Numeracy Key Skills

Handford Hall Primary School

Year One Maths Curriculum

Maths Mastery

Our 2014 national curriculum states that "the expectation is that the majority of pupils will move through the programmes of study at **broadly the same pace" and that "**pupils who grasp concepts rapidly should be challenged through rich and sophisticated problems **before any acceleration through new content"**.

- **Problem-solving and reasoning should be integrated into all activities.**
- **Opportunities to explain and justify opinions and make explanations should be incorporated into planning.**
- **Children should be challenged and extended through the problems they are given to solve.**

Theme	Autumn	Spring	Summer
Mental Maths Objectives to be covered	**Number - Number and place value:** Count reliably up to 20 objects Count forwards in ones to and across 100 from 0, 1 or any given number. Count backwards in ones to and across 100 from any given number. Say that a number is one more or one less than a given number. Compare and order numbers up to 20. Double numbers to 10. **Number – Addition and Subtraction:** Derive and recall all pairs of numbers with a total of 20. Derive and recall all addition facts for totals within 10. **Measurement:** Recognise and know the value of different denominations of coins and notes. To compare the lengths of 2 objects. Tell the time to the hour and half past the hour. **Geometery – Properties of shape** Recognise and name common 2D shapes (rectangles (including squares), circles and triangles) Recognise and name common 3D shapes (cuboids (including cubes), pyramids and spheres)	**Number - Number and place value:** Count on in multiples of two, five and ten to and across 100. Count to and across 100, forwards and backwards, beginning from any given number. Say that a number is one more or one less than a given number. Read and write numbers from 1-20 in numerals and in words. Use knowledge of place value to order numbers to 20 and position them on a number line. Double and half numbers to 10. **Number – Addition and Subtraction:** Derive and recall all pairs of numbers with a total of 20. Derive and recall all addition facts for totals within 20 and related subtraction facts. Recall the doubles of numbers to at least 10 **Measurement:** Recognise and know the value of different denominations of coins and notes. To order the days of the week. Tell the time to the hour and half past the hour. **Geometery – Properties of shape** Recognise and name common 2D and 3D shapes (rectangles (including squares), circles and triangles) Recognise and name common 3D shapes (cuboids (including cubes), pyramids and spheres)To sort shapes/ numbers in different ways i.e. shapes/ rectangles, odd/even numbers.	**Number - Number and place value:** Count on in multiples of two, five and ten to and across 100. Derive the multiples of 2, 5 and 10. Say that a number is one more or one less than a given number. Count, read and write numbers to 100 in numerals. Use knowledge of place value to order numbers to 20 and position them on a number line. Double and half numbers to 10. **Number – Addition and Subtraction:** Derive and recall all pairs of numbers with a total of 20. Derive and recall all addition facts for totals within 20 and related subtraction facts. Recall the doubles of numbers to at least 10 Find small differences. **Measurement:** Recognise and know the value of different denominations of coins and notes. Find money totals. Tell the time to the hour and half past the hour. **Geometery – Properties of shape** Recognise and name common 2D and 3D shapes (rectangles (including squares), circles and triangles) Recognise and name common 3D shapes (cuboids (including cubes), pyramids and spheres) To sort shapes/ numbers in different ways i.e. shapes/ rectangles, odd/even numbers.

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Theme	Autumn	Spring	Summer
Number-number and place value	Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number. 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. Given a number, identify one more and one less. Read and write numbers from 1 to 20 in numerals and words. Count, read and write numbers to 100 in numerals. Count in multiples of, twos, fives and tens.	Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number. Read and write numbers from 1 to 20 in numerals and words. Count, read and write numbers to 100 in numerals. Begin to recognise the place value of numbers beyond 20 (tens and ones). 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. Count in multiples of, twos, fives and tens. Given a number, identify one more and one less. Given a number, identify ten more and ten less. Order numbers to 50. Solve problems and practical problems involving all of the above.	Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number. Read and write numbers from 1 to 20 in numerals and words. Count, read and write numbers to 100 in numerals. Begin to recognise the place value of numbers beyond 20 (tens and ones). 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. Count in multiples of, twos, fives and tens. Given a number, identify one more and one less. Given a number, identify ten more and ten less. Order numbers to 50. Solve problems and practical problems involving all of the above.
Addition and Subtraction	Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs. Represent and use number bonds and related subtraction facts within 20. Add and subtract one-digit and two-digit numbers to 20, including zero (using concrete objects and pictorial representations). Solve simple one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems, such as 7 = □ – 9.	Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs. Represent and use number bonds and related subtraction facts within 20. Add and subtract one-digit and two-digit numbers to 20, including zero (e.g9+9,18-9). Solve simple one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems, such as 7 = □ – 9.	Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs. Represent and use number bonds and related subtraction facts within 20. Add and subtract one-digit and two-digit numbers to 20, including zero (e.g 9+9, 18-9). Solve simple one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems, such as 7 = □ – 9.

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Multiplication and Division	Double numbers to 10.	Recall and use doubles of all numbers to 10 and corresponding halves. Solve one-step problems involving multiplication by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher. Solve one-step problems involving division by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.	Recall and use doubles of all numbers to 10 and corresponding halves. Solve one-step problems involving multiplication by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher. Solve one-step problems involving division by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.

Year One Maths Curriculum

Theme	Autumn	Spring	Summer
Fractions	Understand that a fraction can describe part of a whole. Understand that a unit fraction represents one equal part of a whole. Recognise, find and name a half as one of two equal parts of an object, shape or quantity (including measure).	Understand that a fraction can describe part of a whole. Understand that a unit fraction represents one equal part of a whole. Recognise, find and name a half as one of two equal parts of an object, shape or quantity (including measure). Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity	Understand that a fraction can describe part of a whole. Understand that a unit fraction represents one equal part of a whole. Recognise, find and name a half as one of two equal parts of an object, shape or quantity (including measure). Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity
Measures	Compare and describe and solve practical problems for -lengths and heights (long/short ,longer/shorter, tall, short, double half) Recognise and know the value of different denominations of coins and notes. Sequence events in chronological order using language such as: before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening. Recognise and use language relating to dates, including days of the week, weeks, months and years. Measure and begin to record time (hours, minutes, seconds). Compare, describe and solve practical problems for time (quicker, slower, earlier, later).	Compare and describe mass/weight (for example, heavy/light, heavier than, lighter than). Measure and begin to record mass/weight, using non-standard and then standard units (kg and g) within children's range of counting competence. Compare, describe and solve practical problems for time (quicker, slower, earlier, later). Measure and begin to record the following time (hours, minutes, seconds). Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times.	Compare, describe and solve practical problems capacity/volume (full/empty, more than, less than, quarter). Measure and begin to record capacity and volume using non-standard and then standard units (litres and ml) within children's range of counting competence. Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times.

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Geometry	Recognise and name common 2-D shapes, including rectangles (including squares), circles and triangles. Recognise and name common 3-D shapes, including cuboids (including cubes), pyramids and spheres.	Recognise and name common 2-D shapes, including rectangles (including squares), circles and triangles. Recognise and name common 3-D shapes, including cuboids (including cubes), pyramids and spheres. Describe position, directions and movements, including half, quarter and three-quarter turns.	Recognise and name common 2-D shapes, including rectangles (including squares), circles and triangles. Recognise and name common 3-D shapes, including cuboids (including cubes), pyramids and spheres. Describe position, directions and movements, including half, quarter and three-quarter turns.
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Year Two Maths Curriculum

Maths Mastery

Our 2014 national curriculum states that "the expectation is that the majority of pupils will move through the programmes of study at **broadly the same pace" and that "**pupils who grasp concepts rapidly should be challenged through rich and sophisticated problems **before any acceleration through new content"**.

- **Problem-solving and reasoning should be integrated into all activities.**
- **Opportunities to explain and justify opinions and make explanations should be incorporated into planning.**
- **Children should be challenged and extended through the problems they are given to solve.**

Theme	Autumn	Spring	Summer
Mental Maths Objectives to be covered	**Number - Number and place value:** Count forwards and backwards in steps of 1, 2 and 5 from 0 up to 100. Count forward and backwards in tens from any number. Read and write numbers to at least 100 in numerals and words. Say that a number is 10 more/ less than any two-digit number. Order 2 digit numbers and position them on a number line.	**Number - Number and place value:** Count forwards and backwards in steps of 2, 3 and 5 from 0 up to 100. Count forward and backwards in tens from any number. Read and write numbers to at least 100 in numerals and words. Partition two digit numbers in different ways, including into multiples of 10 and 1 Use the greater than, less than and equals sign to order numbers/ compare number sentences.	**Number - Number and place value:** Count forwards and backwards in steps of 2, 3 and 5 from 0 up to 100. Count forward and backwards in tens from any number. Read and write numbers to at least 100 in numerals and words. Partition two and three digit numbers, understand what each digit represents. Order 2 and 3 digit numbers and place them on a number line. Use the greater than, less than and equals sign to order numbers/ compare number sentences.

	Number – Addition and Subtraction: Recall and use addition and subtraction facts to 20 fluently, derive and use related facts up to 100. Add three one-digit numbers mentally. **Number – Multiplication and division:** Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables. Recognise odd and even numbers Understand that halving is the inverse of doubling. Derive and recall doubles of all numbers to 20 and corresponding halves. **Measurement:** 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 amount of money. Compare and sequence intervals of time Tell and write the time to five minutes, including quarter past/ to the hour. **Geometery – Properties of shape** Visualise and name all 2D and 3D shapes.	**Number – Addition and Subtraction:** Recall and use all addition and subtraction facts for each number to 20 fluently, all pairs with totals to 20, all pairs of multiples of 10 with totals up to 100 and derive and use related facts up to 100. Add three one-digit numbers mentally. Mentally add and subtract a two-digit number and ones. Mentally add and subtract a two-digit number and tens. **Number – Multiplication and division:** Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables. Recognise odd and even numbers Understand that halving is the inverse of doubling. Derive and recall doubles of all numbers to 20 and corresponding halves. **Measurement:** 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 amount of money. **Geometry – Properties of shape** Sort and describe shapes according to their properties.	**Number – Addition and Subtraction:** Add three one-digit numbers mentally. Mentally add and subtract a two-digit number and ones. Mentally add and subtract a two-digit number and tens. **Number – Multiplication and division:** Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables. Describe and extend number sequences and recognise odd and even numbers Understand that halving is the inverse of doubling. Derive and recall doubles of all numbers to 20 and corresponding halves. **Number - fractions:** Count up in fractions to ten Recognise, find, name and write fractions ¼, ½ of a length, shape, set of objects, quantity **Measurement:** 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 amount of money. Compare and sequence intervals of time.

Year Two Maths Curriculum

Theme	Autumn	Spring	Summer

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Number-number and place value	Read and write numbers to at least 100 in numerals and in words. Recognise the place value of each digit in a two-digit number (tens, ones). Identify, represent and estimate numbers using different representations, including the number line. Compare and order numbers from 0 up to 100; use <, > and = signs. Round numbers to at least 100 to the nearest 10. Use place value and number facts to solve problems. Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward. Partition numbers in different ways (for example, 23 = 20 + 3 and 23 = 10 + 13). Use place value and number facts to solve problems.	Read and write numbers to at least 100 in numerals and in words. Recognise the place value of each digit in a two-digit number (tens, ones). Identify, represent and estimate numbers using different representations, including the number line. Compare and order numbers from 0 up to 100; use <, > and = signs. Round numbers to at least 100 to the nearest 10. Use place value and number facts to solve problems. Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward. Partition numbers in different ways (for example, 23 = 20 + 3 and 23 = 10 + 13). Use place value and number facts to solve problems.	Read and write numbers to at least 100 in numerals and in words. Recognise the place value of each digit in a two-digit number (tens, ones). Identify, represent and estimate numbers using different representations, including the number line. Compare and order numbers from 0 up to 100; use <, > and = signs. Round numbers to at least 100 to the nearest 10. Use place value and number facts to solve problems. Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward. Partition numbers in different ways (for example, 23 = 20 + 3 and 23 = 10 + 13). Use place value and number facts to solve problems.
Addition and Subtraction	Solve problems with addition and subtraction: -using concrete objects and pictorial representations, including those involving numbers, quantities and measures. -applying their increasing knowledge of mental and written methods Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot. 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, pictorial representations, and mentally, including: a two-digit number and ones; a two-digit number and tens; two two-digit numbers; adding three one-digit numbers. Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot. Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems	Solve problems with addition and subtraction: -using concrete objects and pictorial representations, including those involving numbers, quantities and measures. -applying their increasing knowledge of mental and written methods. Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot. 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, pictorial representations, and mentally, including: a two-digit number and ones; a two-digit number and tens; two two-digit numbers; adding three one-digit numbers. Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot. Recognise and use the inverse relationship to check calculations and missing number problems. Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot. Combine amounts to make a particular value. Find different combinations of coins that equal the same amounts of money. Add and subtract money of the same unit, including giving change. Solve simple problems in a practical context involving addition and subtraction of money	Solve problems with addition and subtraction: -using concrete objects and pictorial representations, including those involving numbers, quantities and measures. -applying their increasing knowledge of mental and written methods. Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot. 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, pictorial representations, and mentally, including: a two-digit number and ones; a two-digit number and tens; two two-digit numbers; adding three one-digit numbers. Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot. Recognise and use the invrse relationship to check calculations and missing number problems. Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot. Find different combinations of coins that equal the same amounts of money. Add and subtract money of the same unit, including giving change. Solve simple problems in a practical context involving addition and subtraction of money.

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Year Two Maths Curriculum

Theme	Autumn	Spring	Summer
Multiplication and Division	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 (using repeated addition) within the multiplication tables and write them using the multiplication (×),and equals (=) signs. Understand multiplication as repeated addition. Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot.	Show that multiplication of two numbers can be done in any order (commutative). Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers. Understand the connection between the 10 multiplication table and place value. Calculate mathematical statements for multiplication (using repeated addition) within the multiplication tables and write them using the multiplication (×) and equals (=) signs. Solve problems involving multiplication, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.	Understand multiplication as repeated addition. Understand division as sharing and grouping. Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot. Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers. Understand the connection between the 10 multiplication table and place value. Calculate mathematical statements for multiplication (using repeated addition) and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs. Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.
Fractions	Recognise, find, name and write fractions 1/3, 1/4, 2/4 and 3/4 of a length, shape, and set of objects or quantity. Count on and back in steps of 1/2 and 1/4.	Understand and use the terms numerator and denominator. Understand that a fraction can describe part of a set. Understand that the larger the denominator is the more pieces it is split into and therefore the smaller each part will be. Recognise, find, name and write fractions 1/3, 1/4, 2/4 and 3/4 of a length, shape, and set of objects or quantity. Count on and back in steps of 1/2 and 1/4. Write simple fractions for example, 1/2 of 6 = 3 and recognise the equivalence of 2/4 and 1/2.	Understand and use the terms numerator and denominator. Understand that a fraction can describe part of a set. Understand that the larger the denominator is the more pieces it is split into and therefore the smaller each part will be. Recognise, find, name and write fractions 1/3, 1/4, 2/4 and 3/4 of a length, shape, and set of objects or quantity. Count on and back in steps of 1/2 and 1/4. Write simple fractions for example, 1/2 of 6 = 3 and recognise the equivalence of 2/4 and 1/2.
Measures	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. Compare and order lengths, mass, volume/capacity and record the results using >, < and = •	Tell and write 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. Compare and sequence intervals of time.	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. Tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times. Know the number of minutes in an hour and the number of hours in a day.
Geometry	Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line. Identify 2-D shapes on the surface of 3-D shapes, (for example, a circle on a cylinder and a triangle on a pyramid). Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces. Compare and sort common 2-D and 3-D shapes & everyday objects.	Order and arrange combinations of mathematical objects in patterns and sequences. 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).	Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line. Identify 2-D shapes on the surface of 3-D shapes, (for example, a circle on a cylinder and a triangle on a pyramid). Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces. Compare and sort common 2-D and 3-D shapes & everyday objects.

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Statistics	Interpret and construct simple pictograms, tally charts, block diagrams and simple tables. Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity. Ask and answer questions about totalling and comparing categorical data.	Interpret and construct simple pictograms, tally charts, block diagrams and simple tables. Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity. Ask and answer questions about totalling and comparing categorical data.	Interpret and construct simple pictograms, tally charts, block diagrams and simple tables. Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity. Ask and answer questions about totalling and comparing categorical data.

Year Three Maths Curriculum

Maths Mastery

Our 2014 national curriculum states that "the expectation is that the majority of pupils will move through the programmes of study at **broadly the same pace" and that "**pupils who grasp concepts rapidly should be challenged through rich and sophisticated problems **before any acceleration through new content"**.

- **Problem-solving and reasoning should be integrated into all activities.**
- **Opportunities to explain and justify opinions and make explanations should be incorporated into planning.**
- **Children should be challenged and extended through the problems they are given to solve.**

Theme	Autumn	Spring	Summer
Mental Maths Objectives to be covered	**Number - Number and place value:** Read and write numbers up to 1000 in numerals and in words. Compare and order numbers up to 1000. Count on from and back to 0 in multiples of 1, 4, 8, 10, 50 and 100; find 10 or 100 more or less than a given number. Recognise the place value of each digit in a three-digit number and partition into hundreds, tens, ones. **Number – Addition and Subtraction:** Derive and recall all addition and subtraction facts for each number to 20, sums and differences of multiples of 10 and number pairs that total 100. Add and subtract numbers mentally, including: -a three-digit number and one; -a three-digit number and tens; -a three-digit number and hundreds. **Number – Multiplication and division:** Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables. Recognise multiples of 2, 5 or 10 up to 1000 and recall odd and even numbers. Derive doubles of whole numbers to 20 and their corresponding halves. **Number – Fractions:** Count up and down in tenths. **Measurement:** Tell and write the time from an analogue clock, and 12-hour	**Number - Number and place value:** Count on from and back to 0 in multiples of 1, 4, 8, 10, 50 and 100; find 10 or 100 more or less than a given number recognise the place value of each digit in a three-digit number and partition into hundreds, tens, ones compare and order numbers up to 1000 Round 2 or 3 digit numbers to the nearest 10. **Number – Addition and Subtraction:** Find pairs of numbers that total 100. Add and subtract numbers mentally, including: a three-digit number and ones a three-digit number and tens a three-digit number and hundreds **Number – Multiplication and division:** Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables. Recognise multiples of 2, 5 or 10 up to 1000 and recognise off and even numbers (venn and carroll). Derive doubles of whole numbers to 20 and corresponding halves. Derive doubles of multiples of 5 to 100. **Number - fractions:** Count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10. Recognise and use fractions as numbers on a number line: unit fractions and non-unit fractions with small denominators. **Measurement:**	**Number - Number and place value:** Count on from and back to 0 in multiples of 1, 4, 8, 10, 50 and 100. Recognise the place value of each digit in a three-digit number and partition into hundreds, tens, ones. Compare and order numbers up to 1000 and position them on a number line. Round 2 or 3 digit numbers to the nearest 10 or 100. **Number – Addition and Subtraction:** State subtraction fact corresponding to addition fact and vice versa. Add and subtract numbers mentally, including: a three-digit number and ones a three-digit number and tens a three-digit number and hundreds near multiples of 10 e.g. 9, 19, 21 **Number – Multiplication and division:** Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables. **R**ecognise multiples of 2, 5 or 10 up to 1000. **Number - fractions:** Recognise and use fractions as numbers on a number line: unit fractions and non-unit fractions with small denominators. **Measurement:** Know the relationships between kilometres and metres, metres and centimetres, kilograms and grams, litres and millilitres. Tell and write the time from an analogue clock, and 12-hour and

	and 24-hour clocks. Know the number of seconds in a minute and the number of days in each month, year and leap year; Compare durations of events [for example to calculate the time taken by particular events or tasks]. **Geometry – Properties of shape** Identify whether angles are greater than or less than a right angle.	Know the relationships between kilometres and metres, metres and centimetres, kilograms and grams, litres and millilitres. Tell and write the time from an analogue clock, and 12-hour and 24-hour clocks Use Roman numerals from I to XII **Geometery – Properties of shape** Classify 2D and 3D shapes according to their properties (Venn and Carroll).	24-hour clocks. Use Roman numerals from I to XII. Know the number of seconds in a minute and the number of days in each month, year and leap year. **Geometry – Properties of shape** Identify horizontal and vertical lines and pairs of perpendicular and parallel lines.

Year Three Maths Curriculum

Theme	Autumn	Spring	Summer
Number-number and place value	Read and write numbers to at least 1000 in numerals and in words. Recognise the place value of each digit in a three-digit number (hundreds, tens and ones). Partition numbers in different ways. Identify, represent and estimate numbers using different representations, including the number line. Compare and order numbers up to 1000. Round numbers to at least 1000 to the nearest 10 or 100. Solve number problems and practical problems involving these ideas. Count from 0 in multiples of 4 and 100. Find 10 or 100 more or less than a given number. Describe and extend number sequences involving counting on or back in different steps.	Read and write numbers to at least 1000 in numerals and in words. Recognise the place value of each digit in a three-digit number (hundreds, tens and ones). Partition numbers in different ways. Identify, represent and estimate numbers using different representations, including the number line. Compare and order numbers up to 1000. Round numbers to at least 1000 to the nearest 10 or 100. Solve number problems and practical problems involving these ideas. Count from 0 in multiples of 4 and 100. Find 1, 10 or 100 more or less than a given number. Describe and extend number sequences involving counting on or back in different steps.	Count from 0 in multiples of 4, 8, 50 and 100. Find 1, 10 or 100 more or less than a given number. Recognise the place value of each digit in a three-digit number (hundreds, tens and ones). Identify the value of each digit to one decimal place. Compare and order numbers up to 1000. Round numbers to at least 1000 to the nearest 10 or 100. Identify, represent and estimate numbers using different representations, including the number line. Read and write numbers to at least 1000 in numerals and in words. Solve problems involving measures and simple problems involving passage of time. Describe and extend number sequences involving counting on or back in different steps.

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Addition and Subtraction	Add and subtract numbers mentally-combinations of 1- digit and 2-digit numbers. Add and subtract numbers with up to three digits, using formal written method of columnar addition.(expanded) Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method). Estimate the answer to a calculation and use inverse operations to check the answers. Solve problems, including missing number problems, using number facts	Add and subtract numbers mentally, including: a three-digit number and ones and a three-digit number and tens. Add numbers with up to three digits, using formal written method of columnar addition. Subtract numbers with up to three digits, using formal written method of columnar subtraction. Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method). Understand and use take away and difference for subtraction, deciding on the most efficient method for the numbers involved, irrespective of context. Estimate the answer to a calculation and use inverse operations to check the answers. Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction.	Add and subtract numbers mentally, including: a three-digit number and ones and a three-digit number and tens and a three-digit number and hundreds. Add numbers with up to three digits, using formal written method of columnar addition. Subtract numbers with up to three digits, using formal written method of columnar subtraction. Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method). Understand and use take away and difference for subtraction, deciding on the most efficient method for the numbers involved, irrespective of context. Estimate the answer to a calculation and use inverse operations to check the answers. Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction.

Year Three Maths Curriculum

Theme	Autumn	Spring	Summer

Handford Hall Primary School

Multiplication and Division	Revise 2 and 5 and 10 multiplication facts from KS 1. Count from 0 in multiples of 4. Recall and use multiplication and division facts for the 3 and 4 times tables. Write and calculate mathematical statements for multiplication 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 division using the multiplication tables that they know, including for two-digit numbers divided by one-digit numbers, using mental and progressing to formal written methods. Solve problems, including missing number problems, involving multiplication and division.	Recall and use multiplication and division facts for the 3 and 4 times tables. Recall and use multiplication and division facts for the 8 times tables. Write and calculate mathematical statements for multiplication using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods - HTU x U Write and calculate mathematical statements for division using the multiplication tables that they know, including for two-digit numbers divided by one-digit numbers, using mental and progressing to formal written methods. Solve problems, including missing number problems, involving multiplication and division.	Recall and use multiplication and division facts for the 3 and 4 times tables. Recall and use multiplication and division facts for the 8 times tables. Write and calculate mathematical statements for multiplication using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods - HTU x U. Write and calculate mathematical statements for division using the multiplication tables that they know, including for two-digit numbers divided by one-digit numbers, using mental and progressing to formal written methods. Solve problems, including missing number problems, involving multiplication and division including positive integer scaling problems.
Fractions	Count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10. Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators	Count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10. Recognise and show, using diagrams, equivalent fractions with small denominators. Add and subtract fractions with the same denominator within one whole (using diagram) (for example, 5/7 + 1/7 = 6/7). Show practically or pictorially that a fraction is one whole number divided by another (for example, 3/4 can be interpreted as 3 ÷ 4). Compare and order unit fractions and fractions with the same denominators (including on a number line). Solve problems involving fractions.	Count up and down in tenths and in decimals representing tenths (0.1, 0.2, 0.3…..1.1, 1.2, 1.3 etc.). Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators. Recognise and show, using diagrams, equivalent fractions with small denominators. Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators. Show practically or pictorially that a fraction is one whole number divided by another (for example, 3/4 can be interpreted as 3 ÷ 4). Compare and order unit fractions and fractions with the same denominators (including on a number line). Solve problems involving fractions. Compare and order numbers with one decimal place. Continue to recognise and use symbols for pounds (£) and pence (p) and understand that the decimal point separates pounds and pence. Recognise that ten 10p coins are equivalent to £1 and that each coin is 1/10 of £1. Add and subtract amounts of money to give change, using both £ and p in practical contexts.

Handford Hall Primary School

Year Three Maths Curriculum

Theme	Autumn	Spring	Summer
Measures	Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks. Estimate and read time with increasing accuracy to the nearest minute. Record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight. Know the number of seconds in a minute and the number of days in each month, year and leap year. Solve simple problems involving passage of time. .	Measure, compare, add and subtract volumes and capacities. Measure, compare, add and subtract masses. Solve problems involving and measures. Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks. Estimate and read time with increasing accuracy to the nearest minute. Record and compare time in terms of seconds, minutes and hours; use vocabulary such as, o'clock, a.m./p.m., morning, afternoon, noon and midnight. Know the number of seconds in a minute and the number of days in each month, year and leap year. Compare durations of events, for example to calculate the time taken by particular events or tasks. Solve simple problems involving passage of time.	Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml). Measure the perimeter of simple 2-D shapes. Solve problems involving measures.
Geometry	Draw 2-D shapes and describe them. Recognise angles as a property of shape. Make 3-D shapes using modelling materials. Recognise 3-D shapes in different orientations and describe them. Identify horizontal and vertical lines and pairs of perpendicular and parallel lines. Compare and sort common 3-D shapes and everyday objects.	Draw 2-D shapes and describe them. Make 3-D shapes using modelling materials. Recognise 3-D shapes in different orientations and describe them. Recognise that angles area property of a shape or a description of a turn. Identify whether angles are greater than or less than a right angle. Identify horizontal and vertical lines and pairs of perpendicular and parallel lines. Compare and sort common 2-D and 3-D shapes and everyday objects. Use mathematical vocabulary to describe position, direction and movement, including distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise), and movement in a straight line. Describe positions on a square grid labelled with letters and numbers.	Draw 2-D shapes and describe them. Identify horizontal and vertical lines and pairs of perpendicular and parallel lines. Recognise that angles are a property of a shape or a description of a turn. Identify right angles, recognise that two right angles make a half turn, three make three quarters of a turn and four a complete turn. Identify whether angles are greater than or less than a right angle. Compare and sort common 2-D and 3-D shapes and everyday objects
Statistics	Interpret and present data using bar charts and tables.	Interpret and present data using bar charts and tables. Solve one-step and two-step questions (for example, 'How many more?' and 'How many fewer?' using information presented in scaled bar charts and tables.	Interpret and present data using bar charts and tables. Solve one-step and two-step questions (for example, 'How many more?' and 'How many fewer?' using information presented in scaled bar charts and tables.

Handford Hall Primary School

Year Four Maths Curriculum

Maths Mastery

Our 2014 national curriculum states that "the expectation is that the majority of pupils will move through the programmes of study at **broadly the same pace" and that "**pupils who grasp concepts rapidly should be challenged through rich and sophisticated problems **before any acceleration through new content"**.

- **Problem-solving and reasoning should be integrated into all activities.**
- **Opportunities to explain and justify opinions and make explanations should be incorporated into planning.**
- **Children should be challenged and extended through the problems they are given to solve.**

Theme	Autumn	Spring	Summer
Mental Maths Objectives to be covered	**Number - Number and place value** Read and write whole numbers to 10,000 and beyond. Count in multiples of 6, 7, 9, 25 and 1000. Order and compare numbers beyond 1000; using the greater than and less than symbols. Round any number to the nearest 10, 100. Read Roman numerals to 100 (I to C). Find the effect of multiplying and dividing a one- or two-digit number by 10, identifying the value of the digits in the answer as hundreds, tens, ones, tenths and hundredths etc. **Number – Addition and Subtraction:** Estimate and use inverse operations to check answers to a calculation. Add and subtract mentally pairs of 2-digit whole numbers. Add and subtract 1, 10 and 100 to any whole number. **Number – Multiplication and division:** Recall multiplication and division facts for multiplication tables up to 12 × 12. Use place value, known and derived facts to multiply and divide mentally by multiples of 10, 100 and tenths. Multiplying together three numbers. Identify the doubles of 2-digit numbers; use these to calculate doubles of multiples of 10 and 100 and derive the corresponding halves. **Number – Fractions:** Recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$ **Measurement:** Convert between different units of measure [for example, kilometre to metre; hour to minute (add explanation in guidance). Read, write and convert time between analogue and digital 12-	**Number - Number and place value:** Count on and back in multiples of 6, 7, 9, 25 and 1000. Find 1000 more or less than a given number. Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones). Order and compare numbers beyond 1000; using the greater than and less than signs. Round any number to the nearest 10, 100 or 1000 including decimals to the nearest whole number. Find the effect of multiplying and dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as thousands, hundreds, tens ones, tenths and hundredths. **Number – Addition and Subtraction:** Estimate and use inverse operations to check answers to a calculation. Add and subtract mentally pairs of 2-digit whole numbers. Derive addition pairs that total 100; multiples of 50 that total 1000. **Number – Multiplication and division:** Recall multiplication and division facts for x tables up to 12 × 12. Use place value, known and derived facts to multiply and divide mentally by multiples of 10, 100 and tenths. Multiply together three numbers. Recognise and use factor pairs and commutativity in mental calculations. Understand the distributive law to multiply a 2-digit number by a 1-digit number (39 × 7 = 30 × 7 + 9 × 7) and the associative law (2 × 3) × 4 = 2 × (3 × 4)). Identify the doubles of 2-digit numbers; use these to calculate doubles of multiples of 10 and 100 and derive the corresponding halves. **Number - fractions:** Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten. Recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$.	**Number - Number and place value:** Count in multiples of 6, 7, 9, 25 and 1000. Find 1000 more or less than a given number. Count backwards through zero to include negative numbers. Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) order and compare numbers beyond 1000. Round any number to the nearest 10, 100 or 1000, including decimals to the nearest whole number. Read Roman numerals to 100 (I to C) **Number – Addition and Subtraction:** Estimate and use inverse operations to check answers to a calculation. **Number – Multiplication and division:** Recall multiplication and division facts for x tables up to 12 × 12. Use place value, known and derived facts to multiply and divide mentally by multiples of 10, 100 and tenths. Multiplying together three numbers. Recognise and use factor pairs and commutativity in mental calculations. Understand the distributive law to x a 2-digit number by a 1-digit number (39 × 7 = 30 × 7 + 9 × 7) and the associative law (2 × 3) × 4 = 2 × (3 × 4)). Identify the doubles of 2 digit numbers and multiples of 100 to 5000; use these to calculate doubles of multiples of 10 and 100 and derive the corresponding halves. **Number - fractions:** Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten. Recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$. **Measurement:** Read, write and convert time between analogue and digital 12- and

	and 24-hour clocks. Convert from hours to minutes; minutes to seconds; years to months; weeks to days. **Geometery – Properties of shape:** Calculate perimeter of regular shapes.	**Measurement:** Convert between different units of measure [for example, kilometre to metre; hour to minute (add explanation in guidance)] **Geometery – Properties of shape:** Calculate perimeter of regular shapes.	24-hour clocks. Convert from hours to minutes; minutes to seconds; years to months; weeks to days. **Geometry – Properties of shape:** Calculate perimeter of regular shapes.

Year Four Maths Curriculum

Theme	Autumn	Spring	Summer
Number-number and place value	Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens and ones). Round any number to the nearest 10, 100 or 1000 Order and compare numbers beyond 1000 Read and write numbers with up to two decimal places. Identify the value of each digit to two decimal places. Solve number and practical problems that involve all of the above and with increasingly large positive numbers.	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. Count in multiples of 6, 8, 25 and 1000. Count backwards through zero to include negative numbers. Order temperatures including those below 0˚C. Describe and extend number sequences involving counting on or back in different steps, including sequences with multiplication and division steps.	Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens and ones). Order and compare numbers beyond 1000. Identify, represent and estimate numbers using different representations, including the number line. Round any number to the nearest 10, 100 or 1000. Solve number and practical problems that involve all of the above and with increasingly large positive numbers.
Addition and Subtraction	Partition numbers in different ways (for example, 2.3 = 2 + 0.3 and 2.3 = 1 + 1.3). Add and subtract numbers with up to 4 digits and decimals with one decimal place using the formal written methods of columnar addition and subtraction where appropriate. Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method). Estimate and use inverse operations to check answers to a calculation. Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.	Add and subtract numbers with up to 4 digits and decimals with one decimal place using the formal written methods of columnar addition and subtraction where appropriate. Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method). Estimate and use inverse operations to check answers to a calculation. Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.	Add and subtract numbers with up to 4 digits and decimals with one decimal place using the efficient written methods of columnar addition and subtraction where appropriate. Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method). Select a mental strategy appropriate for the numbers involved in the calculation. Estimate and use inverse operations to check answers to a calculation. Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why. Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.
Multiplication and Division	Revise multiplication facts from previous year groups. Recall multiplication and division facts for the 6 times table and 9 times table. Use place value, known and derived facts to multiply mentally, including: multiplying by 0 and 1; multiplying together three numbers. Recognise and use factor pairs and commutativity in mental calculations. Use partitioning to double or halve any number, including decimals to one decimal place.	Recall multiplication and division facts for the 7 times table and 11 times table. Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers. Recognise and use factor pairs and commutativity in mental calculations. Use partitioning to double or halve any number, including decimals to one decimal place. Divide numbers up to 3 digits by a one-digit number using the formal written	Recall multiplication and division facts for the 12 times table. Partition numbers in different ways (for example, 2.3 = 2 + 0.3 and 2.3 = 1 + 1.3). Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers. Recognise and use factor pairs and commutativity in mental calculations. Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting,

	Multiply two-digit and three-digit numbers by a one-digit number using formal written layout. Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method).	method of short division and interpret remainders appropriately for the context.	written method). Multiply two-digit and three-digit numbers by a one-digit number using formal written layout. Solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, division (including remainders), integer scaling problems and harder correspondence problems such as which n objects are connected to m objects.

Year Four Maths Curriculum

Theme	Autumn	Spring	Summer
Fractions	Read and write numbers with up to two decimal places. Identify the value of each digit to two decimal places. Count up and down in hundredths. Recognise that hundredths arise when dividing an object by a hundred and dividing tenths by ten. Recognise that one hundred 1p coins are equivalent to £1 and that each coin is 1/100 of £1. Write amounts of money using decimal notation. Round decimals with one decimal place to the nearest whole number. Order and compare numbers with the same number of decimal places up to two decimal places. 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.	Understand that a fraction is one whole number divided by another (for example, 3/4 can be interpreted as 3 ÷ 4). Add and subtract fractions with the same denominator. Recognise and show, using diagrams, families of common equivalent fractions. Recognise and write decimal equivalents of any number of tenths or hundredths. Recognise and write decimal equivalents to ¼; ½; ¾ . Count on and back in steps of unit fractions. Compare and order unit fractions and fractions with the same denominator (including on a number line). 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 simple measure and money problems involving fractions and decimals to two decimal places.	Identify the value of each digit to two decimal places. Recognise and write decimal equivalents of any number of tenths or hundredths. Recognise and write decimal equivalents to ¼ ; ½; ¾ .•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. Convert between different units of measure. Round decimals with one decimal place to the nearest whole number. Order and compare numbers with the same number of decimal places up to two decimal places. Solve simple measure problems involving fractions and decimals to two decimal places. Continue to understand division as sharing and grouping and use each appropriately. Understand that a fraction is one whole number divided by another (for example, 3/4 can be interpreted as 3 ÷ 4)
Measures	Estimate, compare and calculate different lengths. Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres. Convert between different units of measure (e.g. kilometre to metre; hour to minute).	Read, write and convert time between analogue and digital 12 and 24-hour clocks. Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days and problems involving money and measures.	Estimate, compare and calculate different measures. Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres. Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days and problems involving money and measures.
Geometry	Continue to identify horizontal and vertical lines and pairs of perpendicular and parallel lines. Identify acute and obtuse angles and compare and order angles up to two right angles by size.	Describe positions on a 2-D grid as coordinates in the first quadrant. Describe movements between positions as translations of a given unit to the left/right and up/down. Plot specified points and draw sides to complete a given polygon.	Use a variety of sorting diagrams to compare and classify numbers and geometric shapes, including quadrilaterals and triangles, based on their properties and sizes. Continue to identify horizontal and vertical lines and pairs of perpendicular

	Identify lines of symmetry in 2-D shapes presented in different orientations. Use a variety of sorting diagrams to compare and classify numbers and geometric shapes, including quadrilaterals and triangles, based on their properties and sizes.	Complete a simple symmetric figure with respect to a specific line of symmetry Understand that area is a measure of surface within a given boundary. Find the area of rectilinear shapes by counting squares.	and parallel lines. Identify acute and obtuse angles and compare and order angles up to two right angles by size. Identify lines of symmetry in 2-D shapes presented in different orientations.
Statistics	Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs. Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.	Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs. Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.	Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs. Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.

Year Five Maths Curriculum

Maths Mastery

Our 2014 national curriculum states that "the expectation is that the majority of pupils will move through the programmes of study at **broadly the same pace" and that "**pupils who grasp concepts rapidly should be challenged through rich and sophisticated problems **before any acceleration through new content"**.

- **Problem-solving and reasoning should be integrated into all activities.**
- **Opportunities to explain and justify opinions and make explanations should be incorporated into planning.**
- **Children should be challenged and extended through the problems they are given to solve.**

Theme	Autumn	Spring	Summer
Mental Maths Objectives to be covered	**Number - Number and place value:** Partition, order and compare numbers to at least 1 000 000, including those with up to three decimal places and determine the value of each digit. Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000. Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000. Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero. Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000. **Number – Addition and Subtraction:** Add and subtract numbers mentally with increasingly large numbers. **Number – Multiplication and division:** Derive multiplication and division facts up to 12 x 12. Recall square numbered.	**Number - Number and place value:** Partition, order and compare numbers to at least 1 000 000, including those with up to three decimal places and determine the value of each digit. Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000. Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000. Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero. Use knowledge of place value to derive doubles and halves of decimals e.g. half of 5.6, double 0.4. Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000. **Number – Addition and Subtraction:** Add and subtract numbers mentally with increasingly large numbers. **Number – Multiplication and division:** Derive multiplication and division facts up to 12 x 12. Identify multiples and factors.	**Number - Number and place value:** Partition, order and compare numbers to at least 1 000 000, including those with up to three decimal places and determine the value of each digit. Round any number up to 1 000 000 to the nearest 1, 10, 100, 1000, 10 000 and 100 000. Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000. Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero. Use knowledge of place value to derive doubles and halves of decimals e.g. half of 5.6, double 0.4. Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000. Partition to multiply by single digit numbers. Use tests of divisibility. **Number – Addition and Subtraction:** Add and subtract numbers mentally with increasingly large numbers.

	Double or halve any whole number or decimal number. **Number – Fractions:** Find fractions of shapes, quantities, measures. Recognise equivalent fractions, decimals and percentages. **Measurement:** Read Roman numerals to 1000 (M) and recognise years written in Roman numerals. Convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre). **Geometery – Properties of shape** Calculate the perimeter and area of regular shapes and rectangles.	Establish whether a number up to 100 is prime and recall prime numbers up to 19 (using the vocabulary of prime numbers, prime factors and composite (non-prime) numbers. Multiply and divide numbers mentally drawing upon known facts. **Number - fractions:** Find fractions of shapes, quantities, measures. Recognise equivalent fractions, decimals and percentages. **Measurement:** Read Roman numerals to 1000 (M) and recognise years written in Roman numerals. Convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre). **Geometery – Properties of shape:** Calculate the perimeter and area of regular shapes and rectangles. Identify, visualise and describe properties of 2D and 3D shapes.	**Number – Multiplication and division:** Derive multiplication and division facts up to 12 x 1. Identify multiples and factors. Establish whether a number up to 100 is prime and recall prime numbers up to 19 (using the vocabulary of prime numbers, prime factors and composite (non-prime) numbers. Multiply and divide numbers mentally drawing upon known facts. **Number - fractions:** Find percentages of shapes, quantities, measures. Recognise equivalent fractions, decimals and percentages. Count on and back in fractions and decimals, including bridging 0. **Measurement:** Read Roman numerals to 1000 (M) and recognise years written in Roman numerals. Convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre). Calculate the perimeter and area of regular shapes and rectangles.

Year Five Maths Curriculum

Theme	Autumn	Spring	Summer
Number-number and place value	Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit. Identify, represent and estimate numbers using the number line. Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000. Describe and extend number sequences including those with multiplication and division steps and those where the step size is a decimal. Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000. Solve number problems and practical problems that involve all of the above. Find 1, 10, 100, 1000 and other powers of 10 more or less than a given number than a given number.	Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers through zero. Calculate difference in temperature, including those that involve a positive and negative temperature. Describe and extend number sequences including those with multiplication and division steps and those where the step size is a decimal. Continue to order temperatures including those below 0°C. Read Roman numerals to 1000 (M) and recognise years written in Roman numerals.	Identify, represent and estimate numbers using the number line. Identify the value of each digit to three decimal places. Read, write, order and compare numbers with up to three d.p Count forwards and backwards in decimal steps. Describe and extend number sequences including those with multiplication and division steps and those where the step size is a decimal. Round decimals with two decimal places to the nearest whole number and to one decimal place. Solve number problems and practical problems that involve all of the above. Find 0.01, 0.1, 1, 10, 100, 1000 and other powers of 10 more or less than a given number than a given number.
Addition and Subtraction	Add and subtract whole numbers with more than 4 digits and decimals with two decimal places, including using formal written methods (columnar addition and subtraction). Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method).	Add and subtract numbers mentally with increasingly large numbers and decimals to two decimal places. Add and subtract whole numbers with more than 4 digits and decimals with two decimal places, including using formal written methods (columnar addition and subtraction).	Add and subtract whole numbers with more than 4 digits and decimals with two decimal places, including using formal written methods (columnar addition and subtraction). Add and subtract numbers mentally with increasingly large numbers and decimals to two decimal places.

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	Use estimation and inverse to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy. Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why	Use both operations to solve problems involving measure (for example, length, mass, volume, money) using decimal notation.	Use estimation and inverse to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy. Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.
Multiplication and Division	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. 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	Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers. Multiply and divide numbers mentally drawing upon known facts. 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. Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method). Select a mental strategy appropriate for the numbers involved in the calculation. Solve problems involving multiplication including using their knowledge of factors and multiples, cubes and squares. Solve problems involving multiplication, including scaling by simple fractions and problems involving simple rates.	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. 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. Use all four operations to solve problems involving measure (for example, mass, capacity and volume) using decimal notation, including scaling.

Year Five Maths Curriculum

Theme	Autumn	Spring	Summer
Fractions	Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents. Identify the value of each digit to three decimal places. Read, write, order and compare numbers with up to three decimal places. Find 0.01, 0.1, 1, 10, 100, 1000 and other powers of 10 more or less than a given number than a given number. Count forwards and backwards in decimal steps. Describe and extend number sequences including those with multiplication and division steps and those where the step size is a decimal. Round decimals with two decimal places to the nearest whole number and to one decimal place. Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000.	Recognise mixed number and improper fractions and convert from one form to the other. Add and subtract fractions with the same denominator and denominators that are multiples of the same number (using diagrams). Write mathematical statements > 1 as a mixed number, e.g. 2/5 + 4/5 = 6/5 = 11/5. Read and write decimal numbers as fractions [for example, 0.71 = 71] --------- 100 Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams Read and write decimal numbers as fractions. Solve problems involving fractions.	Round decimals with two decimal places to the nearest whole number and to one decimal place. Solve problems involving number up to three decimal places. 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. Solve problems which require knowing percentage and decimal equivalents of 1/2, 1/4, 1/5, 2/5, 4/5 and those fractions with a denominator of a multiple of 10 or 25. Read and write decimal numbers as fractions. Solve problems involving fractions.

	Solve problems involving number up to three decimal places. Count on and back in mixed number steps such as 11/2. Read and write decimal numbers as fractions. Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths. Compare and order fractions whose denominators are all multiples of the same number (including on a number line). Solve problems involving fractions.		
Measures	Calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm2) and square metres (m2) and estimate the area of irregular shapes.	Calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm^2) and square metres (m^2) and estimate the area of irregular shapes. Understand the difference between liquid volume, including capacity and solid volume. Estimate (and calculate) volume (for example, using 1cm3 blocks to build cuboids (including cubes)).	Solve problems involving converting between units of time. Use all four operations to solve problems involving measure (for example, mass, capacity and volume) using decimal notation, including scaling. Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints.

Year Five Maths Curriculum

Theme	Autumn	Spring	Summer
Geometry	Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles. Draw given angles and measure them in degrees (°) Distinguish between regular polygons based on reasoning about equal sides and angles. Use the properties of rectangles to deduce related facts and find missing lengths and angles. Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres.	Distinguish between regular and irregular polygons based on reasoning about equal sides and angles. Describe positions on the first quadrant of a coordinate grid. Plot specified points and complete shapes. 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. Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles. Draw given angles, and measure them in degrees (°).	Describe positions on the first quadrant of a coordinate grid. Plot specified points and complete shapes. 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.

		Identify angles at a point and one whole turn (total 360°). Identify angles at a point on a straight line and a turn (total 180°). Identify other multiples of 90°. Use the properties of rectangles to deduce related facts and missing lengths and angles. Identify 3-D shapes, including cubes and other cuboids, from 2-D representations. Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes.	
Statistics	Continue to read, write and convert time between analogue and digital 12 and 24-hour clocks. Complete, read and interpret information in tables, including timetables. Solve problems involving converting between units of time.	Calculate and interpret the mode, median and range.	Calculate and interpret the mode, median and range. Complete, read and interpret information in tables, including timetables. Draw and interpret line graphs and read intermediate points.

Year Six Maths Curriculum

Maths Mastery

Our 2014 national curriculum states that “the expectation is that the majority of pupils will move through the programmes of study at **broadly the same pace” and that “**pupils who grasp concepts rapidly should be challenged through rich and sophisticated problems **before any acceleration through new content”**.

- **Problem-solving and reasoning should be integrated into all activities.**

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- **Opportunities to explain and justify opinions and make explanations should be incorporated into planning.**
- **Children should be challenged and extended through the problems they are given to solve.**

Theme	Autumn	Spring	Summer
Mental Maths Objectives to be covered	**Number - Number and place value:** Order and compare decimals with up to 3 decimal places, and determine the value of each digit, and fractions. Round any whole and decimal number to a required degree of accuracy. Use negative numbers in context, and calculate intervals across zero. Multiply and divide whole and decimal numbers by 10, 100 and 1000. **Number – Addition and Subtraction:** Perform mental calculations, including with mixed operations and large numbers. Add and subtract any pair of appropriate whole numbers mentally. Find decimals with a sum of 1/10. **Number – Multiplication and division:** Identify common factors, common multiples and prime numbers. Recall multiplication and division tables to 12 x 12 and derive quickly squares of numbers to 12 x 12 and the corresponding squares of multiples of 10. Double and half any whole number. **Number – Fractions** Find fraction and percentages of whole number quantities, shapes and measures. Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts. Recognise equivalent fractions. **Algebra:** Use simple formulae. **Measurement:** 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. **Geometery – Properties of shape** Calculate the area and perimeter of regular shapes and rectangles.	**Number - Number and place value:** Order and compare decimals with up to 3 decimal places and position on a number line, and determine the value of each digit. Round any whole and decimal number to a required degree of accuracy. Use negative numbers in context, and calculate intervals across zero. Multiply and divide whole and decimal numbers by 10, 100 and 1000. **Number – Addition and Subtraction:** Perform mental calculations, including with mixed operations and large numbers. Add and subtract any pair of appropriate whole numbers mentally. Find pairs with a sum of 100, multiples of 50 with a sum of 1000 and decimals with a sum of 1/10. **Number – Multiplication and division:** Identify common factors, common multiples and prime numbers. Recall multiplication tables to 12 x 12 and derive related facts; derive quickly squares of numbers to 12 x 12 and the corresponding squares of multiples of 10. Double and half decimals. **Algebra:** Generate and describe linear number sequences. Express missing number problems algebraically. **Number - fractions:** Compare and order fractions, including fractions. Find fraction and percentages of whole number quantities, shapes and measures. Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts. Recognise equivalent fractions. **Measurement:** 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. **Geometery – Properties of shape:** Calculate the area and perimeter of regular shapes and rectangles.	**Number - Number and place value:** Order and compare decimals with up to 3 decimal places, and determine the value of each digit. Round any whole and decimal number to a required degree of accuracy. Use negative numbers in context, and calculate intervals across zero. Multiply and divide whole and decimal numbers by 10, 100 and 1000. **Number – Addition and Subtraction:** Perform mental calculations, including with mixed operations and large numbers. Add and subtract any pair of appropriate whole numbers mentally. Find decimals with a sum of 1/10. **Number – Multiplication and division:** Identify common factors, common multiples and prime numbers. Recall multiplication tables to 12 x 12 and derive related facts. Derive quickly squares of numbers and the corresponding squares of multiples of 10. **Number - fractions:** Compare and order fractions, including fractions > 1. Find fraction and percentages of whole number quantities, shapes and measures. Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts. Recognise equivalent fractions. **Measurement:** 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.

Year Six Maths Curriculum

Theme	Autumn	Spring	Summer
Number	Round any whole and decimal number to a required degree of accuracy.	Read, write, order and compare numbers up to 10 000 000, including decimals with up to 3 decimal places and determine the value of each digit.	Read, write, order and compare numbers up to 10 000 000, including decimals with up to 3 decimal places and determine the value of each

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	Use negative numbers in context, and calculate intervals across zero. Solve one and two-step problems involving place value and number. 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. Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate.	Round any whole and decimal number to a required degree of accuracy. Use negative numbers in context, and calculate intervals across zero and between two negative integers. Solve one and two-step problems involving place value and number. Solve problems and puzzles systematically. Interpret solutions to problems and puzzles.	digit. Round any whole and decimal number to a required degree of accuracy. Use negative numbers in context, and calculate intervals across zero and between two negative integers. Solve one and two-step problems involving place value and number. Solve problems and puzzles systematically. Interpret solutions to problems and puzzles.
Addition and Subtraction	Perform mental calculations, including with mixed operations and large numbers. Use their knowledge of the order of operations to carry out calculations involving the four operations. Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why. Solve multi-step problems involving addition, subtraction, multiplication and division. Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.	Perform mental calculations, including with mixed operations and large numbers. Use their knowledge of the order of operations to carry out calculations involving the four operations. Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why. Solve multi-step problems involving addition, subtraction, multiplication and division. Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.	Perform mental calculations, including with mixed operations and large numbers. Use their knowledge of the order of operations to carry out calculations involving the four operations. Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why. Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.
Multiplication and Division	Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication. Identify common factors, common multiples and prime numbers. Solve multi-step problems involving addition, subtraction, multiplication and division. Divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context. Divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context. Solve multi-step problems involving addition, subtraction, multiplication and division.	Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication. Divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context. Divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context. Solve multi-step problems involving addition, subtraction, multiplication and division.	Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication. Divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context. Divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context. Solve multi-step problems involving addition, subtraction, multiplication and division.

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Theme	Autumn	Spring	Summer
Fractions	Use common factors to simplify fractions; use common multiples to express fractions in the same denomination. Compare and order fractions, including fractions > 1. Recognise equivalent fractions. Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions. Multiply simple pairs of proper fractions, writing the answer in its simplest form [for example, $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$]. Divide proper fractions by whole numbers for example, $\frac{1}{3} \div 2 = \frac{1}{6}$]. Solve multi-step problems involving fractions, decimals and percentages. Express one quantity as a percentage of another. Associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction: 3/8 Multiply one-digit numbers with up to two decimal places by whole numbers. Use written division methods in cases where the answer has up to two decimal places Solve multi-step problems involving fractions, decimals and percentages. Solve problems which require answers to be rounded to specified degrees of accuracy.	Use common factors to simplify fractions; use common multiples to express fractions in the same denomination. Compare and order fractions, including fractions > 1. Recognise equivalent fractions. Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions. Multiply simple pairs of proper fractions, writing the answer in its simplest form [for example, $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$]. Divide proper fractions by whole numbers [for example, $\frac{1}{3} \div 2 = \frac{1}{6}$]. Solve multi-step problems involving fractions, decimals and percentages. Express one quantity as a percentage of another. Associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction: 3/8 Multiply one-digit numbers with up to two decimal places by whole numbers. Use written division methods in cases where the answer has up to two decimal places. Solve multi-step problems involving fractions, decimals and percentages. Solve problems which require answers to be rounded to specified degrees of accuracy. Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate.	Use common factors to simplify fractions; use common multiples to express fractions in the same denomination. Compare and order fractions, including fractions > 1. Recognise equivalent fractions. Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions. Multiply simple pairs of proper fractions, writing the answer in its simplest form [for example, $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$]. Divide proper fractions by whole numbers [for example, $\frac{1}{3} \div 2 = \frac{1}{6}$]. Solve multi-step problems involving fractions, decimals and percentages. Express one quantity as a percentage of another. Associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction: 3/8 Multiply one-digit numbers with up to two decimal places by whole numbers. Use written division methods in cases where the answer has up to two decimal places. Solve multi-step problems involving fractions, decimals and percentages. Solve problems which require answers to be rounded to specified degrees of accuracy. Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate.
Ratio and Proportion	Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts. 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 similar shapes where the scale factor is known or can be found. Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.	Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts. 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 similar shapes where the scale factor is known or can be found. Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.	Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts. 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 similar shapes where the scale factor is known or can be found. Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.

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Theme	Autumn	Spring	Summer
Algebra	Use simple formulae. Generate and describe linear number sequences. Express missing number problems algebraically. Find pairs of numbers that satisfy an equation with two unknowns. Enumerate possibilities of combinations of two variables.	Use simple formulae. Generate and describe linear number sequences. Express missing number problems algebraically. Find pairs of numbers that satisfy an equation with two unknowns. Enumerate possibilities of combinations of two variables.	Use simple formulae. Generate and describe linear number sequences. Express missing number problems algebraically. Find pairs of numbers that satisfy an equation with two unknowns. Enumerate possibilities of combinations of two variables
Measures	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. Convert between miles and kilometres. Solve multi-step problems involving measures in a range of contexts. Solve multi-step problems involving time, including interpreting calendars and timetables. Read, interpret and scales on a range of measuring instruments.	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. Convert between miles and kilometres. Solve multi-step problems involving measures in a range of contexts. Solve multi-step problems involving time, including interpreting calendars and timetables. Read, interpret and compare scales on a range of measuring instruments.	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. Solve multi-step problems involving measures in a range of contexts. Solve multi-step problems involving time, including interpreting calendars and timetables.
Geometry	Draw 2d shapes using given dimensions and angles. Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons. Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles. Describe positions on the full coordinate grid (all four quadrants). Draw and translate simple shapes on the coordinate plane, and reflect them in the axes. Find the area and perimeter of regular shapes and rectangles (including counting squares). Recognise that shapes with the same areas can have different perimeters and vice versa. Calculate the area of parallelograms and triangles. Recognise when it is possible to use formulae for area and volume of shapes.	Recognise, describe and build simple 3-D shapes, including making nets. Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons. Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius. Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles. Find the area and perimeter of regular shapes and rectangles (including counting squares). Recognise that shapes with the same areas can have different perimeters and vice versa. Calculate the area of parallelograms and triangles. Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm3) and cubic metres (m3), and extending to other units [for example, mm3 and km3]. Recognise when it is possible to use formulae for area and volume of shapes.	Draw 2-D shapes using given dimensions and angles. Recognise, describe and build simple 3-D shapes, including making nets. Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons. Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles. Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm3) and cubic metres (m3), and extending to other units [for example, mm3 and km3]. Recognise when it is possible to use formulae for area and volume of shapes.
Statistics	Interpret and construct pie charts and line graphs and use these to solve problems.	Interpret and construct pie charts and line graphs and use these to solve problems.	Interpret and construct pie charts and line graphs and use these to solve problems.

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	Calculate and interpret the mean as an average. Interpret a range of data, including conversion graphs.	Calculate and interpret the mean as an average. Describe and predict outcomes from data using the language of chance or likelihood.	Calculate and interpret the mean, mode and median and know when it is appropriate to find each one. Describe and predict outcomes from data using the language of chance or likelihood.