number facts to solve problems

### Addition and Subtraction

Solve simple problems with addition and subtraction using pictorial Representations or apparatus	Solve problems with addition and subtraction using the correct operation, using pictorial representations or apparatus	Solve problems with addition and subtraction applying increasing knowledge of mental and jotting/written methods.
Derive addition and subtraction facts up to 20 e.g. counting on using a number line, using objects	Recall and use addition and subtraction facts to 20	Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100
Add and subtract numbers using concrete objects and pictorial representations.	Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: <ul style="list-style-type: none"> <li>• a two-digit number and 1s</li> <li>• a two-digit number and 10s</li> </ul>	Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: <ul style="list-style-type: none"> <li>• a two-digit number and 1s</li> <li>• a two-digit number and 10s</li> <li>• 2 two-digit numbers</li> <li>• adding 3 one-digit numbers</li> </ul>

## Year 2

Entering	Entering +	Developing	Developing +	Secure
Read, write and interpret mathematical statements involving addition (+) , subtraction (-) and equals (=) signs		Know that in addition the answer is more and I know that in subtraction the answer is less.		Show that addition of 2 numbers can be done in any order (commutative) and know that subtraction of 1 number from another cannot.
Recognise and use the inverse relationship between addition and subtraction with apparatus		Recognise and use the inverse relationship between addition and subtraction and use this to check calculations		Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems
Multiplication and Division				
Understand the language of multiplication linking to repeated addition or arrays, times, lots of  Understand the language of division linking to repeated subtraction, sharing and grouping		Understand that when multiplying I can use repeated addition of objects, number line or arrays to show understanding.  When dividing I can use repeated subtraction and sharing/grouping using concrete apparatus.		Show that multiplication of 2 numbers can be done in any order (commutative) and division of 1 number by another cannot
Calculate mathematical statements for multiplication and division within 2s multiplication table linking with doubles facts begin to write using the multiplication ( $\times$ ), division ( $\div$ ) and equals (=) signs		Calculate mathematical statements for multiplication and division within 2s,10s multiplication tables and write them using the multiplication ( $\times$ ), division ( $\div$ ) and equals (=) signs		Calculate mathematical statements for multiplication and division within 2s,5s,10s multiplication tables and write them using the multiplication ( $\times$ ), division ( $\div$ ) and equals (=) signs
Make an array to support multiplication and division.  Use facts from the 2,5 and 10 times tables, linking to counting in steps of 2,5 or 10		Read, write and interpret mathematical statements involving multiplication( $\times$ ) , division ( $\div$ ) and equals (=) signs  Derive and use facts from the 2,5 and 10 times tables, beginning to recall in order		Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers.
Solve one-step problems involving multiplication and division using objects, pictorial representations and arrays with support		Solve one-step problems involving multiplication and division using objects, pictorial representations and arrays.		Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts

## Year 2

Entering	Entering +	Developing	Developing +	Secure
<b>Fractions</b>				
Recognise, find, name and write fractions $\frac{1}{2}$ and $\frac{1}{4}$ of a length or shape		Recognise, find, name and write fractions $\frac{1}{2}$ , $\frac{1}{3}$ , $\frac{1}{4}$ , $\frac{2}{4}$ and $\frac{3}{4}$ of a length, shape or set of objects		Recognise, find, name and write fractions $\frac{1}{3}$ , $\frac{1}{4}$ , $\frac{2}{4}$ and $\frac{3}{4}$ of a length, shape, set of objects or quantity
Know halves of a quantity up to half of 10		Know halves of a quantity up to half of 20 writing some as $\frac{1}{2}$ of 2 = 1, $\frac{1}{2}$ of 4 = 2 Recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$		Write simple fractions e.g. $\frac{1}{2}$ of 6 = 3, $\frac{1}{4}$ of 8 = 2 and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$
<b>Measurement</b>				
Begin to choose and use appropriate standard units to estimate and measure length/height ,(m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) using equipment (rulers, scales, thermometers and measuring vessels) scale of ones with support		Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest unit, using equipment (rulers, scales, thermometers and measuring vessels) scale of ones with increasing accuracy		Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest unit using equipment on a scale in ones, twos, fives, tens  I can compare and order lengths, mass, volume/capacity and record the results using >, < and =
Recognise that different things cost different amounts of money and read values beginning to notice how costs are written  Total the value of 2 coins within 50p		Know the value of different denominations of coins and notes and recognise how this is written  Find different combinations of coins that equal the same amounts of money to 20p		Recognise and use symbols for pounds (£) and pence (p);  Combine amounts to make a particular value  Find different combinations of coins that equal the same amounts of money to 50p  Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change from £1.00

## Year 2

Entering	Entering +	Developing	Developing +	Secure
Write and tell the time to the hour and half hour		Write and tell the time to the hour, half past and quarter past and quarter to and draw the hands on a clock face to show these times		Write and tell the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times  Know the number of minutes in an hour and the number of hours in a day

### Geometry - Properties of Shape

Identify properties of 2-D shapes, including the number of sides using the correct vocabulary	Name and describe common 2-D shapes with an increasing use of correct vocabulary	Identify and describe the properties of 2-D shapes, including the number of sides, and line symmetry in a vertical line  Compare and sort common 2-D and everyday objects
Identify the properties of 3-D shapes, including the number of edges, vertices and faces with prompts or support.	Name and describe a variety of common 3-D shapes with an increasing use of correct vocabulary	Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces  Compare and sort common 3-D shapes and everyday objects  Identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid]

### Geometry - position and direction

Continue a mathematical repeating pattern or sequence	Make a mathematical repeating pattern or sequence	Order and arrange combinations of mathematical objects in patterns and sequences
Make whole, $\frac{1}{2}$ , $\frac{1}{4}$ , $\frac{3}{4}$ turns clockwise and anticlockwise	Identify and describe direction and movement of an object, or picture of an object that has changed	Use mathematical vocabulary to describe position, direction and movement, including movement in a straight line ie reflection, rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise)

Year 2			
Entering	Entering +	Developing      Developing +	Secure
<b>Statistics</b>			
Read/count information on simple pictograms, tally charts, block diagrams and tables.	Begin to construct simple pictograms, tally charts, block diagrams and tables.	Interpret and construct pictograms, tally charts, block diagrams and tables.	
Begin to answer questions about simple pictograms, tally charts, block diagrams and tables.	Ask questions and gather information in simple pictograms, tally charts, block diagrams and tables eg favourite food.	Ask and answer simple questions, sorting by category and counting quantities from simple pictograms, tally charts, block diagrams and tables.	

**Year 2**

**Greater Depth**

Children have successfully completed a range of independent problem solving in varied contexts extending expected level knowledge, use reasoning to explain how the answer has been found/how the problem was solved and why the answer is correct.

For problems with:

- Place value, < > =
- More complex, 2 step problems with addition and subtraction
- Balance problems with missing parts within 100, using inverse knowledge eg  $23 + 9 = ? + 16$ ,  $? + ? + ? = 54$ ,  $76 - ? = 38$
- More complex multiplication and division word problems inc comparison eg which is most – 4 packets of biscuits with 5 in each packet or 3 packets of biscuits with 10 in each packet.
- Fractions when solving problems using shape, objects and quantities.
- Multi -step problems involving addition and subtraction of money, inc giving change or reasoning about money eg together Jack and Sam have £14. Jack has £2 more than Sam. How much money does Sam have etc
- Measures and time duration problems.
- Identifying pattern inc different orientation of shapes, different angles of turn and make predictions of what will come next.

They also:

Fluently recall and apply expected number skills eg number bonds within 20, multiplication and division facts for 2,5,10 times tables to support mental calculations in contexts.

Inc:

Recall and use multiplication and division facts for 2,5,10 times table and make deductions outside know multiplication facts.

Use commutativity and inverse relationships to develop multiplicative reasoning eg  $4 \times 5 = 20$  so  $20 \div 5 = 4$

Accurately estimate numbers on an empty line and explain why they have placed the number in that position

Read scales, as number lines or in measuring situations where not all numbers on the scale are given.

Interpret pictograms, tally charts, block diagrams and tables with more complex scales, units 2,5, or 10

Compare and sort 2D and 3D shapes using properties and precise vocabulary, identifying what is the same and what is different

## Year 3

<b>Entering</b>	<b>Entering +</b>	<b>Developing</b>	<b>Developing +</b>	<b>Secure</b>
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### Number and place value

Count in steps of 50 and 100  Find 10 more or less for 3 digit numbers	Count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number with apparatus  Find 100 more or less than 3 digit numbers	Count from 0 in multiples of 4, 8, 50 and 100; Find 10 or 100 more or less than a given number to 1000
Understand that a three digit number is made up of hundreds, tens and ones, using apparatus to partition	Partition a 3 digit number using pictorial/written representations	Recognise the place value of each digit in a three-digit number (hundreds, tens, ones) partitioning in different ways Eg <b>146</b> – 100+40 +6, 130 +16
Compare 2 numbers to 100, using more/less, most/least	Compare more than 2 numbers up to 1000 using more/less, most/least	Compare and order numbers up to 1000 using < > and =
Identify, represent and estimate numbers up to 100 using different representations	Identify, represent and estimate numbers up to 500 using different representations	Identify, represent and estimate numbers up to 1000 using different representations
Read and match numerals to words, up to 500	Read and match numerals to words, up to 1000	Read and write numbers up to 1000 in numerals and in words *accurate spelling
Solve number problems and practical problems applying above skills	Solve number problems and practical problems applying above skills	Solve number problems and practical problems applying above skills

### Addition and subtraction

Add and subtract numbers using concrete apparatus or pictorial representation: <ul style="list-style-type: none"> <li>a three-digit number and ones</li> <li>a three-digit number and tens</li> <li>a two-digit number and hundreds</li> </ul>	Add and subtract numbers using concrete apparatus, pictorial representation and mentally, including: <ul style="list-style-type: none"> <li>a three-digit number and ones</li> <li>a three-digit number and tens</li> <li>a three-digit number and hundreds</li> </ul>	Add and subtract numbers mentally, including: <ul style="list-style-type: none"> <li>a three-digit number and ones</li> <li>a three-digit number and tens</li> <li>a three-digit number and hundreds</li> </ul>
Add 2 digit numbers and subtracting 2 digit numbers using column methods ( no crossing tens)	Add and subtract numbers with two digits, using formal written methods of columnar addition and subtraction (crossing tens)	Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction
	Begin to make sensible estimates using place value knowledge	Estimate the answer to a calculation and use inverse operations to check answers on a regular basis

## Year 3

Entering	Entering +	Developing	Developing +	Secure
Solve missing number balance problems up to 100 Eg $23 + 9 = ? + 16$ $? + ? + ? = 38$ $78 - ? = 62$		Solve problems, including missing number problems, using number facts and place value. Eg. $148 + 25 = ? + 31$ $? + ? + ? = 256$		Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction. Eg. $5?3$ $?0?$ $\begin{array}{r} -218 \\ \hline 315 \end{array}$ $\begin{array}{r} -2?8 \\ \hline 246 \end{array}$

### Multiplication and Division

Count in steps of 3 and 4	Recall multiplication facts for the 3 and 4 multiplication tables	Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables
Write and calculate mathematical statements for multiplication and division using the multiplication tables 2s,5s,10s,3s,4s that they know, including for two-digit numbers x one-digit numbers, using mental methods or a reliable method	Write and calculate mathematical statements for multiplication and division using the multiplication tables 2s,5s,10s,3s,4s that they know, including for two-digit numbers x one-digit numbers, using mental methods or a reliable method	Write and calculate mathematical statements for multiplication and division using the multiplication tables 2s,5s,10s,3s,4s,8s including for two-digit numbers times x one-digit numbers, using mental and progressing to formal written methods
	Solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems	Solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects.

### Fractions

Recognise tenths as 10 equal parts and 10/10 as a whole	Count up in tenths; recognise that tenths arise from dividing an object into 10 equal parts	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 unit fractions using concrete apparatus	Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators using apparatus, models or pictorial representation.	Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators  Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators
	Recognise the equivalence of halves, quarters, fifths and tenths using practical apparatus.	Recognise and show, using diagrams, equivalent fractions with small denominators

Year 3				
Entering	Entering +	Developing	Developing +	Secure
Add fractions with the same denominator working practically or using models ie bar model method		Add fractions with the same denominator within one whole		Add and subtract fractions with the same denominator within one whole
Compare fractions with the same denominators identifying which is more/less, most/least		Compare unit fractions identifying which is more/less, most/least		Compare and order unit fractions, and fractions with the same denominators
Solve fraction problems that involve all of the above		Solve fraction problems that involve all of the above		Solve fraction problems that involve all of the above.
Measurement				
		Measure and compare lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)		Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)
Practically measure perimeter using non-standard units eg strides around playground		Be able to find the perimeter of squares and rectangles drawn on squared paper by counting		Measure the perimeter of simple 2-D shapes
Add values in £ and p using notation to record accurately		Add and subtract amounts of money (combined £ and p) to give change using practical apparatus		Add and subtract amounts of money to give change, using both £ and p in practical contexts
Tell and write the time from an analogue clock to all five minute intervals beginning to recognise some corresponding times in different forms ie Roman numerals, 24 hour		Tell and write the time from an analogue clock, including using Roman numerals from I to XII, to the nearest five minutes		Tell and write the time from an analogue clock, including using Roman numerals from I to XII, 12-hour 24-hour
Estimate and read time with increasing accuracy to the nearest quarter of an hour; record and compare time in terms of hours and o'clock; use vocabulary such as a.m./p.m., morning, afternoon, noon and midnight		Estimate and read time with increasing accuracy to the nearest five minutes; record and compare time in terms of seconds, minutes, hours and o'clock; use vocabulary such as a.m./p.m., morning, afternoon, noon and midnight		Estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes, hours and o'clock; use vocabulary such as a.m./p.m., morning, afternoon, noon and midnight
Know the number of seconds in a minute and the number of minutes in an hour		Know the number of seconds in a minute, the number of minutes in an hour and the number of days in each month.		Know the number of seconds in a minute and the number of days in each month, year and leap year
Compare durations of events given in seconds or minutes		Compare durations of events that involve simple conversion		Compare durations of events, for example to calculate the time taken by particular events or tasks.

Year 3			
Entering	Entering +	Developing      Developing +	Secure
<b>Geometry - Properties of shape</b>			
Draw 2-D shapes and make 3-D shapes using modelling materials with support	Draw 2-D shapes and make 3-D shapes using modelling materials; begin to recognise 3-D shapes in different orientations	Draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them.	
Recognise that angles are a description of a turn	Recognise that angles are a description of a turn Eg. turn shapes through angles to show shapes in different orientations	Recognise that angles are a property of shape or a description of a turn (rotation) Identify the number of angles in common shapes	
Identify right angles, and when prompted, recognise that two right angles make a half-turn and four a complete turn	Identify right angles, recognise that two right angles make a half-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 angles that are greater than or less than a right angle.	
Identify horizontal and vertical lines	Identify horizontal and vertical lines and begin to identify parallel lines.	Identify horizontal and vertical lines and pairs of perpendicular and parallel lines.	
<b>Statistics</b>			
Read and interpret data using pictograms, tables and block graphs	Present data using pictograms, tables and bar charts with simple scales.	Investigate, interpret and present data using bar charts, pictograms and tables	
Solve simple one-step and two-step questions using information presented in simple block charts, pictograms and tables with support	Solve one-step and two-step questions using information presented in simple bar charts, pictograms and tables	Solve one-step and two-step questions such as 'How many more?' and 'How many fewer?' using information presented in scaled bar charts and pictograms and tables.	
<b>Year 3</b>			
<b>Greater Depth</b>			
Fluently recall and apply all expected number skills in contexts, explaining working or techniques.			
Children have successfully completed a range of independent problem solving in varied contexts extending expected level knowledge, use reasoning to explain how the answer has been found/how the problem was solved and why the answer is correct.			

## Year 4

Entering	Entering +	Developing	Developing +	Secure
<b>Number and place value</b>				
Count in 25s, 1000s Find 100 more or less than four digit numbers		Count in multiples of 6,7,9,25 and 1000 using apparatus		Count in multiples of 6,7,9,25 and 1000  Find 1000 more or less than a given number to 10,000
		Recognise negative numbers in everyday contexts explaining the number sequence eg thermometer		Count backwards through zero to include negative numbers
Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, ones) using apparatus		Partition a 4 digit number using pictorial/written representations		Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) partition in different ways Eg <b>1234</b> is 1000+ 200 + 30 +4, 1200 + 34
Compare and order 2 numbers beyond 1000 using more/less, most/least		Compare more than 2 numbers beyond 1000 using more/less, most/least		Order and compare numbers beyond 1000 using < > =
Round any number to the nearest 10		Round any number to the nearest 10 or 100.		Round any number to the nearest 10, 100 or 1000
Solve number problems and practical problems using place value knowledge up to four digit numbers.		Solve number and practical problems that involve place value with larger four-digit numbers		Solve number and practical problems that involve all of the above with increasingly large positive numbers
Read Roman numerals to 10 (I to X)		Know the key Roman numerals up to 100 (I=1, X=10, L=50 and C=100)		Read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value
<b>Addition and subtraction</b>				
Add and subtract numbers with up to 3 digits using the formal written methods of columnar addition and subtraction (3 digit compact)		Add and begin to subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction (4 digit compact) with support		Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate (4 digit compact)
Estimates answers to calculations before calculating.		Estimates answers and uses inverse operations to check answers to a calculation (up to 4 digits) beginning to be more consistent		Estimates answers and uses inverse operations to check answers to calculations (up to 4 digits) consistently.

Year 4				
Entering	Entering +	Developing	Developing +	Secure
Begin to solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.		Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use with some explanation.		Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and explaining clearly.
Multiplication and Division				
Count in steps of 6 and 8		Recall and use multiplication facts for all multiplication tables to 12 x12 ( inc x0 and x1)		Recall multiplication and division facts for multiplication tables up to 12 × 12 ( inc ÷ 1)
		Multiply together three numbers, beginning to choose with support most appropriate recall of facts to use		Multiply together three numbers, choosing and explaining best technique
Recognise what factor pairs are.		Recognise some numbers have different numbers of factors. Find factor pairs for increasingly larger numbers		Recognise and use factor pairs and commutativity in mental calculations
Begin to multiply two-digit numbers a one-digit number using formal written layout		Multiply two-digit and three-digit numbers by a one-digit number using formal written layout with support		Multiply two-digit and three-digit numbers by a one-digit number using formal written layout.
		Solve integer scaling problems and harder correspondence problems such as n objects are connected to m with support		Solve integer scaling problems and harder correspondence problems such as n objects are connected to m  Solve problems involving multiplying and adding, including using the distributive laws to multiply two digit numbers by one digit number.
Fractions				
Sort and group fraction families showing equivalence		Recognise and show, using diagrams, families of equivalent fractions		Recognise and show, using diagrams, families of common equivalent fractions
Recognise hundredths as 100 equal parts and 100/100 as a whole		Count up in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten.		Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten.
		Find the effect of dividing a one- or two digit number by 10, identifying the value of the digits in the answer as ones and tenths.		Find the effect of dividing a one- or twodigit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths

## Year 4

Entering	Entering +	Developing	Developing +	Secure
	Can count in decimals of a whole		Understand what one decimal place means.	Round decimals with one decimal place to the nearest whole number
	Solve problems involving fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole Number using apparatus to support calculation		Solve problems involving fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number	Solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number
			Add fractions with the same denominator beyond one whole	Add and subtract fractions with the same denominator beyond one whole
	Use place value to read and build decimals with 1 and 2 decimal places.		Recognise and write decimal equivalents of any number of tenths	Recognise and write decimal equivalents of any number of tenths or hundredths
			Recognise and write decimal equivalents to $\frac{1}{2}$ and $\frac{1}{4}$	Recognise and write decimal equivalents to $\frac{1}{2}$ $\frac{1}{4}$ and $\frac{3}{4}$
			Compare numbers with the same number of decimal places up to one decimal place	Compare numbers with the same number of decimal places up to two decimal places
	Solve simple measure problems involving fractions		Solve simple measure and money problems involving fractions and decimals to one decimal place.	Solve simple measure and money problems involving fractions and decimals to two decimal places.

## Measurement

	Convert between different units of measure resulting in integer answers when prompted		Begin to experience a wider range of conversions for measure and time	Convert between different units of measure [for example, kilometre to metre; hour to minute]
			Find the perimeter on squared paper of a rectilinear shape	Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres
	Make different shapes using squares and begin to record solutions on squared paper		Make different shapes using squares and record solutions on squared paper; begin to associate these diagrams with area	Find the area of rectilinear shapes by counting squares
			Begin to estimate different measures, including money in pounds and pence with support	Estimate, compare and calculate different measures, including money in pounds and pence

## Year 4

Entering	Entering +	Developing	Developing +	Secure
Read and match times from analogue and digital 12 hour clock		Read and match times from analogue and digital 24 hour clock  Match times on 12 hour and 24 hour clocks explaining meaning		Read, write and convert time between analogue and digital 12- and 24-hour clocks
Begin to solve simple problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days with prompts				Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days.
<b>Geometry – properties of shapes</b>				
Compare geometric shapes, including sets of quadrilaterals and triangles		Compare and describe geometric shapes, based on their properties and sizes with support		Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes
Confidently identify right angles without being prompted; begin to compare and order angles up to two right ( $180^\circ$ ) by size		Identify whether an angle is less or greater than a right angle and begin to use the language of acute and obtuse when prompted		Identify acute and obtuse angles using language appropriately and compare and order angles up to two right angles by size
		Begin to identify lines of symmetry in 2-D shapes presented in different orientations		Identify lines of symmetry in 2-D shapes presented in different orientations
Begin to complete a simple symmetric figure with respect to a horizontal or vertical line of symmetry				Complete a simple symmetric figure with respect to a specific line of symmetry.
<b>Geometry – position and direction</b>				
Begin to describe positions on a 2-D grid as coordinates in the first quadrant describe movements between positions		Describe positions on a 2-D grid as coordinates in the first quadrant describe movements and begin to use correct notation when prompted		Describe positions on a 2-D grid as coordinates in the first quadrant describe movements between positions as translations of a given unit to the left/right and up/down
Plot specified points with support.		Plot specified points with increasing confidence		Plot specified points and draw sides to complete a given polygon.

Year 4			
Entering	Entering +	Developing      Developing +	Secure
Statistics			
Read, interpret and present data accurately using bar charts, pictograms and table	Begin to interpret and present data using time graphs	Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs.	
Answer questions to solve simple one-step and two-step problems using information presented in bar charts, pictograms, tables and other graphs when prompted	Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs with support	Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.	
Year 4			
Greater Depth			
<p>Fluently recall and apply all expected number skills in contexts, explaining working or techniques</p> <p>Children have successfully completed a range of independent problem solving in varied contexts extending expected level knowledge, use reasoning to explain how the answer has been found/how the problem was solved and why the answer is correct.</p>			