

# **CASTLE PRIMARY SCHOOL**

## **MATHEMATICS ASSESSMENT GRIDS**

**Based On Grids Produced By  
Entrust and Staffordshire County council**

## **Suggestions for using age related progression grids:**

### **As a Planning Tool**

- To ensure clear differentiation and progressive steps towards age related expectations.
- To enable challenge for more able learners to deepen understanding and reasoning skills.
- Individual grids can be used to highlight gaps for a particular learner/group of learners.

### **As Teacher Assessment**

- To be completed for each learner individually/ability groups where statements are highlighted once objectives are achieved.
- To be used to aid the creation of Steps to Learning/Success criteria/Progress arrows to self-assess so that learners understand their next steps and how they can progress in different areas of Mathematics.
- To be highlighted in different colours half termly to show progression.

### **Moderation**

- To be used in the same way as historical APP grids to assess groups of learners/all learners individually.
- To be highlighted termly to show progression.
- To be used to support teacher judgements by dating with evidence in books.
- To be used when moderating with Mathematics leaders, across phase groups, whole school and clusters.

Name:		Academic Year:	
Autumn 1	Autumn 2	Spring 1	Spring 2
			Summer 1
			Summer 2

**Year 1**

<b>WORKING TOWARDS STANDARD</b>	<b>EXPECTED STANDARD</b>	<b>GREATER DEPTH STANDARD</b>
<b>2</b>	<b>3</b>	<b>4</b>

**Number and Place Value**

Continue to count from any number to 100.	Continue counting forwards and backwards to 100 from any given number.	Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number.	Begin to recognise place value in numbers beyond 20 by reading, writing, counting and comparing numbers up to 100 .
Count and read numbers to 100 in numerals.	Write numbers to 100 in numerals	Count, read and write numbers to 100 in numerals; count in multiples of 2s, 5s and 10s	Recognise simple patterns of multiples e.g. Multiplies of 5 always end in a 0 or 5 and odd and even numbers.
Order numbers correctly to 50.	Say a number that is 1 more or 1 less to 50	Given a number, identifies 1 more and 1 less.	Be able to solve and begin to explain a word problem where 1 more or less is needed for the answer without counting.
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> including the number line, 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	Be able to show if a number is bigger or smaller than another by positioning them on a blank number line.
Read and write number words from 1-10.	Read and write number words from 11- 20.	Read and write numbers from 1 to 20 in numerals and words.	Be able to read number words in a simple Maths word problem.

Name:				Academic Year:			
Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2		

Year 1		
WORKING TOWARDS STANDARD 2	EXPECTED STANDARD 3	GREATER DEPTH STANDARD 4

### Addition and Subtraction

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.	Be able to find the missing operation in a subtraction or addition mathematical statement.
Represent and use number bonds and related subtraction facts within 10.	Represent and use number bonds and related subtraction facts within 15.	Represent and use number bonds and related subtraction facts within 20.	Memorise and reason with number bonds to 10 and 20 in several forms e.g. $9 + 7 = 16$ , $16 - 9 = 7$ , $7 = 16 - 9$ and realise the effect of adding or subtracting 0.
Add two 1-digit numbers.	Add a one-digit number to a two-digit number Subtract a one-digit number from a 2-digit number	Add and subtract one-digit and two-digit numbers to 20, including 0.	Confidently and accurately add and subtract two 2-digit numbers up to 20
Solve one-step problems that involve addition and subtraction, using concrete objects.	Solve one-step problems that involve addition and subtraction, using pictorial representations.  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 $7 = ? - 9$	Record work using + - and = symbols and explain why it is used for a given problem

### Multiplication and Division

Recognise a pattern counting in 2s. Know doubles to double 5.	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, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.	Make connections between arrays, number patterns and counting in 2s, 5s and 10s.
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Year 1					
WORKING TOWARDS STANDARD 2		EXPECTED STANDARD 3		GREATER DEPTH STANDARD 4	
Fractions					
Recognise, find and name a half as 1 of 2 equal parts of a shape.  Find half of a quantity less than 10.		Recognise, find and name a half as 1 of 2 equal parts of an object, shape or quantity.		Recognise, find and name a half as 1 of 2 equal parts of an object, shape or quantity.	
Recognise, find and name 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.	
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Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2

Name:		Academic Year:					
Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2		
<b>Year 1</b>							
<b>WORKING TOWARDS STANDARD 2</b>		<b>EXPECTED STANDARD 3</b>		<b>GREATER DEPTH STANDARD 4</b>			
<b>Measurement</b>							
<p>Use everyday language to talk about size, weight, capacity, position, distance, time and money.</p> <p>Compare quantities and objects and solve problems</p>		<p>Begin to use the correct mathematical language for measurement when comparing quantities and objects</p>		<p>Compare, describe and solve practical problems for:</p> <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>		<p>Begin to use common standard units of measurement when comparing and using different quantities and objects</p> <p>Begin to recognise standard measures when using measuring tools such as a ruler, weighing scales and containers</p>	
<p>Use everyday language to talk about size, weight, capacity, position, distance, time and money.</p>		<p>Use and compare different types of quantities and measures using non-standard units</p>		<p>Measure and begin to record the following:</p> <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> <li>recognise and know the value of different denominations of coins and notes</li> <li>sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening]</li> </ul>		<p>Show and explain my thinking when solving simple measurement problems e.g. how much I have left if I have 80p and I spend 10p guessing the name of the bear at the school fair, without counting in 1s</p>	
<p>Know that each day has a different name</p> <p>Know what month their birthday is in</p>		<p>Say the days of the week in order</p> <p>Begin to name some of the months</p>		<p>Recognise and use language relating to dates, including days of the week, weeks, months and years</p>		<p>Answer simple questions related to the order of the days of the week, months and years</p>	

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 minute hand	Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times	Begin to compare and sequence intervals of time e.g. the school day
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Name:				Academic Year:			
Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2		

**Year 1**

<b>WORKING TOWARDS STANDARD 2</b>	<b>EXPECTED STANDARD 3</b>	<b>GREATER DEPTH STANDARD 4</b>
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**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 [for example, rectangles (including squares), circles and triangles]	Recognise 2D shapes in different orientations and sizes and explain why rectangles and triangles are not always similar to others.
Explore the characteristics of everyday 3D objects and shaped and use mathematical language to describe them.	Use mathematical language to describe common 3D shapes.	Recognise and name common 3-D shapes, including: 3-D shapes [for example, cuboids (including cubes), pyramids and spheres]	Recognise 3D shapes in different orientations and sizes and explain why cuboids and pyramids are not always similar to others.

**Geometry Position and Direction**

Recognise, create and describe patterns.	Use the language of position, direction and motion, including: left and right, top, middle and bottom, on top of, in front of, above, between, around, near, close and far, up and down, forwards and backwards, inside and outside.	Describe position, direction and movement, including whole, half, quarter and three-quarter turns	Make whole, half, quarter and three-quarters turn in both directions and connect turning clockwise and anti-clockwise with movement on a clock face.
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Name:				Academic Year:			
Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2		
<b>Year 2</b>							
<b>WORKING TOWARDS STANDARD 2</b>		<b>EXPECTED STANDARD 3</b>			<b>GREATER DEPTH STANDARD 4</b>		
<b>Number and Place Value</b>							
Count in different multiples of 2's, 5's and 10	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.	Count in steps of 2, 3, 5 and 10 from 0, forwards and backwards.	Recognise and identify a multiple of 2, 5 and 10 of any given number.			
Understand that a two digit number is made up of tens and ones.	Partition a 2 digit number using Dienes apparatus and pictorial representations	Recognise the place value of each digit in a two-digit number (tens, ones)	Recognise the place value of each digit in a two-digit number (tens, ones)	Recognise and understand the place value of each digit in a three-digit number (hundreds, tens, ones)			
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.	Identify, represent and estimate numbers using different representations, including the number line for numbers up to 100.	Accurately estimate numbers on an empty line and explain why they have placed my number in that position.			
Compare and order numbers of objects to 20.	Compare and order numbers up to 100	Compare and order numbers from 0 up to 100; use <, > and = signs	Compare and order numbers from 0 up to 100; use <, > and = signs	Solve problems using <, > and = signs numbers up to 100 and explain my reasoning.			
Read and write numbers from 1-20 in numerals and words.	Read and write numbers to at least 50 in numerals and words.	Read and write numbers to at least 100 in numerals and words.	Read and write numbers to at least 100 in numerals and words.	Read numbers correctly in words when solving a mathematical problem.			
Use pictorial representations to solve problems involving number facts.	Use number facts to solve problems.	Use place value and number facts to solve problems	Use place value and number facts to solve problems	Explain the method I have used and how the problem was solved and why the answer is correct.			

Name:		Academic Year:			
Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<b>Year 2</b>					
<b>WORKING TOWARDS STANDARD 2</b>		<b>EXPECTED STANDARD 3</b>		<b>GREATER DEPTH STANDARD 4</b>	
<b>Addition and Subtraction</b>					
Solve simple problems with addition and subtraction using pictorial representations		Solve problems with addition and subtraction using the correct operation		Solve problems with addition and subtraction applying my increasing knowledge of mental and 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>	
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	
				Be able to make 2 correct additions and 2 subtractions using 2 digit numbers.	

Name:		Academic Year:			
Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<b>Year 2</b>					
<b>WORKING TOWARDS STANDARD 2</b>		<b>EXPECTED STANDARD 3</b>		<b>GREATER DEPTH STANDARD 4</b>	
<b>Multiplication and Division</b>					
Understand that when multiplying I can use repeated addition on a number line and arrays to show understanding.  When dividing I can use repeated subtraction and sharing/grouping using concrete apparatus.		Know and use the 2,5 and 10 times tables in order		Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers.	
Calculate mathematical statements for multiplication and division for 2s and 10s and recognise multiplication ( $\times$ ), division ( $\div$ ) and equals (=) signs		Recognise multiplication ( $\times$ ), division ( $\div$ ) and equals (=) signs and calculate mathematical statements for multiplication and division for 2s, 10s and 5s		Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication ( $\times$ ), division ( $\div$ ) and equals (=) signs	
Make an array to support multiplication and division.		Read, write and interpret mathematical statements involving multiplication( $\times$ ) , division ( $\div$ ) and equals (=) signs		Show that multiplication of 2 numbers can be done in any order (commutative) and division of 1 number by another cannot	
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	
				Use commutativity and inverse relations to develop multiplicative reasoning e.g. $4 \times 5 = 20$ and $20 \div 5 = 4$	
				Select the correct operation for a problem using multiplication and division	
				Recognise and use the inverse relationships between multiplication and division	
				Show and explain how knowing a multiplication fact helps me to solve a division word problem and record related number sentences	

Year 2					
WORKING TOWARDS STANDARD 2		EXPECTED STANDARD 3		GREATER DEPTH STANDARD 4	
Fractions					
Recognise, find, name and write fractions $\frac{1}{4}$ and $\frac{2}{4}$ of a length or shape		Recognise, find, name and write fractions $\frac{1}{3}$ , $\frac{1}{4}$ , $\frac{2}{4}$ 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	
Write simple fractions e.g. $\frac{1}{2}$ of 6 = 3		Recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$		Write simple fractions e.g. $\frac{1}{2}$ of 6 = 3 and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$	
Solve and explain how to use fractions when solving problems using shape, objects and quantities		Count in halves and quarters up to 10 on a numberline and begin to understand the concept of fractions as numbers			
Name:				Academic Year:	
Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2

Name:		Academic Year:			
Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<b>Year 2</b>					
<b>WORKING TOWARDS STANDARD 2</b>		<b>EXPECTED STANDARD 3</b>		<b>GREATER DEPTH STANDARD 4</b>	
<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 rulers, scales, thermometers and measuring vessels 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 appropriate unit, using rulers, scales, thermometers and measuring vessels 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 appropriate unit, using rulers, scales, thermometers and measuring vessels  I can compare and order lengths, mass, volume/capacity and record the results using >, < and =	
Recognise that different things cost different amounts of money		Recognise and know the value of different denominations of coins and notes		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  Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change	
Write and tell the time to the hour, half past and quarter past and draw the hands on a clock face to show these times		Write and tell the time to the hour, half past and quarter past 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	
				Add and subtract different measures to help me solve and explain a problem	
				Solve and explain problems involving addition and subtraction of money of the same unit, including giving change	
				Solve and explain simple problems involving time using a numberline	

Year 2					
WORKING TOWARDS STANDARD 2		EXPECTED STANDARD 3		GREATER DEPTH STANDARD 4	
Geometry - Properties of Shape					
Begin to identify and describe the properties of 2-D shapes, including the number of sides using the correct vocabulary		Name a variety of 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	
Begin to identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces with prompts or support.		Name 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]	
Name:				Academic Year:	
Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2

Year 2		
WORKING TOWARDS STANDARD 2	EXPECTED STANDARD 3	GREATER DEPTH STANDARD 4

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	Work with patterns of shapes and predict what will come next.
Use mathematical vocabulary to describe position,	Use mathematical vocabulary to describe direction and movement including distinguishing between rotation as a turn	Use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise)	Understand the concept and language of angles (right angles) to describe 'turn' by applying rotations, including in practical contexts

Name:		Academic Year:			
Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2

Statistics			
Recognise simple pictograms, tally charts, block diagrams and tables.	Recognise simple pictograms, tally charts, block diagrams and tables.	Recognise simple pictograms, tally charts, block diagrams and tables.	Recognise simple pictograms, tally charts, block diagrams and tables.
Begin to ask questions about simple pictograms, tally charts, block diagrams and tables.	Be able to ask questions about simple pictograms, tally charts, block diagrams and tables.	Be able to ask questions about simple pictograms, tally charts, block diagrams and tables.	Be able to ask more complex questions about simple pictograms, tally charts, block diagrams and tables.

Name:		Academic Year:	
Autumn 1	Autumn 2	Spring 1	Spring 2
			Summer 1
			Summer 2

<b>Year 3</b>
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<b>WORKING TOWARDS STANDARD 2</b>	<b>EXPECTED STANDARD 3</b>	<b>GREATER DEPTH STANDARD 4</b>
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<b>Number and place value</b>
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Count in steps of 2, 3, 5 and 10 from any number forward and backwards.	Count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number  Find 10 more or less than a given number and 100 more than a given number	Count from 0 in multiples of 4, 8, 50 and 100;  Find 10 or 100 more or less than a given number	Count from 0 in multiples of 6, 25 and 1000
Recognise the place value of each digit in a two-digit number	Start to recognise the place value of each digit in a three-digit number (hundreds, tens, ones)	Recognise the place value of each digit in a three-digit number (hundreds, tens, ones)	Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, ones)
Compare and order numbers up to 100	Compare numbers up to 1000	Compare and order numbers up to 1000	Compare and order numbers beyond 1000
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	Identify, represent and estimate numbers beyond 1000 using different representations
Read and write numbers to at least 1000 in numerals and in words	Read and write numbers up to 1000 in numerals	Read and write numbers up to 1000 in numerals and in words	Read and write numbers beyond up to 10,000 in numerals and in words



Solve number problems and practical problems involving the ideas above	Solve number problems and practical problems involving the ideas above	Solve number problems and practical problems involving the ideas above	Solve number problems and practical problems involving the ideas above
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## Year 3

<b>WORKING TOWARDS STANDARD</b>	<b>EXPECTED STANDARD</b>	<b>GREATER DEPTH STANDARD</b>
<b>2</b>	<b>3</b>	<b>4</b>

### Addition and subtraction

<p>Add and subtract numbers mentally, including:</p> <ul style="list-style-type: none"> <li>a two-digit number and ones</li> <li>a two-digit number and tens a two-digit number and hundreds</li> </ul>	<p>Add and subtract numbers mentally, including:</p> <ul style="list-style-type: none"> <li>a three-digit number and ones</li> <li>a three-digit number and tens</li> </ul>	<p>Add and subtract numbers mentally, including:</p> <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>	<p>Pupils continue to practise both mental methods for addition and subtraction with increasingly large numbers</p>
<p>Record addition and subtraction in columns to support place value</p>	<p>Add and subtract numbers with up to two digits, using formal written methods of columnar addition and subtraction</p>	<p>Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction</p>	<p>Add and begin to subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate</p>
<p>Use the inverse relationship between addition and subtraction to check calculations</p>	<p>Start to estimate the answer to a calculation and use inverse operations to check answers</p>	<p>Estimate the answer to a calculation and use inverse operations to check answers on a regular basis</p>	<p>Use inverse operations to check answers to a calculation with numbers up to 4 digits.</p>
<p>Solve missing number problems</p>	<p>Solve problems, including missing number problems, using number facts and place value.</p>	<p>Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction.</p>	<p>Begin to solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.</p>
Name:		Academic Year:	

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
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Name:		Academic Year:			
Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2

**Year 3**

<b>WORKING TOWARDS STANDARD 2</b>	<b>EXPECTED STANDARD 3</b>	<b>GREATER DEPTH STANDARD 4</b>
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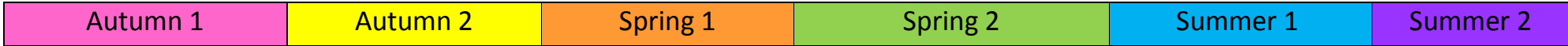
**Multiplication and Division**

Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables	Recall and use multiplication and division facts for the 3 and 4 multiplication tables	Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables	Recall and use multiplication and division facts for the 3, 4, 6 and 8, 9 and 11 multiplication tables
Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication, division and equals signs.	Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental methods	Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods	Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and formal written methods
Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.	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.	Confidently 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.

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<b>Year 3</b>					
<b>WORKING TOWARDS STANDARD</b> <b>2</b>		<b>EXPECTED STANDARD</b> <b>3</b>		<b>GREATER DEPTH STANDARD</b> <b>4</b>	
<b>Fractions</b>					
Count up to 10 in halves and quarters	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	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	Count up in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten and use these in a growing variety of problems.		
Write simple fractions of numbers for example $\frac{1}{2}$ of 6=3	Recognise, find and write fractions of a discrete set of objects: unit fractions with small denominators	Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators	Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with larger denominators and use these in a growing variety of problems.		
	Recognise and use fractions as numbers: unit fractions with small denominators	Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators	Recognise and use fractions as numbers: unit fractions and non-unit fractions with larger denominators and use these in a growing variety of problems.		
Recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$	Recognise the equivalence of halves, quarters, fifths and tenths.	Recognise and show, using diagrams, equivalent fractions with small denominators	Recognise and show, using diagrams, families of equivalent fractions and use these in a growing variety of problems.		
Recognise that if you add 2 halves together or 4 quarters together they add up to 1.	Add fractions with the same denominator within one whole	Add and subtract fractions with the same denominator within one whole	Add fractions with the same denominator beyond one whole and use these in a growing variety of problems.		
Compare and order fractions with the same denominators	Compare and order fractions with the same denominators and compare unit fractions	Compare and order unit fractions, and fractions with the same denominators	Begin to recognise there is equivalence between fractions and decimals.		
Solve problems that involve all of the above	Solve problems that involve all of the above	Solve problems that involve all of the above	Solve problems that involve all of the above		



Year 3			
WORKING TOWARDS STANDARD 2	EXPECTED STANDARD 3		GREATER DEPTH STANDARD 4
<b>Measurement</b>			
Estimate and measure lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)	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)	I can measure and compare, selecting the appropriate tools and units; add and subtract using mixed units and equivalence of units e.g. 75cm and $\frac{1}{2}$ m
Be able to find the perimeter of squares and rectangles drawn on squared paper by counting	Measure the perimeter of squares, rectangles and triangles	Measure the perimeter of simple 2-D shapes	I can measure and calculate the perimeter of simple 2-D shapes accurately
Add and subtract simple amounts of money using the support of practical apparatus	Add and subtract amounts of money to give change, using practical apparatus if needed	Add and subtract amounts of money to give change, using both £ and p in practical contexts	I can add and subtract amounts of money including mixed units and give change in manageable amounts
Tell and write the time from an analogue clock to the nearest quarter of an 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, and 12-hour and 24-hour clocks	I can confidently apply knowledge of time, including using Roman numerals, 12-hour and 24-hour, to a wide range of practical contexts; convert between 12-hour and 24-hour clocks
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	Estimate and read time with accuracy to the nearest minute; record and compare time in terms of seconds, minutes, hours and days; Confidently 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	Know and apply knowledge of the number of seconds in a minute and the number of days in each month, year and leap year to a wide range of applications
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.	Confidently compare durations of events given in a range of formats
Name:		Academic Year:	



Name:				Academic Year:			
Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2		
<b>Year 3</b>							
<b>WORKING TOWARDS STANDARD</b> <b>2</b>		<b>EXPECTED STANDARD</b> <b>3</b>			<b>GREATER DEPTH STANDARD</b> <b>4</b>		
<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.		Describe, with appropriate vocabulary, the properties of 2- D and 3-D shapes, when presented in a range of formats, using my knowledge of lengths and angles	
Recognise that angles are a description of a turn with support		Recognise that angles are a description of a turn		Recognise that angles are a property of shape or a description of a turn		Recognise that angles are a property of shape or a description of a turn and can be measured in degrees or as a fraction both clockwise and anticlockwise	
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, three make three quarters of a turn and four a complete 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 whether angles are greater than or less than a right angle.		Demonstrate secure understanding that two right angles = $180^\circ = \frac{1}{2}$ turn and three right angles = $270^\circ = \frac{3}{4}$ turn; Classify angles according to their size	
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.		Apply knowledge of horizontal, vertical, parallel and perpendicular lines to shape using correct mathematical vocabulary	



Year 3					
WORKING TOWARDS STANDARD 2		EXPECTED STANDARD 3		GREATER DEPTH STANDARD 4	
Statistics					
Interpret and present data using pictograms, tables and block graphs		Interpret and present data using pictograms, tables and bar charts with simple scales.		Interpret and present data using bar charts, pictograms and tables	
Interpret and compare data presented in different formats, deriving simple conclusions		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 such as 'How many more?' and 'How many fewer?' using information presented in scaled bar charts and pictograms and tables.	
Solve one-step and two-step questions using information presented in simple bar charts, pictograms and tables		Solve increasingly complex multi-step questions deriving information from a range of charts and justify my solutions		Name:	
Academic Year:		Autumn 1		Autumn 2	
Spring 1		Spring 2		Summer 1	
Summer 2					

Name:		Academic Year:			
Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<b>Year 4</b>					
<b>WORKING TOWARDS STANDARD 2</b>		<b>EXPECTED STANDARD 3</b>		<b>GREATER DEPTH STANDARD 4</b>	
<b>Number and place value</b>					
Count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number	Begin to count in multiples of 6, 7, 9, 25 and 1000 recalling the first 5 in the sequence and 10x	Count in multiples of 6,7,9,25 and 1000	Apply counting to decimals and multiples of 10 eg. 0.6, 70, 900		
Read and write numbers up to 1000 in numerals and in words	Read and write numbers up to 9999 in numerals and words	Find 1000 more or less than a given number	Find multiples of 1000 and 10,000 more or less than a given number, including in the context of problems.		
	Understand how negative numbers are used in everyday life	Count backwards through zero to include negative numbers	Count forwards and backwards from numbers below zero, including in the context of problems.		
Recognise the place value of each digit in a three-digit number (hundreds, tens, ones)		Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones)	Recognise the place value of each digit in a five-digit number (ten thousands, thousands, hundreds, tens, and ones), including in the context of problems.		
Compare and order numbers up to 1000		Order and compare numbers beyond 1000	Order and compare numbers up to 10,000, including in the context of problems.		
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	Round any number to the nearest 10, 100, 1000 and 10,000, including rounding to solve division problems and also using rounding to approximate.		
Solve number problems and practical problems.	Solve number and practical problems that involve some of the above and with increasingly large positive numbers	Solve number and practical problems that involve all of the above and with increasingly large positive numbers	Solve number and practical problems that involve all of the above and with increasingly large positive numbers, that use an increasing number of steps and greater complexity		

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	Read and write Roman numerals to 100 (I to C)
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Name:				Academic Year:			
Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2		
<b>Year 4</b>							
<b>WORKING TOWARDS STANDARD</b> <b>2</b>		<b>EXPECTED STANDARD</b> <b>3</b>			<b>GREATER DEPTH STANDARD</b> <b>4</b>		
Addition and subtraction							
Add and subtract numbers with up to 3 digits using the formal written methods of columnar addition and subtraction where appropriate		Add and begin to subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate		Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate		Add and subtract numbers beyond 4-digits using the formal written methods of columnar addition and subtraction where appropriate	
Estimate the answer to a calculation with numbers up to three digits.		Use inverse operations to check answers to a calculation with numbers up to 4 digits.		Estimate and use inverse operations to check answers to a calculation up to 4 digits.		Estimate whether the answer is sensible and explain reasoning. Explain whether the last digit in an answer is mathematically correct.	
Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction		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 and why.		Solve addition and subtraction two-step problems efficiently in contexts, deciding which operations and methods to use and explaining choice of method.	

Year 4					
WORKING TOWARDS STANDARD 2		EXPECTED STANDARD 3		GREATER DEPTH STANDARD 4	
<b>Multiplication and Division</b>					
Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables		Recall and use multiplication and division facts for the 3, 4, 6 and 8, 9 and 11 multiplication tables		Recall multiplication and division facts for multiplication tables up to $12 \times 12$	
Use place value, known and derived facts for 2,3,4,5,8 and 10 and including multiplying by 0 and 1 and dividing by 1;		Use place value, known and derived facts for 2,3,4,5,6,8,9,10 and 11 including multiplying by 0 and 1; dividing by 1; multiplying together three numbers		Use place value, known and derived facts to multiply and divide mentally with numbers up to $12 \times 12$ , including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers	
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	
Find all factor pairs of a number and find multiples.		Find all factor pairs of a number and find multiples.		Find all factor pairs of a number and find multiples.	
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		Multiply two-digit and three-digit numbers by a one-digit number using formal written layout consistently.	
Multiply two-digit digit by two-digit number using formal written layout.		Multiply two-digit and three-digit numbers by a one-digit number using formal written layout consistently.		Multiply two-digit digit by two-digit number using formal written layout.	
Solve problems involving multiplying and adding, including using the distributive laws to multiply two digit numbers by one digit number.		Solve problems involving multiplying and adding, including using the associative and distributive laws to multiply two digit numbers by one digit number.		Solve problems involving multiplying and adding, including using the associative and distributive laws to multiply two digit numbers by two digit number.	
Solve scaling problems using multiplication		Solve scaling problems using multiplication and division		Solve increasingly complex integer scaling problems and harder correspondence problems	
Solve integer scaling problems and harder correspondence problems		Solve integer scaling problems and harder correspondence problems		Solve increasingly complex integer scaling problems and harder correspondence problems	
Name:			Academic Year:		
Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2

Name:		Academic Year:			
Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2

Name: \_\_\_\_\_  
Academic Year: \_\_\_\_\_

**Year 4**

<b>WORKING TOWARDS STANDARD 2</b>	<b>EXPECTED STANDARD 3</b>	<b>GREATER DEPTH STANDARD 4</b>
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**Fractions**

Recognise and show, using diagrams, equivalent fractions with small denominators	Recognise and show, using diagrams, families of equivalent fractions for $\frac{1}{2}$ and $\frac{1}{4}$	Recognise and show, using diagrams, families of common equivalent fractions	Recognise and show, using diagrams, families of common equivalent fractions and simplify where necessary.
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	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.	Count up and down quickly and confidently in tenths and 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 two- digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths	Recognise and use thousandths
	Understand what one decimal place means.	Round decimals with one decimal place to the nearest whole number	Round decimals with two decimal places to the nearest whole number
Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators	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	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 or a fraction.
Add and subtract fractions with the same denominator within one whole	Add fractions with the same denominator beyond one whole	Add and subtract fractions with the same denominator beyond one whole	Solve increasingly complex problems add and subtract fractions with the same denominator beyond one whole
Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators	Recognise and write decimal equivalents of any number of tenths	Recognise and write decimal equivalents of any number of tenths or hundredths	Recognise and use thousandths and relate them to tenths and 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 $\frac{3}{4}$	Read and write decimal numbers up to one decimal place as fractions e.g. 0.4 = $\frac{4}{10}$

Compare and order unit fractions,	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	Compare and order numbers with the same number of decimal places up to two decimal places and beyond
Solve simple measure problems involving fractions within one whole	Solve simple measure and money problems involving fractions and decimals to one decimal places.	Solve simple measure and money problems involving fractions and decimals to two decimal places.	Solve simple problems involving number up to two decimal places. Use decimal equivalences of $\frac{1}{2}$ , $\frac{1}{4}$ and $\frac{3}{4}$

Year 4					
WORKING TOWARDS STANDARD 2		EXPECTED STANDARD 3		GREATER DEPTH STANDARD 4	
<b>Measurement</b>					
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]	Be fluent in converting between different units of measure without prompts		
Measure the perimeter of simple 2-D shapes and begin to calculate the perimeter when prompted	Calculate the perimeter of simple 2-D shapes with support	Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres	Measure and calculate the perimeter of rectilinear shapes with accuracy		
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 explore the perimeter of rectilinear shapes in centimetres and metres		
Measure and compare different measures, including money in pounds and pence	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	Estimate, with increasingly accuracy, different measures, including money in pounds and pence; calculate different measures, including money in pounds and pence confidently		
Write and tell the time from analogue clocks; 12 and 24 hour clocks with confidence	Begin to convert time between analogue and digital 12- and 24-hour clocks with support	Read, write and convert time between analogue and digital 12- and 24-hour clocks	Be fluent in reading, writing and converting between analogue and digital clocks and begin to apply these skills to different situations		
Begin to solve simple problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days with prompts	Solve simple problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days	Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days.	Solve increasingly complex problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days without prompts		
Name:		Academic Year:			
Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2



**Year 4**

**WORKING TOWARDS STANDARD**

**2**

**EXPECTED STANDARD**

**3**

**GREATER DEPTH STANDARD**

**4**

**Geometry – properties of shapes**

Compare and sort geometric shapes, including quadrilaterals and triangles

Compare and classify 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

Explain and justify the classification of geometric shapes using correct mathematical vocabulary.

Confidently identify right angles without being prompted; begin to compare and order angles up to two right angles by size

Confidently 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 and compare and order angles up to two right angles by size

Confidently identify acute and obtuse angles using correct mathematical vocabulary.

Begin to identify lines of symmetry in simple 2-D shapes presented in different orientations

Identify lines of symmetry in 2-D shapes presented in different orientations when prompted

Identify lines of symmetry in 2-D shapes presented in different orientations

Identify all lines of symmetry in increasingly complex 2-D shapes

Begin to complete a simple symmetric figure with respect to a horizontal or vertical line of symmetry

Confidently complete a simple symmetric figure with respect to a horizontal or vertical line of symmetry and begin to complete figures with a specific line of symmetry

Complete a simple symmetric figure with respect to a specific line of symmetry.

Complete increasingly complex symmetric figure with respect to a specific line of symmetry.

Name:

Academic Year:

Autumn 1

Autumn 2

Spring 1

Spring 2

Summer 1

Summer 2

Year 4		
WORKING TOWARDS STANDARD 2	EXPECTED STANDARD 3	GREATER DEPTH STANDARD 4

**Geometry – position and direction**

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	Describe positions on a 2-D grid as coordinates in the first quadrant with accuracy; describe movements between positions using correct mathematical vocabulary
Plot specified points with support.	Plot specified points with increasing confidence	Plot specified points and draw sides to complete a given polygon.	Plot specified points accurately, using correct notation; draw axes with accuracy

Name:		Academic Year:			
Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2

**Statistics**

Confidently interpret and present data with increasing accuracy 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.	Accurately interpret and present discrete and continuous data using appropriate graphical methods, being able to explain and justify an answer
Solve simple one-step and two-step problems using information presented in bar charts, pictograms, tables and other graphs when prompted	Begin to 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.	Solve increasingly complex comparison, sum and difference problems using information presented in a variety of ways

## Year 5

<b>WORKING TOWARDS STANDARD</b> <b>2</b>	<b>EXPECTED STANDARD</b> <b>3</b>	<b>GREATER DEPTH STANDARD</b> <b>4</b>
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### Number and Place Value

Order and compare numbers beyond 1,000	Read, write, order and compare numbers to at 10,000 and determine the value of each digit	Read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit	Read, write, order and compare numbers up to 10,000,000 and determine the value of each digit
Find 1,000 more or less than a given number  Recognise the place value of each digit in a four-digit number (1,000s, 100s, 10s, and 1s)  Count in multiples of 6, 7, 9, 25 and 1,000	Count forwards or backwards in steps of powers of 10 for any given number up to 10,000 and then 100,000	Count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000	Count forwards or backwards in steps of powers of 10 for any given number up to 10,000,000
Count backwards through 0 to include negative numbers	Interpret negative numbers in context, count backwards with positive and negative whole numbers, including through 0	Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through 0	Use negative numbers in context, calculating intervals across 0, including in the context of problems
Round any number to the nearest 10, 100 or 1,000	Round any number up to 10,000 to the nearest 10, 100, 1,000 and 10,000	Round any number up to 1,000,000 to the nearest 10, 100, 1,000, 10,000 and 100,000	Round any whole number to a required degree of accuracy
Solve number and practical problems that involve all of the above and with increasingly large positive numbers		Solve number problems and practical problems that involve all of the above	Solve number problems and practical problems that involve all of the above with a an increasing number of steps and greater complexity
Read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of 0 and place value		Read Roman numerals to 1,000 (M) and recognise years written in Roman numerals	

Name: \_\_\_\_\_

Academic Year: \_\_\_\_\_

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
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## Year 5

Year 5					
WORKING TOWARDS STANDARD 2		EXPECTED STANDARD 3		GREATER DEPTH STANDARD 4	
<b>Addition and Subtraction</b>					
Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction with prompting if appropriate		Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate		Add and subtract whole numbers with 5 digits, including using formal written methods (columnar addition and subtraction)	
Use mental methods for addition and subtraction including the use of partitioning to aid speed and fluency.		Add and subtract numbers mentally with increasingly large numbers, using known skills such as rounding to the nearest 10, 100 and 1000.		Add and subtract numbers mentally with increasingly large numbers, using known skills such as rounding and partitioning.	
Estimate by rounding to the nearest 10, 100 and 1000, and use inverse operations to check answers to a calculation		Estimate by rounding to the nearest 10, 100 and 1000, and use inverse operations to check answers to a calculation, including rounding pounds and pence to the nearest 10 pence or pound.		Use rounding and the inverse to check answers to calculations and determine, in the context of a problem, levels of accuracy	
Solve addition and subtraction one-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 and why		Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why	
Name:				Academic Year:	
Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2

## Year 5

<b>WORKING TOWARDS STANDARD</b>	<b>EXPECTED STANDARD</b>	<b>GREATER DEPTH STANDARD</b>
2	3	4

### Multiplication and Division

Recognise and use factor pairs and commutativity in mental calculation.	Find all factor pairs of a number and find multiples.	Identify multiples and factors, including finding all factor pairs of a number, and common factors of 2 numbers	Identify common factors and common multiples of a range of numbers.
Recognise that some numbers have more factors than others.	Recognise that some numbers only have two factors, itself and one.	Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers  Establish whether a number up to 100 is prime and recall prime numbers up to 19	Confidently identify prime numbers and use divisibility checks to work out whether larger numbers are prime.  Establish whether numbers beyond 100 are prime and recall prime numbers up to 50.
Multiply two-digit and three-digit numbers by a one-digit number using formal written layout	Multiply two-digit or three digit by two-digit number using formal written layout.	Multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers	Multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers with precision and accuracy, identifying potential errors.
Use place value, known and derived facts to multiply and divide mentally with numbers up to 12x12, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers	Use place value, known and derived facts to multiply and divide mentally with numbers greater than 12x12, including multiplying together three or more numbers	Multiply and divide numbers mentally, drawing upon known facts such as multiplication tables and related division facts and multiplying by multiples of 10.	Multiply and divide numbers mentally, drawing upon known facts such as multiplication tables and related division facts and multiplying by multiples of 10 and 100.
Divide two-digit and three-digit numbers by any one-digit number, using formal written layout	Confidently divide two-digit and three-digit numbers by any one-digit number, using formal written layout, introducing remainders.	Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context	Divide numbers using the most efficient method for the question (e.g.: $320 \div 8$ using multiplication facts) and interpret remainders appropriately for the context
Find 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	Find the effect of dividing a one- or two- digit number by 10 and 100 and 1000, identifying the value of the digits in the answer as ones, tenths and hundredths	Multiply and divide whole numbers and those involving decimals by 10, 100 and 1,000	Multiply and divide whole numbers and those involving decimals by 10, 100 and 1,000 including in different contexts e.g: measures.

Name:

Academic Year:

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
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<b>WORKING TOWARDS STANDARD</b> <b>2</b>	<b>EXPECTED STANDARD</b> <b>3</b>		<b>GREATER DEPTH STANDARD</b> <b>4</b>
Understand what a square number is.	Recognise and use square numbers and the notation for squared ( $^2$ ).	Recognise and use square numbers and cube numbers, and the notation for squared ( $^2$ ) and cubed ( $^3$ )	Confidently solve problems involving multiplication and division, including using my knowledge of factors and multiples, squares and cubes.
Solve problems involving multiplication including using my knowledge of factors.	Solve problems involving multiplication and division, including using my knowledge of factors and multiples and squares.	Solve problems involving multiplication and division, including using my knowledge of factors and multiples, squares and cubes	
Solve two step problems involving addition, subtraction and multiplication, including understanding the meaning of the equals sign	Solve two step problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign	Solve two and three step problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign	Solve multi-step problems involving addition, subtraction, multiplication and division
Solve integer scaling problems and harder correspondence problems	Solve problems involving multiplication and division and problems involving simple rates.	Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates	Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates to support the introduction of ratio (adapting a recipe for more or less servings)
<b>Multiplication and Division</b>			

## Year 5

<b>WORKING TOWARDS STANDARD</b>	<b>EXPECTED STANDARD</b>	<b>GREATER DEPTH STANDARD</b>
<b>2</b>	<b>3</b>	<b>4</b>

### Fractions

Compare and order unit fractions with increasingly large denominators and order on the number line	Compare and order fractions whose denominators are all multiples of the same number, within the multiplication tables up to 12x12, with up to three fractions in a set	Compare and order fractions whose denominators are all multiples of the same number, with up to four fractions in a set	Compare and order fractions, including fractions > 1
Recognise and show, using diagrams, families of common equivalent fractions	Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths	Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths	Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths and cancel fractions to their simplest form using factors.
Recognise mixed numbers and improper fractions, knowing that they represent the same value using visual representations.	Recognise mixed numbers and improper fractions, understanding that they represent the same value, and convert from one to the other using visual representations as an aid.	Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number	
Add and subtract fractions with the same denominator	Add and subtract fractions with the same denominator where one is a multiple of the other.	Add and subtract fractions with the same denominator and denominators that are multiples of the same number	Add and subtract fractions with denominators that are multiples of the same number, including those >1.
Multiply proper fractions by whole numbers (e.g.: $\frac{1}{2} \times 5$ ), supported by materials, diagrams and number lines	Multiply mixed numbers by whole numbers, supported by materials and diagrams	Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams	Multiply simple pairs of proper fractions, writing the answer in its simplest form
Recognise and write decimal equivalents to $\frac{1}{4}$ , $\frac{1}{2}$ and $\frac{3}{4}$	Recognise and write decimals numbers as fractions up to tenths.	Read and write decimal numbers as fractions up to hundredths	Read and write decimal numbers as fractions up to thousandths
Understand that one tenth is the same as 10 hundredths.	Recognise and use thousandths and relate them to hundredths.	Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents	Solve problems fluently using a combination of these.
		Recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal	

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<b>WORKING TOWARDS STANDARD</b> <b>2</b>	<b>EXPECTED STANDARD</b> <b>3</b>	<b>GREATER DEPTH STANDARD</b> <b>4</b>	
<b>Fractions</b>			
Round decimals with one decimal place to the nearest whole number	Round decimals with two decimal places to the nearest whole numbers	Round decimals with two decimal places to the nearest whole number and to one decimal place	Round decimals with three decimal places to the nearest whole number and to one decimal place and two decimal places
Compare numbers with the same number of decimal places up to two decimal places	Read, write, order and compare number with up to three decimal places, with the same number of places within one question	Read, write, order and compare numbers with up to three decimal places	Read, write, order and compare numbers with any number of decimal places including fractions
Solve problems involving number up to two decimal places	Solve problems involving number up to three decimal places with the same number of places within one question	Solve problems involving number up to three decimal places	Solve problems involving number up to three decimal places, with the answer rounded to a specified degree of accuracy.
Solve problems which require knowing decimal equivalents of $\frac{1}{2}$ , $\frac{1}{4}$ and $\frac{3}{4}$	Solve problems which require knowing percentage and decimal equivalents of $\frac{1}{2}$ , $\frac{1}{4}$ and $\frac{3}{4}$	Solve problems which require knowing percentage and decimal equivalents of $\frac{1}{2}$ , $\frac{1}{4}$ , $\frac{1}{5}$ , $\frac{2}{5}$ and $\frac{4}{5}$ and those fractions with a denominator of a multiple of 10 or 25.	Solve problems which require knowing percentage and decimal equivalents of a variety of fractions and those fractions with a denominator of a multiple of 10 or 25.

## Year 5

<b>WORKING TOWARDS STANDARD</b>  <b>2</b>	<b>EXPECTED STANDARD</b>  <b>3</b>	<b>GREATER DEPTH STANDARD</b>  <b>4</b>
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### Measures

Convert between different units of measure [for example, kilometre to metre; hour to minute]	Convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre)	Convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre)	Convert between standard units, converting measurements of length from a smaller unit of measure to a larger unit and vice versa, using decimal notation up to three decimal places.
Understand and use approximate equivalences between metric units	Understand and use approximate equivalences between metric units and common imperial units such as inches	Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints	Convert between miles and kilometres and use approximate conversions to tell if an answer is sensible.
Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres	Measure and calculate the perimeter of composite rectilinear shapes (including squares) in centimetres and metres	Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres	Recognise how shapes with the same areas can have different perimeters and areas and vice versa.
Find the area of rectilinear shapes by counting squares	Find the area of rectilinear shapes and estimate the area of irregular shapes by counting squares	Calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm <sup>2</sup> ) and square metres (m <sup>2</sup> ) and estimate the area of irregular shapes	Calculate and estimate the area of irregular shapes and triangles including using mixed units of measure.
Estimate capacity (e.g.: using water) for a variety of containers	Estimate volume (e.g.: using 1cm <sup>3</sup> blocks to build cuboids, including cubes) and capacity (e.g.: using water)	Estimate volume [for example, using 1 cm <sup>3</sup> blocks to build cuboids (including cubes)] and capacity [for example, using water]	Calculate, estimate and compare volume of cubes and cuboids using standard units, including centimetre cubed and cubic metres.
Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days.	Solve problems involving converting between units of time.	Solve problems involving converting between units of time, including interpreting simple timetables.	Solve problems involving converting between units of time, including interpreting more complex timetables.
Use all four operations to solve problems for all of the above.	Use all four operations to solve problems for all of the above using decimal notation, including scaling.	Use all four operations to solve problems for all of the above using decimal notation, including scaling.	Use all four operations to solve problems for all of the above using decimal notation, including scaling.

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<b>Year 5</b>					
<b>WORKING TOWARDS STANDARD 2</b>		<b>EXPECTED STANDARD 3</b>		<b>GREATER DEPTH STANDARD 4</b>	
<b>Geometry – properties of shapes</b>					
Identify and name regular and irregular polygons and identify and name 3-D shapes.	Identify cubes from 2-D representations	Identify 3-D shapes, including cubes and other cuboids, from 2-D representations	Identify 3-D shapes, including cubes and other cuboids, from 2-D representations including constructing the net of a cube or cuboid.		
Identify acute and obtuse angles and compare and order angles up to two right angles by size	Know angles are measured in degrees compare acute, obtuse and reflex angles	Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles	Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles with increased accuracy and fluency		
	Draw given angles, within accuracy of 5 degrees and measure them in degrees (°)	Draw given angles, within accuracy of 2 degrees and measure them in degrees (°), including reflex angles	Draw and construct triangles, using given dimensions including angles.		
	Identify: <ul style="list-style-type: none"> <li>angles at a point and one whole turn (total 360°)</li> <li>angles on a straight line and ½ a turn (total 180°)</li> </ul>	Identify: <ul style="list-style-type: none"> <li>angles at a point and one whole turn (total 360°)</li> <li>angles on a straight line and ½ a turn (total 180°) and other multiples of 90°</li> </ul>	Identify: <ul style="list-style-type: none"> <li>angles at a point and one whole turn (total 360°)</li> <li>angles on a straight line and ½ a turn (total 180°) and other multiples of 90° and 45°</li> </ul>		
Know that there are 360 degrees within a square or rectangle (4 lots of 90 degrees)	Use the properties of triangles to deduce related facts such as finding missing angles.	Use the properties of rectangles to deduce related facts and find missing lengths and angles	Use the properties of quadrilaterals and triangles to deduce related facts and find missing lengths and angles		
Explain what the term regular means	Explain what the terms regular and irregular mean	Distinguish between regular and irregular polygons based on reasoning about equal sides and angles.	Distinguish between regular and irregular polygons based on reasoning about equal sides and angles for a variety of shapes		

Year 5					
WORKING TOWARDS STANDARD 2		EXPECTED STANDARD 3		GREATER DEPTH STANDARD 4	
<b>Geometry – Position and Direction</b>					
Describe movements between positions as translations of a given unit to the left/right and up/down.		Describe movements between positions as translations of a given unit to the left/right and up/down with increasing fluency.		Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed.	
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Statistics			
Solve comparison, sum and difference problems using information presented in bar charts, pictograms and tables.	Solve comparison, sum and difference problems using information presented in a line graph related to the key plotted points.	Solve comparison, sum and difference problems using information presented in a line graph	Solve comparison, sum and difference problems using information presented in a line graph. Decide which representations of data are most appropriate for the data and support with reasoning.
Read and interpret information in tables	Complete, read and interpret information in tables	Complete, read and interpret information in tables, including timetables.	Complete, read and interpret information in tables, including timetables recording work systematically

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<b>Year 6</b>					
<b>WORKING TOWARDS STANDARD 2</b>		<b>EXPECTED STANDARD 3</b>		<b>GREATER DEPTH STANDARD 4</b>	
<b>Number &amp; Place value</b>					
Read and write numbers to 10 000 000 and know the value of the digit.		Read, write and order numbers to 10 000 000		Read, write, order and compare numbers up to 10 000 000 and determine the value of each digit	
Round any whole number to the nearest 10, 100, 1000, 10 000, 100 000				Round any whole number to a required degree of accuracy	
Use negative numbers in context, order negative and positive numbers		Use negative numbers in context, and begin to calculate intervals across zero		Use negative numbers in context, and calculate intervals across zero	
Solve simple number and practical problems that involve all of the above.		Solve number and practical problems that involve all of the above.		Solve number and practical problems that involve all of the above in familiar and unfamiliar contexts.	

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<b>Year 6</b>					
<b>WORKING TOWARDS STANDARD 2</b>		<b>EXPECTED STANDARD 3</b>		<b>GREATER DEPTH STANDARD 4</b>	
<b>Number – addition, subtraction, multiplication and division</b>					
Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)	Solve addition and subtraction multi- step problems in context, including using formal written methods	Solve addition and subtraction multi-step problems in context, deciding which operations and methods to use and why	Solve increasingly complex problems involving addition, subtraction, multiplication and division in both familiar and unfamiliar contexts.		
Solve problems involving addition, subtraction, multiplication and division with support	Solve simple problems involving addition, subtraction, multiplication and division	Solve problems involving addition, subtraction, multiplication and division			
Use rounding to check answers to calculations when prompted		Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.	Use estimation to check answers without prompting.		
Multiply whole numbers up to 4 digits by 2 digits using the formal written method of long multiplication with some support.	Begin to multiply multi digit numbers up to 4 digits by 2 digits using the formal written method of long multiplication with some support.	Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication	Recognise when to use formal methods of short and long multiplication and division, calculate accurately, interpreting remainders appropriately.		
Begin to divide a number with up to 4 digits by two digit numbers using the formal written method of <u>long</u> with some support that involve remainders	Begin to divide a number with up to 4 digits by two digit numbers using the formal written method of <u>long</u> division. Begin to interpret remainders as appropriate to the context	Divide numbers up to 4 digits by a two- digit whole number using the formal written method of <u>long</u> division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context.			

<p>Divide numbers up to 4 digits by a one digit whole number using the formal written method of <u>short</u> division, with some support that may involve remainders</p>	<p>Divide numbers up to 4 digits by a one digit whole number using the formal written method of <u>short</u> division. Begin to interpret remainders as appropriate to the context</p>	<p>Divide numbers up to 4 digits by a two- digit number using the formal written method of <u>short</u> division where appropriate, interpreting remainders according to the context</p>
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Calculate mentally including mixed operations	Perform mental calculations, including with mixed operations and increasingly larger numbers	Perform mental calculations, including with mixed operations and large numbers.	Explain and justify mental methods used to solve a problem and recognise the most efficient method
Systematically find all factor pairs of a number.	Identify common factors and begin to find common multiples	Identify common factors and common multiples	Have and be able to explain systematic strategies to find common factors and multiples.
Know prime numbers up to 19	Know prime numbers up to 30 with some confidence.	Know prime numbers up to 50 with increasing confidence.	Know prime numbers up to 100 with confidence.
Begin to use order of operations to carry out calculations, including brackets	Begin to apply their knowledge of the order of operations to carry out calculations involving the 4 operations	Use their knowledge of the order of operations to carry out calculations involving the four operations.	Use order of operations with increasingly complex calculations accurately, including squares and cubes.

## Year 6

WORKING TOWARDS STANDARD 2	EXPECTED STANDARD 3	GREATER DEPTH STANDARD 4	
<b>Fractions (including decimals and percentages)</b>			
Identify, name and write equivalent fractions of a given fraction	Simplify fractions using common factors with support (likely to need more than one step)	Use common factors to simplify fractions; use common multiples to express fractions in the same denomination	Use common factors to simplify fractions with increasingly larger numerators and denominators, recognising and justifying when fractions are in their lowest possible terms.
Compare and order fractions >1 whose denominators are all multiples of the same number	Compare and order fractions, including fractions > 1 using the concept of equivalent fractions	Compare and order fractions, including fractions > 1	Compare and order numbers, including fractions, percentages and decimals
Add and subtract fractions with denominators that are multiples of the same number	Add and subtract fractions with different denominators	Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions	Solve multi-step problems for addition and subtraction of mixed fractions with different denominators in a range of contexts
Multiply proper fractions and mixed numbers by whole numbers	Begin to multiply simple pairs of proper fractions	Multiply simple pairs of proper fractions, writing the answer in its simplest form [for example, $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$ ]	Multiply simple pairs of proper fractions, writing the answer in its simplest form without being prompted.
Begin to divide proper fractions by whole numbers supported by materials and diagrams with support	Begin to divide proper fractions by whole numbers supported by materials and diagrams	Divide proper fractions by whole numbers [for example, $\frac{1}{3} \div 2 = \frac{1}{6}$ ]	Divide proper fractions by another proper fraction supported by diagrams
Write numbers with one or two decimal places as a fraction with a denominator of 10 or 100	Read and write decimal numbers as fractions and vice versa	Associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, $\frac{3}{8}$ ]	Associate a fraction with division and calculate decimal fraction equivalents, knowing when to apply this strategy
Read, write, order and compare numbers with up to three decimal places	Read, write, order and compare numbers with up to three decimal places, identifying the value of each digit	Identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places.	Multiply and divide numbers by any power of 10
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Begin to multiply one-digit numbers with one decimal place by a whole number with support.	Multiply one-digit numbers with one decimal place by a whole number.	Multiply one-digit numbers with up to two decimal places by whole numbers.	Choosing an appropriate method to use when multiplying one-digit numbers with up to three decimal places by whole numbers.
Begin to use written division methods in cases where the answer has one decimal places.	Use written division methods in cases where the answer has one decimal places.	Use written division methods in cases where the answer has up to two decimal places.	Choosing an appropriate method to use when using written division methods in cases where the answer has up to three decimal places.
Begin to solve problems which require answers to be rounded to specified degrees of accuracy.		Solve problems which require answers to be rounded to specified degrees of accuracy.	
Recall and use some equivalence between simple fractions, decimals and percentages, $\frac{1}{2}$ , quarters, fifths, tenths, hundredths with prompts.	Recall and use some equivalence between simple fractions, decimals and percentages, $\frac{1}{2}$ , quarters, fifths, tenths, hundredths	Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.	Have fluency between different equivalences for fractions, decimals and percentages without being prompted.
<b>WORKING TOWARDS STANDARD</b> <b>2</b>	<b>EXPECTED STANDARD</b> <b>3</b>		<b>GREATER DEPTH STANDARD</b> <b>4</b>
<b>Fractions (including decimals and percentages)</b>			

Year 6		
WORKING TOWARDS STANDARD 2	EXPECTED STANDARD 3	GREATER DEPTH STANDARD 4

Ratio and proportion			
Begin to use multiplication and division facts to find the connection between two values or quantities		Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts	Begin to explore multipliers (fractional and decimals) to connect two quantities
Solve problems involving calculation of percentages where the percentage is a multiple of 10	Solve problems involving the calculation of percentages where the percentage is a multiple of 5 and 10 and begin to use of percentages for comparison	Solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison	Solve problems involving the calculation of any percentage involving a range of contexts both familiar and unfamiliar.
Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.	Solve problems involving similar shapes where the scale factor is known	Solve problems involving similar shapes where the scale factor is known or can be found	Solve problems involving similar shapes where the scale factor is known or can be found, including fractions
Begin to solve simple problems involving unequal sharing and grouping	Solve simple problems involving unequal sharing and grouping	Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.	Solve increasingly complex problems involving unequal sharing and grouping using knowledge of fractions and multiples.

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Algebra			
Use simple familiar formulae, e.g. area of a rectangle to find missing values	Use a greater range of familiar formulae	Use simple formulae	Use more complex formulae in a range of contexts both familiar and unfamiliar
Describe a simple linear number sequence in words	Generate a simple number sequence given a rule	Generate and describe linear number sequences	Find the nth term of a simple number sequence linked to multiplication tables
Begin to express simple missing number problems algebraically with support	Express simple missing number problems algebraically	Express missing number problems algebraically	Read and interpret algebraic notation consistently
Find a pair of numbers that satisfy an equation with two unknowns when prompted	Find at least one pair of numbers that satisfy an equation with two unknowns without being prompted	Find pairs of numbers that satisfy an equation with two unknowns	Explain and justify how all possible values have been found

Find a combination of two variables that meet a stated criteria when prompted	Find at least one combination of two variables that meet a stated criteria without being prompted	Enumerate possibilities of combinations of two variables.	Explain and justify how all possible combinations have been
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Year 6					
WORKING TOWARDS STANDARD 2		EXPECTED STANDARD 3		GREATER DEPTH STANDARD 4	
<b>Measurement</b>					
	Solve simple problems involving the calculation and conversion of units of measure, using decimal notation up to two decimal places, where appropriate when prompted	Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate	Choose an appropriate method to solve problems involving the calculation and conversion of units of measure and recognise the most efficient method		
Begin to use, read, write, convert between standard units of length, mass and with support	Use, read, write, convert between standard units of length and mass. Convert between units of time with support.	Use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places	Be fluent in using, reading, writing and converting between standard units.		
Begin to use conversion between miles and kilometres		Convert between miles and kilometres	Use a greater range of imperial and metric conversions for length, mass and capacity		
Draw a rectangle with a fixed perimeter or area	Find at least one shape with a fixed perimeter or area	Recognise that shapes with the same areas can have different perimeters and vice versa	Justify why a shape with a given perimeter has the largest area and vice versa		
Find the area of rectangles when prompted	Use formulae for finding area of squares and rectangles	Recognise when it is possible to use formulae for area and volume of shapes	Find the area and volume of compound 2d and 3d shapes and explain decisions made		
Begin to explore the area of a triangle and derive a formula	Calculate the area of triangles and begin to explore the area of a parallelogram	Calculate the area of parallelograms and triangles	Solve problems using missing lengths for triangles and parallelograms		
Use cubes to begin to explore the volume of a cube and cuboid and have an awareness of the standard units used	Derive a formula for finding the volume of a cube or cuboid and use appropriate units if prompted	Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm <sup>3</sup> ) and cubic metres (m <sup>3</sup> ), and extending to other units [for example, mm <sup>3</sup> and km <sup>3</sup> ].	Calculate the volume of cubes and cuboids using the correct units and notation without being prompted.		
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## Year 6

<b>WORKING TOWARDS STANDARD</b> <b>2</b>	<b>EXPECTED STANDARD</b> <b>3</b>	<b>GREATER DEPTH STANDARD</b> <b>4</b>
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### Geometry – properties of shapes

Draw simple 2-D shapes using given angles with support	Draw simple 2-D shapes using given dimensions and angles	Draw 2-D shapes using given dimensions and angles	Draw complex 2-D shapes using given dimensions and angles
Recognise and build simple 3-D shapes using apparatus	Begin to relate simple 3-D shapes to their associated nets	Recognise, describe and build simple 3-D shapes, including making nets	Recognise, describe and build increasingly complex 3-D shapes, including making nets accurately
Classify geometric shapes given criteria; begin to find the unknown angles in triangles and simple quadrilaterals	Begin to find unknown angles in any triangles, quadrilaterals, and regular polygons with support	Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons	Justify reasons for classifying shapes based on their properties using accurate mathematical vocabulary without prompts
Begin to name and use parts of the circle including radius, diameter and circumference when prompted		Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius	Use the language of circles including radius, diameter and circumference with confidence and accuracy. Begin to explore the formula for the circumference of circles.
Identify where angles meet on a straight line and find missing angles when prompted	Identify where angles are vertically opposite and find missing angles when prompted	Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.	Justify the missing angles of a diagram through use of correct mathematical vocabulary without prompts

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### Geometry – position and direction

Be fluent in describing positions in the first quadrant	Begin to describe positions on the full coordinate grid (all four quadrants)	Describe positions on the full coordinate grid (all four quadrants)	Be fluent in describing positions on the full coordinate grid (all four quadrants) accurately; and draw and label axes accurately
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<p>Draw and translate simple shapes on the coordinate plane in the first quadrant</p>	<p>Draw and translate simple shapes on the coordinate plane in the full coordinate grid and begin to reflect in horizontal and vertical axes.</p>	<p>Draw and translate simple shapes on the coordinate plane, and reflect them in the axes</p>	<p>Draw and translate increasingly complex shapes on the coordinate plane, and reflect them in the axes, justifying a solution through the use of correct mathematical vocabulary without prompts</p>
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**Year 6**

<b>WORKING TOWARDS STANDARD</b> <b>2</b>	<b>EXPECTED STANDARD</b> <b>3</b>	<b>GREATER DEPTH STANDARD</b> <b>4</b>
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**Statistics**

Interpret and construct simple pie charts based on simple fractions.	Interpret and construct pie charts and line graphs and begin to use these to solve problems with support	Interpret and construct pie charts and line graphs and use these to solve problems	Compare sets of data presented in different formats and be able to justify my reasons when solving a problem
Begin to calculate the mean as an average for small data sets	Calculate the mean as an average and begin to interpret my answer	Calculate and interpret the mean as an average	Calculate the mean of a set of data and be able to interpret the answer in relation to a range of unfamiliar contexts

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