## Introduction

The aim of this document is to give an at-a-glance guide to how the White Rose Maths curriculum links to the Key Stage 1 and 2 national curriculum, and how it progresses through topics.

In each of the major topic areas (Number, Measurement, Geometry and Statistics), the curriculum has been broken down into key areas. For each of these areas, you can then see which NC objectives are covered in that year, together with the term and block in which that objective is first met in version 3 of the White Rose Maths schemes.


- Number and place value NPV
- Number facts NF
- Addition and subtraction AS
- Multiplication and division MD
- Fractions F

Most strands are split into a number of separate criteria. For each of these, the key White Rose Maths steps are listed under the name(s) of the block(s) of learning in

These are the NC objectives. In our schemes these are broken


Many schools are using the 'Ready to progress' criteria produced by the DfE as part of their assessments of pupils' learning. This document also lists the key steps in the White Rose Maths schemes of learning that support each of the 'Ready to progress' criteria, in the same sections as the national curriculum objectives. In many cases, the criteria are also addressed in other steps and in other blocks, for example looking at addition and subtraction in the context of measures. We have not listed every single instance as this would become unwieldly.

So far, we have added the Autumn steps from the new schemes. We will update this document when the Spring and Summer steps are released.

## Place value

## Place value: Count

| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| - count to and across 100, forwards and backwards, beginning with 0 or 1 , or from any given number <br> - Count numbersto 100 in numerals; count in multiples of twos, fives and tens | - count in steps of 2, 3 , and 5 from 0 , and in tens from any number, forward and backward | - count from 0 in multiples of 4,8 , 50 and 100; find 10 or 100 more or less than a given number | - count in multiples of $6,7,9,25$ and 1000 <br> - count backwards through zero to include negative numbers | - count forwards or backwards in steps of powers of 10 for any given number up to 1000000 <br> - count forwards and backwards with positive and negative whole numbers, including through zero |  |
| Autumn 1 <br> Spring 1 <br> Spring 3 <br> Summer 4 | Autumn 1 | Autumn 1 Autumn 3 | Autumn 1 <br> Autumn 4 | Autumn 1 <br> Summer 4 |  |

## Place value: Represent

| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| - identify and represent numbers using objects and pictorial representations <br> - read and write numbers to 100in numerals <br> - read and write numbers from 1 to 20 in numerals and words | - read and write numbers to at least 100 in numerals and in words <br> - identify, represent and estimate numbers using different representations, including the number line | - identify, represent and estimate numbers using different representations <br> read and write numbers up to 1000 innumerals and in words | - identify, represent and estimate numbers using different representations read Roman numerals to 100 (। to C) and know that over time, the numeral system changed to include the concept of zero and place value | - read, write, (order and compare) numbers to at least 1000000 and determine the value of eachdigit <br> - read Roman numerals to 1000 (M) and recognise years written in Roman numerals | - read, write,(order and compare) numbers up to 10 000000 and determine the value of eachdigit |
| Autumn 1 <br> Spring 1 <br> Spring 3 <br> Summer 4 | Autumn 1 | Autumn 1 | Autumn 1 | Autumn 1 | Autumn 1 |

## Place value: Use and compare

| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| - given a number, identify one more and one less | - recognise the place value of each digit in a two-digit number (tens, ones) <br> - compare and order numbers from 0 up to 100; use <, > and = signs | - recognise the place value of each digit in a three-digit number (hundreds, tens, ones) <br> - compare and order numbers up to 1000 | - find 1000 moreor less than a given number <br> - recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) <br> - order and compare numbers beyond 1000 | - (read, write) order and compare numbers to at least 1000000 and determine the value of eachdigit | - (read, write), order and compare numbers up to 10 000000 and determine the value of eachdigit |
| Autumn 1 <br> Spring 1 <br> Spring 3 <br> Summer 4 | Autumn 1 | Autumn 1 | Autumn 1 | Autumn 1 | Autumn 1 |

## Place value: Problems/Rounding

| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | - use place value and numberfacts to solve problems | - solve number problems and practical problems involving these ideas | - round any number to the nearest 10 , 100 or 1000 <br> - solve number and practical problems that involve all of the above and with increasingly large positive numbers | - interpret negative numbers in context <br> - round any number up to 1 000000 to the nearest 10, 100, 1000, 10000 and 100000 <br> - solve number problems and practical problems that involve all of the above | - round any whole number to a required degree of accuracy <br> - use negative numbers in context, and calculate intervals across zero <br> - solve number and practical problems that involve all of the above |
|  | Autumn 1 | Autumn 1 | Autumn 1 | Autumn 1 | Autumn 1 |

## Year 1 RTP Place value

| Ready to progresscriteria | Block | Steps |
| :---: | :---: | :---: |
| 1NPV-1 Count within 100, forwards and backwards, starting with any number. | Autumn 1 | 6 - Count on from any number 8 <br> - Count backwards within 10 |
|  | Spring 1 | Spring steps to follow in November 2022 |
|  | Spring 3 | Spring steps to follow in November 2022 |
|  | Summer 4 | Summer steps to follow in March 2023 |
| 1NPV-2 Reason about the location of numbers to 20 within the linear number system, including comparing using < > and = | Autumn 1 | 11 - Fewer, more, same <br> 12 - Less than, greater than, equal to 13 <br> - Compare numbers <br> 14 - Order objects and numbers 15 <br> - The number line |
|  | Spring 1 | Spring steps to follow in November 2022 |
|  | Spring 3 | Spring steps to follow in November 2022 |

## Year 2 RTP Place value

| Ready to progress criteria | Block | Steps |
| :--- | :--- | :--- |
| 2NPV-1 Recognise the place value of each digit <br> in two-digit numbers, and compose and <br> decompose two-digit numbers using standard <br> and non-standard partitioning. | Autumn 1 | 3-Recognise tens and ones 4- <br> Use a place value chart 5- <br> Partition numbers to 100 <br> $7-$ Flexibly partition numbers to 100 8 <br> - Write numbers in expanded form |
| 2NPV-2 Reason about the location of any <br> two-digit number in the linear number <br> system, including identifying the previous <br> and next multiple of 10 | Autumn 1 | $9-10$ s on the number line to 100 <br> $10-10$ sand 1s on the number line to 100 <br> $11-$ Estimate numbers on the number line |

## Year 3 RTP Place value

| Ready to progresscriteria | Block | Steps |
| :---: | :---: | :---: |
| 3NPV-1 Know that 10 tens are equivalent to 1 hundred, and that 100 is 10 times the size of 10 ; apply this to identify and work out how many 10s there are in other three-digit multiples of 10 | Autumn 1 | 4 - Hundreds |
|  | Autumn 2 | 10 - Make connections |
|  | Autumn 3 | 4 - Multiples of 5 and 10 |
|  | Spring 4 | Spring steps to follow in November 2022 |
| 3NPV-2 Recognise the place value of each digit in three-digit numbers, and compose and decompose three-digit numbers using standard and non-standard partitioning. | Autumn 1 | 5 - Represent numbers to 1,000 <br> 6 - Partition numbers to 1,000 <br> 7 - Flexible partitioning of numbers to 1,000 8 Hundreds, tens and ones |
| 3NPV-3 Reason about the location of any three-digit number in the linear number system, including identifying the previous and next multiple of 100 and 10 | Autumn 1 | 9 - Find 1,10 or 100 more orless <br> 10 - Number line to 1,000 <br> 11 - Estimate on a number line to 1,00012 <br> - Compare numbers to 1,000 <br> 13 - Order numbers to 1,000 |
| 3NPV-4 Divide 100 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 100 with $2,4,5$ and 10 equal parts. | Autumn 1 | 10 - Number line to 1,000 <br> 11 - Estimate on a number line to 1,00014 <br> - Count in 50s |
|  | Spring 4 | Spring steps to follow in November 2022 |

## Year 4 RTP Place value

| Ready to progresscriteria | Block | Steps |
| :---: | :---: | :---: |
| 4NPV-1 Know that 10 hundreds are equivalent to 1 thousand, and that 1,000 is 10 times the size of 100; apply this to identify and work out how many 100s there are in other four-digit multiples of 100 | Autumn 1 | 4 - Thousands |
|  | Spring 1 | Spring steps to follow in November 2022 |
| 4NPV-2 Recognise the place value of each digit in four-digit numbers, and compose and decompose four-digit numbers using standard and non-standard partitioning. | Autumn 1 | 5 - Represent numbers to 10,000 <br> 6 - Partition numbers to 10,000 <br> 7 - Flexible partitioning of numbers to 10,000 |
| 4NPV-3 Reason about the location of any four-digit number in the linear number system, including identifying the previous and next multiple of 1,000 and 100 , and rounding to the nearest of each. | Autumn 1 | 8 - Find 1, 10, 100, 1,000 more or less <br> 9 - Number line to 10,000 <br> 10 - Estimate on a number line to 10,00011 <br> - Compare numbers to 10,000 <br> 12 - Order numbers to 10,00014 <br> - Round to the nearest 1015 - <br> Round to the nearest 100 16- <br> Round to the nearest 1,000 <br> 17 - Round to the nearest 10,000 |
| 4NPV-4 Divide 1,000 into $2,4,5$ and 10 equal parts, and read scales/number lines marked in multiples of 1,000 with $2,4,5$ and 10 equal parts. | Autumn 1 | 9 - Number line to 10,000 <br> 10 - Estimate on a number line to 10,000 |

## Year 5 RTP Place value

| Ready to progress criteria | Block | Steps |
| :--- | :--- | :--- |
| 5NPV-1 Know that 10 tenths are equivalent to 1 <br> one, and that 1 is 10 times the size of 0.1. <br> Know that 100 hundredths are equivalent to 1 <br> one, and that 1 is 100 times the size of 0.01. Know <br> that 10 hundredths are equivalent to 1 tenth, <br> and that 0.1 is 10 times the size of 0.01 | Spring 3 | Spring steps to follow in November 2022 |
| 5NPV-2 Recognise the place value of each digit <br> in numbers with up to 2 decimal places, and <br> compose and decompose numbers with up to 2 <br> decimal places using standard and non- <br> standard partitioning. | Spring 3 | Spring steps to follow in November 2022 |
| 5NPV-3 Reason about the location of any <br> number with up to 2 decimals places in the <br> linear number system, including identifying the <br> previous and next multiple of 1 and 0.1 and <br> rounding to the nearest of each. | Spring 3 | Spring steps to follow in November 2022 |
| 5NPV-4 Divide 1 into 2, 4,5 and 10 equal parts, <br> and read scales/number lines marked in units of <br> 1 with 2, 4, 5 and 10 equal parts. | Spring 3 | Spring steps to follow in November 2022 |
| 5NPV-5Convertbetweenunitsofmeasure, <br> including using common decimals and <br> fractions. | Summer 5 | Summer steps to follow in March 2023 |

## Year 6 RTP Place value

| Ready to progresscriteria | Block | Steps |
| :---: | :---: | :---: |
| 6NPV-1 Understand the relationship between powers of 10 from 1 hundredth to 10 million, and use this to make a given number 10,100 , 1,000, 1 tenth, 1 hundredth or 1 thousandth times the size (multiply and divide by 10, 100 and 1,000). | Autumn 1 | 4 - Powers of 10 |
| 6NPV-2 Recognise the place value of each digit in numbers up to 10 million, including decimal fractions, and compose and decompose numbers up to 10 million using standard and non-standard partitioning. | Autumn 1 | 1 - Numbers to 1,000,000 <br> 2 - Numbers to 10,000,000 <br> 3 - Read and write numbers to $10,000,000$ |
| 6NPV-3 Reason about the location of any number up to 10 million, including decimal fractions, in the linear number system, and round numbers, as appropriate, including in contexts. | Autumn 1 | 6 - Compare and order any integers 7 Round any integers |
| 6NPV-4 Divide powers of 10 , from 1 hundredth to 10 million, into $2,4,5$ and 10 equal parts, and read scales/number lines with labelled intervals divided into $2,4,5$ and 10 equal parts. | Autumn 1 | 5 - Number line to 10,000,000 |
|  | Autumn 5 | 2 - Convert metric measures |
|  | Spring 3 | Spring steps to follow in November 2022 |

## Addition

## and

## subtraction

## Addition \& subtraction: Calculations

| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| - add and subtract one-digit and twodigit numbers to 20, includingzero | - add and subtract numbers using concrete objects, pictorial representations, and mentally, including: <br> $>$ a two-digit number and ones <br> $>$ a two-digit number and tens two two-digit numbers <br> > adding threeonedigit numbers | - add and subtract numbers mentally, including: a three-digit number andones a three-digit number and tens <br> $>$ a three-digit number and hundreds <br> - add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction | - add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate | - add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) <br> - add and subtract numbers mentally with increasingly large numbers | - perform mental calculations, including with mixed operations and large numbers <br> - use their knowledge of the order of operations to carry out calculations involving the four operations |
| Autumn 2 <br> Spring 2 | Autumn 2 | Autumn 2 | Autumn 2 | Autumn 2 | Autumn 2 |

## Addition \& subtraction: Problems

| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| - solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7=$ $\square$ $\square-9$ | - solve problems with addition and subtraction: <br> using concrete objects and pictorial representations, including those involving numbers, quantities and measures <br> > applying their increasing knowledge of mental and written methods | - solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction | - solve addition and subtraction twostep problems in contexts, deciding which operations and methods to use and why | - solve addition and subtraction multistep problems in contexts, deciding which operations and methods to use and why <br> - solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign | - solve addition and subtraction multistep problems in contexts, deciding which operations and methods to use and why |
| Autumn 2 <br> Spring 2 | Autumn 2 | Autumn 2 | Autumn 2 | Autumn 2 | Autumn 2 |

## Year 1 RTP Numberfacts

| Ready to progresscriteria | Block | Steps |
| :---: | :---: | :---: |
| 1NF-1 Develop fluency in addition and subtraction facts within 10 | Autumn 2 | 5 - Number bonds within 10 <br> 6 -Systematic number bonds within 107 <br> - Number bonds to 10 |
|  | Spring 2 | Spring steps to follow in November 2022 |
| 1NF-2 Count forwards and backwards in multiples of 2,5 and 10 , up to 10 multiples, beginning with any multiple, and count forwards and backwards through the odd numbers. |  | See under Multiplication \& division |

## Year 2 RTP Numberfacts

| Ready to progresscriteria | Block | Steps |
| :--- | :--- | :--- |
| 2NF-1 Securefluencyinadditionand <br> subtraction facts within 10, through <br> continued practice. | Autumn Block 2 | 1 - Bonds to 10 <br> - - Add by making 108 <br> - Add to the next 10 11 <br> -Subtract from a 10 |

## Year 3 RTP Numberfacts

| Ready to progresscriteria | Block | Steps |
| :---: | :---: | :---: |
| 3NF-1 Secure fluency in addition and subtraction facts that bridge 10, through continued practice. | Autumn Block 2 | 6 - Add 1s across a 10 <br> 7 - Add 10s across a 100 <br> 8 - Subtract 1s across a 109 - <br> Subtract 1s across a 100 <br> 13 - Add two numbers (across a 10) 14 - <br> Add two numbers (across a 100) <br> 15 - Subtract two numbers (across a 10) <br> 16 - Subtract two numbers (across a 100) |
| 3NF-2 Recall multiplication facts, and corresponding division facts, in the 10, 5, 2, 4 and 8 multiplication tables, and recognise products in these multiplication tables as multiples of the correspondingnumber. |  | See under Multiplication \& division |
| 3NF-3 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 10 ). |  | See under Multiplication \& division |

## Year 1 RTP Addition \& subtraction

| Ready to progresscriteria | Block | Steps |
| :---: | :---: | :---: |
| 1AS-1 Compose numbers to 10 from 2 parts, and partition numbers to 10 into parts, including recognising odd and even numbers. | Autumn Block 2 | 5 - Number bonds within 10 <br> 6 -Systematic number bonds within 107 <br> - Number bonds to 10 |
| 1AS-2 Read, write and interpret equations containing addition (+), subtraction (-) and equals (=) symbols, and relate additive expressions and equations to real-life contexts. | Autumn Block 2 | 4 - Fact families - addition facts 8 - <br> Addition - add together <br> 9 - Addition - add more 10 <br> - Addition problems 11 - <br> Find a part <br> 12 - Subtraction - find a part <br> 13 - Fact families - the eightfacts <br> 14 -Subtraction - take away/cross out (How many left?) 15 <br> - Subtraction - take away (How many left?) <br> 16 - Subtraction on a number line |
|  | Spring Block 2 | Spring steps to follow in November 2022 |

Note- In the WRM schemes, odd and even numbers are explored both in Reception and Y 2 but there is no explicit step in Y1

## Year 2 RTP Addition \& subtraction

| Ready to progress criteria | Block | Steps |
| :--- | :--- | :--- |
| 2AS-1 Add and subtract across 10 | Autumn 2 | $9-$ Add across a 10 <br> $10-$ Subtract across a 10 <br> $11-$ Subtract from a 10 <br> $12-$ Subtract 1-digit number from a 2-digit number (across a 10) |
| 2AS-2 Recognise the subtractionstructure of <br> 'difference' and answer questions of the form, <br> "How many more...?". | Spring 1 | Spring steps to follow in November 2022 |
| 2AS-3 Add and subtract within 100 by applying <br> related one-digit addition and subtraction facts: <br> add and subtract only ones or only tens to/from <br> a two-digit number. | Autumn 2 | $9-$ Add across a 10 <br> $10-$ Subtract across a 10 <br> $11-$ Subtract from a 10 <br> $12-$ Subtract 1-digit number from a 2-digit number (across a 10) 13 - <br> 10 more, 10less |
| 2AS-4 Add and subtract within 100 by <br> applying related one-digit addition and <br> subtraction facts: add and subtract any 2 <br> two-digit numbers. | Autumn 2 |  |

## Year 3 RTP Addition \& subtraction

| Ready to progresscriteria | Block | Steps |
| :---: | :---: | :---: |
| 3AS-1 Calculate complements to 100 | Autumn Block 2 | 19 - Complements to 100 |
|  | Summer 2 | Summer steps to follow in March 2023 |
| 3AS-2 Add and subtract up to three-digit numbers using columnarmethods. | Autumn Block 2 | 11 - Add two numbers (no exchange) <br> 12 - Subtract two numbers (no exchange) 13 <br> - Add two numbers (across a10) <br> 14 - Add two numbers (across a 100) <br> 15 -Subtract two numbers (across a 10) 16- <br> Subtract two numbers (across a 100) 17 - <br> Add 2-digit and 3-digit numbers <br> 18 - Subtract a 2 -digit number from a 3-digit number |
| 3AS-3 Manipulate the additive relationship: Understand the inverse relationship between addition and subtraction, and how both relate to the part-part-whole structure. Understand and use the commutative property of addition, and understand the related property for subtraction. | Autumn Block 2 | 21 - Inverse operations <br> 22 - Make decisions |
|  | Summer 2 | Summer steps to follow in March 2023 |

# Addition, subtraction, multiplication and division 

| Ready to progress criteria | Block | Steps |
| :--- | :--- | :--- |
| 6AS/MD-1 Understand that 2 numbers can be <br> related additively or multiplicatively, and <br> quantify additive and multiplicative <br> relationships (multiplicative relationships <br> restricted to multiplication by a whole number). | Spring 1 | Spring steps to follow in November 2022 |
| 6AS/MD-2 Use a given additive or <br> multiplicative calculation to derive or <br> complete a related calculation, using <br> arithmetic properties, inverse relationships, <br> and place-value understanding. | Autumn 2 | $8-$ Solve problems with multiplication <br> $10-$ Division using factors <br> $13-$ Solve problems with division 14 <br> - Solve multi-step problems 17 - <br> Reason from known facts |
| 6AS/MD-3Solveproblemsinvolvingratio <br> relationships. |  | See under Ratio and proportion |
| 6AS/MD-4 Solve problems with 2 unknowns. |  | See under Algebra |

## Multiplication

## and

## division

## Multiplication \& division: Recall/Use

| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | - recall and use multiplication and division facts for the 2,5 and 10 multiplication tables, including recognising odd and even numbers <br> - 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 3,4 and 8 multiplication tables | - recall <br> multiplication and division facts for multiplication tables up to $12 \times$ 12 <br> - 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 <br> - recogniseanduse factor pairs and commutativity in mental calculations | - identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers <br> - know and use the vocabulary of prime numbers, prime factors and composite (nonprime) numbers <br> - establish whether a number up to 100 is prime and recall prime numbers up to 19 <br> - recognise and use square numbers and cube numbers, and the notation for squared ( ${ }^{2}$ ) and cubed ( ${ }^{3}$ ) | - identify common factors, common multiples and prime numbers <br> - use estimation to checkanswersto calculations and determine, in the context of a problem, an appropriate degree of accuracy |
|  | Spring 2 | Autumn 3 <br> Spring 1 | Autumn 4 <br> Spring 1 | Autumn 3 | Autumn 2 |

## Multiplication \& division: Calculations

| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | - calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication ( $\times$ ), division ( $\div$ ) and equals (=)signs | - write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods | - multiply two-digit and three-digit numbers by a one-digit number using formal written layout | - multiply numbers up to 4 digits by a one- or two-digit number using a formal written method,includinglong multiplication for twodigit numbers <br> - multiply and divide numbers mentally drawing upon known facts <br> - dividenumbersupto4 digits by a one-digit number using the formalwritten method of short division and interpret remainders appropriately for the context <br> - multiply and divide whole numbers and those involving decimals by 10,100 and 1000 | - multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of longmultiplication <br> - 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 <br> - dividenumbersupto4 digits by a two-digit number using the formal written method ofshortdivisionwhere appropriate, interpreting remainders according to the context <br> - perform mental calculations, including with mixed operations and large numbers |
|  | Spring 2 | Autumn 3 Spring 1 | Spring 1 | Autumn 3 Spring 1 | Autumn 2 |

## Multiplication \& division: Problems

| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| - solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher | - solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and divisionfacts, including problems in contexts | - solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects | - solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as $n$ objects are connected to m objects | - solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes <br> - solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates | - solve problems involving addition, subtraction, multiplication and division |
| Summer 1 | Spring 2 | Spring 1 | Spring 1 | Autumn 3 <br> Spring 1 | Autumn 2 |

## Multiplication \& division: Combined

| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  |  | -solve problems <br> involving addition, <br> subtraction, <br> muttipication and <br> division and a <br> combination of <br> these, including <br> understanding the <br> meaning of the <br> equals sign• use their <br> knowledge ofthe <br> order of <br> operations to <br> cary out <br> calculations <br> involving the four <br> operations |  |
|  |  |  | Spring 1 | Autumn 2 |  |

## Year 1 RTP Numberfacts

| Ready to progress criteria | Block | Steps |
| :--- | :--- | :--- |
| 1NF-1 Develop fluency in addition and <br> subtraction facts within 10 | See under Addition \& subtraction |  |
| 1NF-2 Count forwards and backwards in <br> multiples of 2,5 and 10, up to 10 multiples, <br> beginning with any multiple, and count <br> forwards and backwards through the odd <br> numbers. | Summer 1 | Summer 4 |
|  | Summer 5 | Summer steps to follow in March 2023 |

## Year 3 RTP Numberfacts

| Ready to progresscriteria | Block | Steps |
| :---: | :---: | :---: |
| 3NF-1 Secure fluency in addition and subtraction facts that bridge 10, through continued practice. |  | See under Addition \& subtraction |
| 3NF-2 Recall multiplication facts, and corresponding division facts, in the 10, 5, 2, 4 and 8 multiplication tables, and recognise products in these multiplication tables as multiples of the correspondingnumber. | Autumn Block 3 | 3 - Multiples of 2 <br> 4 - Multiples of 5 and 105 <br> - Sharing and grouping 9 - <br> Multiply by 4 <br> 10 - Divide by 4 <br> 11 - The 4 times-table |
| 3NF-3 Apply place-value knowledge toknown additive and multiplicative number facts (scaling facts by 10 ). | Spring 1 | Spring steps to follow in November 2022 |
|  | Spring 3 | Spring steps to follow in November 2022 |

## Year 4 RTP Numberfacts

| Ready to progresscriteria | Block | Steps |
| :---: | :---: | :---: |
| 4NF-1 Recall multiplication and divisionfacts up to $12 \times 12$ and recognise products in multiplication tables as multiples of the corresponding number. | Autumn 4 | All 13 steps in this block relate to this criterion |
|  | Spring 1 | Spring steps to follow in November 2022 |
| 4NF-2Solve division problems, with two-digit dividends and one-digit divisors, that involve remainders, and interpret remainders appropriately according to the context. | Autumn 4 | All 13 steps in this block relate to this criterion |
|  | Spring 1 | Spring steps to follow in November 2022 |
| 4NF-3 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 100). | Spring 1 | Spring steps to follow in November 2022 |
|  | Spring 4 | Spring steps to follow in November 2022 |

## Year 5 RTP Numberfacts

| Ready to progress criteria | Block | Steps |
| :--- | :--- | :--- |
| 5NF-1 Securefluencyin multiplication table <br> facts, and corresponding division facts, <br> through continued practice. | Autumn 3 | 1 - Multiples <br> - - Common multiples 3 <br> - Factors <br> 4-Common factors 6 <br> - Square numbers |
|  | Spring 1 | Spring steps to follow in November 2022 |
|  | Spring 2 | Spring steps to follow in November 2022 |
| 5NF-2 Applyplace-value knowledgeto known <br> additive and multiplicative number facts <br> (scaling facts by 1 tenth or 1 hundredth). | Autumn 3 | 10-Divide by 10, 100 and 1,000 |
|  | Spring 3 | Spring steps to follow in November 2022 |

## Year 2 RTP Multiplication \& division

| Ready to progress criteria | Block | Steps |
| :--- | :--- | :--- |
| 2MD-1 Recognise repeated addition contexts, <br> representing them with multiplication equations <br> and calculating the product, within the 2,5 and <br> 10 multiplication tables. | Spring 2 | Spring 4 |
|  | Summer 2 | Spring steps to follow in November 2022 |
| 2MD-2 Relate grouping problems where the <br> number of groups is unknown to <br> multiplication equations with a missing factor, <br> and to division equations (quotitive division). | Spring 2 | Summer steps to follow in March 2023 |

## Year 3 RTP Multiplication \& division

| Ready to progresscriteria | Block | Steps |
| :--- | :--- | :--- |
| 3MD-1 Apply known multiplication and division <br> facts to solve contextual problems with <br> different structures, including quotitive and <br> partitive division. | Autumn 3 | All 15 steps in this block relate to this criterion |
|  | Spring 1 | Spring steps to follow in November 2022 |

## Year 4 RTP Multiplication \& division

| Ready to progress criteria | Block | Steps |
| :--- | :--- | :--- |
| 4MD-1 Multiply and divide whole numbers by 10 <br> and 100 (keeping to whole number quotients); <br> understand this as equivalent to making a <br> number 10 or 100 times the size. | Spring 1 | Spring steps to follow in November 2022 |
| 4MD-2 Manipulate multiplication and division <br> equations, and understand and apply the <br> commutative property of multiplication. | Autumn 4 | All 13 steps in this block relate to this criterion |
| 4MD-3 Understand and apply the distributive <br> property of multiplication. | Spring 1 | Spring steps to follow in November 2022 |

## Year 5 RTP Multiplication \& division

| Ready to progresscriteria | Block | Steps |
| :---: | :---: | :---: |
| 5MD-1 Multiply and divide numbers by 10 and 100; understand this as equivalent to making a number 10 or 100 times the size, or 1 tenth or 1 hundredth times the size. | Autumn 3 | 8 - Multiply by 10, 100 and 1,000 <br> 9 - Divide by 10, 100 and 1,000 <br> 10 - Multiples of 10,100 and 1,000 |
|  | Summer 3 | Summer steps to follow in March 2023 |
| 5MD-2 Find factors and multiples of positive whole numbers, including common factors and common multiples, and express a given number as a product of 2 or 3 factors. | Autumn 3 | 1 - Multiples <br> 2 -Common multiples <br> 3 - Factors <br> 4 - Common factors 6 <br> - Square numbers |
| 5MD-3 Multiply any whole number with up to 4 digits by any one-digit number using a formal written method. | Spring 1 | Spring steps to follow in November 2022 |
| 5MD-4 Divide a number with up to 4 digits by a one-digit number using a formal written method, and interpret remainders appropriately for the context. | Spring 1 | Spring steps to follow in November 2022 |

## Year 6RTP

## Addition, subtraction, multiplication and division

| Ready to progress criteria | Block | Steps |
| :--- | :--- | :--- |
| 6AS/MD-1 Understand that 2 numbers can be <br> related additively or multiplicatively, and <br> quantify additive and multiplicative <br> relationships (multiplicative relationships <br> restricted to multiplication by a whole number). | Spring 1 | Spring steps to follow in November 2022 |
| 6AS/MD-2 Use a given additive or <br> multiplicative calculation to derive or <br> complete a related calculation, using <br> arithmetic properties, inverse relationships, <br> and place-value understanding. | Autumn 2 | $8-$ Solve problems with multiplication <br> $10-$ Division using factors <br> $13-$ Solve problems with division 14 <br> - Solve multi-step problems 17 - <br> Reason form known facts |
| 6AS/MD-3Solveproblemsinvolvingratio <br> relationships. | See under Ratio and proportion |  |
| 6AS/MD-4 Solve problems with 2 unknowns. |  | See under Algebra |

# Fractions, decimals, 

## percentages

## Fractions: Recognise and write

| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| - recognise, find and name a half as one of two equal parts of an object, shape or quantity <br> - recognise, find and name a quarter as one of four equal parts of an object, shape or quantity | - recognise,find, name and write fractions ${ }^{1},{ }_{3}{ }_{4}^{2}$ <br> 344 and ${ }^{4}$ of a length, shape, set of objects or quantity | - 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 <br> - recognise, find and write fractions of a discrete set of objects: unit fractions and nonunit fractions with small denominators <br> - recogniseanduse fractions as numbers: unit fractions and nonunit fractions with small denominators | - count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten. | - identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths <br> - recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements $>1$ as a mixed number [for example, ${ }^{2+}{ }_{5}$ ${ }_{5}^{4}={ }_{5}^{6}=\mathbf{1}_{5}^{1}{ }_{5}$ |  |
| Summer 2 | Summer 1 | Spring 3 | Spring 4 <br> Summer 1 | Autumn 4 |  |

## Fractions: Compare

| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | - Recognise the equivalence of ${ }^{2}$ and $\frac{1}{2}$ | - recogniseand show, using diagrams, equivalent fractions with small denominators <br> - compare and order unit fractions, and fractions with the same denominators | - recognise and show, using diagrams, families of common equivalent fractions | - compare and order fractions whose denominators are all multiples of the same number | - use common factors to simplify fractions; use common multiples to express fractions in the same denomination <br> - compare and order fractions, including fractions >1 |
|  | Summer 1 | Spring 3 | Spring 3 | Autumn 4 | Autumn 3 |

## Fractions: Calculations

| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | - write simple fractions for example, ${ }^{1}$ of $6=$ 3 | - add and subtract fractions with the same denominator within one whole [for example, ${ }^{5+}$ 1 7 ${ }^{6}{ }_{7}^{7}$ | - add and subtract fractions with the same denominator | - add and subtract fractions with the same denominator and denominators that are multiples of the same number <br> - multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams | - add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions <br> - multiply simple pairs of proper fractions, writing the answer in its simplest form [for example, $\left.{ }_{4}^{1} \times{ }_{2}^{1}={ }_{8}^{1}\right]$ <br> - divide proper fractions by whole numbers [for example $\left.{ }_{3}^{1} \div 2={ }_{6}^{1}\right]$ |
|  | Summer 1 | Summer 1 | Spring 3 | Autumn 4 Spring 2 | Autumn 3 <br> Autumn 4 |

## Fractions: Solve problems

| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| :--- | :--- | :--- | :--- | :--- | :--- |
|  |  | - solve problems <br> that involve all of <br> the above | - solve problems <br> involving <br> increasingly harder <br> fractions to <br> calculate <br> quantities, and <br> fractions to divide <br> quantities, <br> including non-unit <br> fractions where <br> the answer is a <br> whole number |  |  |
|  |  | Spring 3 |  |  |  |

## Decimals: Recognise, write, compare

| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | - recognise and write decimal equivalents of any number of tenths or hundredths <br> - recogniseand write decimal equivalents to 113 $4^{\circ} 2^{\circ} 4$ <br> - round decimals with one decimal place to the nearest whole number <br> - compare numbers with the same number of decimal places up to two decimal places | - read and write decimal numbers as fractions [for example, 0.71= 71 100 <br> - recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents <br> - round decimals with two decimal places to the nearest whole number and to one decimal place <br> - read, write, order and compare numbers with up to three decimal places | - identify the value of each digit in numbers givento three decimal places |
|  |  |  | Spring 4 <br> Summer 1 | Spring 3 <br> Summer 3 | Spring 3 |

## Fractions, decimals and percentages

| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | - solve simple measure and money problems involving fractions and decimals to two 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 adecimal <br> - solve problems which require knowing percentage and decimal equivalents of ${ }^{1},{ }^{1},{ }^{1},{ }^{2}, 4$ and 24555 those fractions with a denominator of a multiple of 10 or 25 | - associate a <br> fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, 3] 8 <br> - recall and use equivalences between simple fractions, decimals and percentages, including in different contexts |
|  |  |  | Spring 3 <br> Spring 4 <br> Summer1 | Spring 3 | Spring 3 <br> Spring 4 |

## Year 3 RTP Fractions

| Ready to progresscriteria | Block | Steps |
| :--- | :--- | :--- |
| 3F-1 Interpret and write proper fractions to <br> represent 1 or several parts of a whole that is <br> divided into equal parts. | Spring 3 | Spring steps to follow in November 2022 |
| 3F-2 Find unit fractions of quantities using <br> known division facts (multiplication tables <br> fluency). | Summer 1 | Summer steps to follow in March 2023 |
| 3F-3 Reason about the location of any <br> fraction within 1 in the linear number system. | Spring 3 | Spring steps to follow in November 2022 |
| 3F-4 Add and subtract fractions with the <br> same denominator, within 1 | Summer 1 | Summer steps to follow in March 2023 |

## Year 4 RTP Fractions

| Ready to progress criteria | Block | Steps |
| :--- | :--- | :--- |
| 4F-1 Reason about the location of mixed <br> numbers in the linear number system. | Spring 3 | Spring steps to follow in November 2022 |
| 4F-2 Convert mixed numbers to improper fractions <br> and vice versa. | Spring 3 | Spring steps to follow in November 2022 |
| 4F-3 Add and subtract improper and mixed <br> fractions with the same denominator, <br> including bridging whole numbers. | Spring 3 | Spring steps to follow in November 2022 |

## Year 5 RTP Fractions

| Ready to progresscriteria | Block | Steps |
| :---: | :---: | :---: |
| 5F-1 Find non-unit fractions of quantities. | Spring 2 | Spring steps to follow in November 2022 |
| 5F-2 Find equivalent fractions and understand that they have the same value and the same position in the linear number system. | Autumn 4 | 1 - Find fractions equivalent to a unitfraction <br> 2 - Find fractions equivalent to a non-unit fraction 3 <br> - Recognise equivalentfractions |
| 5F-3 Recall decimal fraction equivalents for ${ }^{1}$, ${ }^{1},{ }^{1}$ and ${ }^{1}$ and for multiples of these proper fractions. | Spring 3 | Spring steps to follow in November 2022 |

## Year 6 RTP Fractions

| Ready to progress criteria | Block | Steps |
| :--- | :--- | :--- |
| 6F-1 Recognisewhenfractions canbe <br> simplified, and use common factors to <br> simplify fractions. | Autumn 3 | 1 - Equivalent fractions and simplifying 2- <br> Equivalent fractions on a number line |
| 6F-2 Express fractions in a common <br> denomination and use this to compare <br> fractions that are similar in value. | Autumn 3 | 3-Compare and order (denominator) |
| 6F-3 Compare fractions with different <br> denominators, including fractions greater than <br> 1, using reasoning, and choose between <br> reasoning and common denomination as a <br> comparison strategy. | Autumn 3 | 3-Compare and order (denominator) <br> 4-Compare and order (numerator) |

## Ratio and

 proportion, algebra
## Ratio and proportion

| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | - solve problems involving the relative sizes of two quantities where missing valuescan be found by using integer multiplication and division facts <br> - solve problems involving the calculation/use of percentages for comparison <br> - solve problems involving similar shapes where the scale factor is known or can be found <br> - solve problems involving unequal sharing and grouping using knowledge of fractions and multiples |



## Algebra

| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| - solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7=\square-9$ | - recogniseanduse the inverse relationship between addition and subtraction and use this to check calculations andsolvemissing number problems | - solve problems, including missing number problems |  |  | - use simple formulae <br> - generate and describe linear number sequences <br> - express missing number problems algebraically <br> - find pairs of numbers that satisfy an equation with two unknowns <br> - enumerate possibilities of combinations of two variables |
|  |  |  |  |  | Spring 2 |

[^0]
## Year 6RTP

## Addition, subtraction, multiplication and division

| Ready to progress criteria | Block | Steps |
| :--- | :--- | :--- |
| 6AS/MD-1 Understand that 2 numbers can be <br> related additively or multiplicatively, and <br> quantify additive and multiplicative <br> relationships (multiplicative relationships <br> restricted to multiplication by a whole number). |  | See under Addition and subtraction, multiplication and division |
| 6AS/MD-2 Use a given additive or <br> multiplicative calculation to derive or <br> complete a related calculation, using <br> arithmetic properties, inverse relationships, <br> and place-value understanding. |  | See under Addition and subtraction, multiplication and division |
| 6AS/MD-3Solveproblemsinvolvingratio <br> relationships. | Spring 1 | Spring steps to follow in November 2022 |
| 6AS/MD-4 Solve problems with 2 unknowns. | Spring 2 | Spring steps to follow in November 2022 |

## Measurement

## Using measures

| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| - compare, describe and solve practical problems for: <br> lengths and heights <br> $>$ mass/weight <br> $>$ capacity and volume <br> > time <br> - measure and begin to record the following: <br> lengths and heights <br> > mass/weight <br> $\rightarrow$ capacity and volume <br> $>$ time (hours, minutes, seconds) | - choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature ( ${ }^{\circ} \mathrm{C}$ ); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels <br> - compare and order lengths, mass, volume/capacity and record the results using >,< and = | - measure, compare, addand subtract: lengths ( $\mathrm{m} / \mathrm{cm} / \mathrm{mm}$ ); mass (kg/g); volume/capacity ( $1 / \mathrm{ml}$ ) | - Convertbetween different units of measure [for example, kilometre to metre; hour to minute] <br> - estimate, compare and calculate different measures | - convert between different units of metric measure <br> - understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints <br> - use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling | - solve problems involving the calculation and conversion of units of measure, using decimal notation up to 3 d.p. where appropriate <br> - 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 3d.p. <br> - convertbetween miles and kilometres |


| Spring 4 <br> Spring 5 <br> Summer 6 | Spring 3 <br> Spring 4 | Spring 2 <br> Spring 4 | Spring 2 <br> Summer 3 | Spring 4 <br> Summer 5 <br> Summer 6 | Autumn 5 |
| :---: | :---: | :---: | :---: | :---: | :---: |


| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| - recognise and know the value of different denominations of coins andnotes | - recognise and use symbols for pounds ( $£$ ) and pence (p); combine amounts to make a particular value <br> - find different combinations of coins that equal the same amounts of money <br> - solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change | - add and subtract amounts of money to give change, using both $£$ and $p$ in practical contexts | - estimate, compare and calculate different measures, including money in pounds and pence | - use all four operations to solve problems involving measure [for example, money] |  |
| Summer 5 | Spring 1 | Summer 2 | Summer 2 | Summer 3 |  |


| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| - sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening] <br> - recogniseanduse language relating to dates, including days of the week, weeks, months and years <br> - tell the time to the hour and half past the hour and draw the hands on a clock face to show these times | - compare and sequence intervals of time <br> - 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 <br> - know the number of minutes in an hour and the number of hours in a day | - tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12hour and 24-hour clocks <br> - 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 <br> - know the number of seconds in a minute and the number of days in each month, year and leap year <br> - compare durations of events [for example to calculate the time taken by particular events ortasks] | - read, write and convert time between analogue and digital 12- and 24-hour clocks <br> - solve problems involving converting from hours to minutes; minutes to seconds;yearsto months; weeks to days | - solve problems involving converting between units of time | - use, read, write and convert between standard units, converting measurements of time from a smaller unit of measure to a larger unit, and vice versa <br> Note - In the WRM schemes, time conversions are covered in Y5; the Y6 block concentrates on |
| Summer 6 | Summer 2 | Summer 3 | Summer 3 | Summer 5 | Autumn 5 |

## Perimeter, area, volume

| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | - measure the perimeter of simple2-Dshapes | - measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres <br> - find the area of rectilinearshapes by counting squares | - measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres <br> - calculate and compare the area of rectangles (including squares) and including using standard units, square centimetres ( $\mathrm{cm}^{2}$ ) and square metres ( $\mathrm{m}^{2}$ ) and estimate the area of irregular shapes <br> - estimate volume [for example, using blocks to build cuboids] and capacity [for example, using water] | - recognise that shapes withthe same areascan have different perimeters and vice versa <br> - recognise whenit is possible to use formulae for area and volume of shapes <br> - calculate the area of parallelograms and triangles <br> - calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres ( $\mathrm{cm}^{3}$ ) and cubic metres $\left(\mathrm{m}^{3}\right)$, and extending to other units |
|  |  | Spring 2 | Autumn 3 <br> Spring 2 | Spring 4 <br> Summer 6 | Spring 5 |

## Geometry

## 2-D shapes

| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| - recognise and name common 2-D shapes [for example, rectangles (including squares), circles and triangles] | - identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line <br> - identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid] <br> - compare and sort common 2-D shapes and everyday objects | - draw 2-D shapes | - compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes <br> - identify lines of symmetry in 2-D shapes presented in different orientations | - distinguish between regular and irregular polygons based on reasoning about equalsides and angles. <br> - use the properties of rectangles to deduce related facts and find missing lengths and angles | - draw 2-D shapes using given dimensions and angles <br> - compare and classify geometric shapes based on their properties and sizes <br> - illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius |
| Autumn 3 | Autumn 3 | Summer 4 | Summer 4 | Summer 1 | Summer 1 |


| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| - recognise and name common 3-D shapes [for example, cuboids (including cubes), pyramids and spheres] | - recognise and name common 3-D shapes [for example, cuboids (including cubes), pyramids and spheres] <br> - compare and sort common 3-D shapes and everyday objects | - make3-Dshapes using modelling materials; recognise 3-D shapes in different orientations and describe them |  | - identify 3-D shapes, including cubes and other cuboids, from 2-D representations | - recognise, describe and build simple 3-D shapes, including making nets |
| Autumn 3 | Autumn 3 | Summer 4 |  | Summer 1 | Summer 1 |

## Angles and lines

| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | - recognise angles as a property of shape or a description of a turn <br> - identify right angles, recognise that two right angles make a halfturn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle <br> - identify horizontal and vertical lines and pairs of perpendicular and parallel lines | - identify acute and obtuse anglesand compare and order angles up to two right angles by size <br> - identify lines of symmetry in 2-D shapes presented in different orientations <br> - complete asimple symmetric figure with respect to a specific line of symmetry | - know angles are measured in degrees: estimate and compare acute, obtuseand reflex angles <br> - draw given angles, and measure them in degrees <br> - identify: <br> > angles at a point and one whole turn (total $360^{\circ}$ ) angles at a point on a straight line and ${ }^{1}$ a turn (total $180^{\circ}{ }^{2}$ <br> > other multiples of $90^{\circ}$ | - find unknown angles in any triangles, quadrilaterals, and regular polygons <br> - recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles |
|  |  | Summer 4 | Summer 4 | Summer 2 | Summer 1 |

## Position and direction

| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| - describeposition, direction and movement, including whole, half, quarter and three-quarter turns | - order and arrange combinations of mathematical objects in patterns and sequences <br> - use mathematical vocabulary to describeposition, 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 threequarter turns (clockwise and anti- clockwise) |  | - describe positions on a 2-D grid as coordinates inthe first quadrant <br> - describe movements between positions as translations of a given unit to the left/right and up/down <br> - plot specified points and draw sides to complete a given polygon | - 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 | - describepositions on the full coordinate grid (all four quadrants) <br> - draw and translate simple shapes on the coordinate plane, and reflect them in the axes |
| Summer 3 | Summer 4 |  | Summer 6 | Summer 2 | Summer 2 |

## Year 1 RTP Geometry

| Ready to progress criteria | Block | Steps |
| :--- | :--- | :--- |
| 1G-1 Recognise common 2Dand 3D shapes <br> presented in different orientations, and know <br> that rectangles, triangles, cuboids and pyramids <br> are not always similar to one another. | Autumn 3 | 1- Recognise and name 3-D shapes 2- <br> Sort 3-D shapes <br> 3-Recognise and name 2-D shapes 4- <br> Sort 2-D shapes <br> $5-$ Patterns with 2-D and 3-D shapes |
| 1G-2 Compose 2D and 3D shapes from smaller <br> shapes to match an example, including <br> manipulating shapes to place them in particular <br> orientations. | Autumn 3 | 1- Recognise and name 3-D shapes 2- <br> Sort 3-D shapes <br> 3-Recognise and name 2-D shapes <br> 4-Sort 2-D shapes <br> $5-$ Patterns with 2-D and 3-D shapes |

## Year 2 RTP Geometry

| Ready to progresscriteria | Block | Steps |
| :--- | :--- | :--- |
| 2G-1 Recognise common2Dand3D shapes <br> presented in different orientations, and know <br> that rectangles, triangles, cuboids and pyramids <br> are not always similar to one another. | Autumn 3 | 1- Recognise 2-D and 3-D shapes 2- <br> Count sides on 2-Dshapes <br> 3-Count vertices on 2-D shapes 7 - <br> Sort 2-D shapes |
|  |  | 8-Count faces on 3-D shapes 9- <br> Count edges on 3-D shapes <br> $10-$ Count vertices on 3-D shapes <br> $11-$ Sort 3-D shapes |

## Year 3 RTP Geometry

| Ready to progress criteria | Block | Steps |
| :--- | :--- | :--- |
| 3G-1 Recognise right angles as a property of <br> shape or a description of a turn, and identify <br> right angles in 2D shapes presented in <br> different orientations. | Summer 4 | Summer steps to follow in March 2023 |
| 3G-2 Draw polygons by joining marked <br> points, and identify parallel and <br> perpendicular sides. | Summer 4 | Summer steps to follow in March 2023 |

## Year 4 RTP Geometry

| Ready to progress criteria | Block | Steps |
| :--- | :--- | :--- |
| 4G-1 Draw polygons, specified by <br> coordinates in the first quadrant, and <br> translate within the first quadrant. | Summer 4 | Summer steps to follow in March 2023 |
| 4G-2 Identify regular polygons, including <br> equilateral triangles and squares, as those in <br> which the side-lengths are equal and the angles <br> are equal. Find the perimeter of regular and <br> irregular polygons. | Spring 2 | Summer 4 |
| 4G-3 Identify line symmetry in 2D shapes <br> presented in different orientations. Reflect <br> shapes in a line of symmetry and complete a <br> symmetric figure or pattern with respect toa <br> specified line of symmetry. | Summer 4 | Summer steps to follow in March 2023 |

## Year 5 RTP Geometry

| Ready to progress criteria | Block | Steps |
| :--- | :--- | :--- |
| 5G-1 Compare angles, estimate and measure <br> angles in degrees $\left({ }^{\circ}\right)$ and draw angles of a given <br> size. | Summer 1 | Summer steps to follow in March 2023 |
| 5G-2 Compare areas and calculate the area of <br> rectangles (including squares) using standard <br> units. | Spring 4 | Spring steps to follow in November 2022 |

## Year 6 RTP Geometry

| Ready to progress criteria | Block | Steps |
| :--- | :--- | :--- |
| 6G-1 Draw, compose, and decompose shapes <br> according to given properties, including <br> dimensions, angles and area, and solve related <br> problems. | Spring 5 | Spring steps to follow in November 2022 |
|  | Summer 1 | Summer steps to follow in March 2023 |

## Statistics

## Present and interpret data

| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | - interpret and <br> construct simple <br> pictograms, tally <br> charts, block <br> diagrams and <br> simple tables | - interpret and <br> present data <br> using barcharts, <br> pictograms and <br> tables | - interpret and <br> presentdiscrete <br> and continuous <br> data using <br> appropriate <br> graphical <br> methods, <br> including bar <br> charts and time <br> graphs | -complete, read <br> and interpret <br> information in <br> tables, including <br> timetables$\quad$• interpret and <br> construct pie <br> charts and line <br> graphs anduse <br> these to solve <br> problems |  |

## Solve statistical problems

| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | - ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity <br> - ask and answer questions about totalling and comparing categorical data | - solve one-step and two-step questions [for example, 'How many more?' and 'How many fewer?'] using information presented in scaled barcharts and pictograms and tables | - solvecomparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs | - solvecomparison, sum and difference problems using information presented in aline graph | - calculate and interpret the mean as an average |
|  | Summer 3 | Summer 5 | Summer 5 | Spring 5 | Spring 6 |


[^0]:    Note - although formal algebraic notation is not introduced until
    Y6, algebraic thinking starts much earlier as exemplified by the
    'missing number' objectives from $Y 1 / 2 / 3$

