Mathematics Mastery

RtP criteria mapped to MM curriculum

This resource takes each Ready-to-Progress criterion and explains where it will be taught in our curriculum and where we suggest time is used to practice and consolidate that concept in Maths Meetings. This resource supports you to see how and when all concepts outlined in the DfE guidance are taught.

Year 1			
	Description	**Links to MM programme of study**	**Consolidation in Maths Meetings**
1NPV-1	Count within 100, forwards and backwards, starting with any number.	• Unit 1: Numbers to 10 • Unit 2: Addition and subtraction within 10 • Unit 4: Numbers to 20 • Unit 12: Numbers 50 to 100 and beyond	***Autumn Term:*** Count on and back within 20, with a focus on ordinality, cardinality and conservation of number.
1NPV-2	Reason about the location of numbers to 20 within the linear number system, including comparing using < > and =	• Unit 1: Numbers to 10 • Unit 4: Numbers to 20	***Autumn term*** (additional guidance): One more and one less within 20
1NF-1	Develop fluency in addition and subtraction facts within 10.	• Unit 4: Addition and subtraction within 20 • Unit 7 Exploring calculation strategies within 20 • Unit 9: Addition and subtraction within 20	***Autumn Term:*** Number bonds within 10, for example, identifying all the ways of making 6 (using the part-whole model to represent this) ***Spring Term:*** Number bonds to and within 10 with part-whole representation
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.	• Unit 15: Multiplication and division	***Spring term*** (additional guidance): Recognising patterns that increase and decrease in steps of 2, 5 and 10 ***Summer Term:*** Exploring repeated addition and the part-whole model and how it links with multiplication and division
1AS–1.	Compose numbers to 10 from 2 parts, and partition numbers to 10 into parts, including recognising odd and even numbers	• Unit 1: Numbers to 10 • Unit 2: Addition and subtraction within 10 • Unit 4: Numbers to 20 • Unit 7 Exploring calculation strategies within 20	***Autumn Term:*** Number bonds within 10, for example, identifying all the ways of making 6 (using the part-whole model to represent this) ***Spring Term:*** Number bonds to and within 10 with part-whole representation ***Summer Term:*** Addition and subtraction within 20, drawing attention to strategies (e.g. Make 10, counting on) and structures (e.g. 'first, then, now', combining or partitioning sets, finding difference).
1AS-2	Read, write and interpret equations containing addition ( ), subtraction ( ) and equals ( ) symbols, and relate additive expressions and	• Unit 5: Addition and subtraction within 20	***Autumn Term:*** Number bonds within 10, for example, identifying all the ways of making 6 (using the part-whole model to represent this) ***Spring Term:*** Number bonds to and within 10 with part-whole representation

	equations to real-life contexts		Using inverse to find missing numbers in equations
1G-1	Recognise common 2D and 3D shapes presented in different orientations, and know that rectangles, triangles, cuboids and pyramids are not always similar to one another.	• Unit 3: Shape and patterns	***Autumn term:*** *Recognise and name 2-D and 3-D shapes* ***Summer term:*** Identify and describe 2-D and 3-D shapes using vocabulary side, edge, face and vertices
1G-2	Compose 2D and 3D shapes from smaller shapes to match an example, including manipulating shapes to place them in particular orientations.	• Unit 3: Shape and patterns	***Summer term:*** Identify and describe 2-D and 3-D shapes using vocabulary side, edge, face and vertices

Year 2			
	Description	**Links to MM programme of study**	**Consolidation in Maths Meetings**
2NPV-1	Recognise the place value of each digit in two-digit numbers, and compose and decompose two digit numbers using standard and nonstandard partitioning.	• Unit 1: Numbers within 100	***Autumn term and Spring term:*** Partition and recombine numbers from 11-20 (e.g. using a part-whole model, beadstring, linked to abstract addition and subtraction equations) **Autumn:** Recognise the place value of each digit in a 2-digit number (tens, ones)
2NPV-2	Reason about the location of any two digit number in the linear number system, including identifying the previous and next multiple of 10.	• Unit 1 Numbers within 100	***Autumn term:*** Count on and back from any number within 100 along a number line
2NF-1	Secure fluency in addition and subtraction facts within 10, through continued practice.	• Unit 2: Addition and subtraction of 2-digit numbers • Unit 9: Addition and subtraction of 2-git numbers	***Autumn term:*** Consolidate and apply knowledge of number bonds for all numbers up to ten ***Spring term:*** Apply knowledge of number bonds for all numbers up to ten, including through mental calculations to which they can be applied.
2AS–1.	Add and subtract across 10, for example: 8 + 5 = 13, 13 – 5 = 8	• Unit 2: Addition and Subtraction of 2-digit numbers	***Spring and Summer term:*** Complete addition or subtraction calculations using a range of strategies and discussing which is the most efficient
2AS-2	Recognise the subtraction structure of ‘difference’ and answer questions of the form, “How many more…?”.	• Unit 2: Addition and Subtraction of 2-digit numbers	***Spring and Summer term:*** Complete addition or subtraction calculations using a range of strategies and discussing which is the most efficient

2AS-3	Add and subtract within 100 by applying related one digit addition and subtraction facts: add and subtract only ones or only tens to/from a two-digit number.	• Unit 2: Addition and Subtraction of 2-digit numbers • Unit 3: Addition and subtraction word problems • Unit 9: Addition and subtraction of 2-git numbers	***Spring and Summer term:*** Complete addition or subtraction calculations using a range of strategies and discussing which is the most efficient
2AS- 4	Add and subtract within 100 by applying related one digit addition and subtraction facts: add and subtract any 2 two digit numbers.	• Unit 9: Addition and subtraction of 2-git numbers • Unit 15: Exploring calculation strategies	***Spring and Summer term:*** Complete addition or subtraction calculations using a range of strategies and discussing which is the most efficient
2MD- 1	Recognise repeated addition contexts, representing them with multiplication equations and calculating the product, within the 2, 5 and 10 multiplication tables.	• Unit 6: Multiplication and division: 2, 5 and 10	***Autumn term and Spring term*** (additional guidance: Skip counting in steps of 2, 3, 5 and 10 forwards and backwards ***Spring term and Summer term:*** (additional guidance) Multiplication tables of 2, 5 and 10
2MD- 2	Relate grouping problems where the number of groups is unknown to multiplication equations with a missing factor, and to division equations (quotitive division).	• Unit 6: Multiplication and division: 2, 5 and 10 • Unit 16: Multiplication and division	***Spring term and Summer term:*** (additional guidance) Multiplication tables of 2, 5 and 10
2G-1	Use precise language to describe the properties of 2D and 3D shapes, and compare shapes by reasoning about similarities and differences in properties.	• Unit 11: Faces, shapes and patterns; lies and turns	***Autumn term***: Use vocabulary related to shape accurately including the number of sides, edges, vertices and faces on 2-D and 3-D shapes, including pyramids ***Spring term:*** Recognise 3-D shapes including triangular prisms and cones

Year 3			
	Description	**Links to MM programme of study**	**Maths Meeting guidance**
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.	• Unit 1: Number sense and exploring calculation strategies	***Autumn term:*** Represent numbers to 1000 with concrete manipulatives and images, including number lines

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.	• Unit 2: Place value	***Autumn term:*** Represent numbers to 1000 with concrete manipulatives and images, including number lines Place value of digits in numbers with up to three digits
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.	• Unit 2: Place Value	***Autumn term:*** *(additional guidance):* Count on and back in ones and tens within 1000 along number track Compare numbers within 1000 using < and > signs
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.	• Unit 2: Place Value	***Autumn term:*** Skip counting in 2s, 3s, 4s, 5s and 10s
3NF-1	Secure fluency in addition and subtraction facts that bridge 10, through continued practice.	• Unit 1: Number sense and exploring calculation strategies • Unit 4: Addition and subtraction	***Autumn term:*** Consolidate mental addition and subtraction for 2-digit numbers
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 corresponding number.	• Unit 6: Multiplication and division • Unit 12: Securing multiplication and division	***Autumn Term:*** Derive multiplication and division equations using arrays
3NF-3	Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 10),	• Unit 1: Number sense and exploring calculation strategies • Unit 13: Exploring calculation strategies and place value	***Spring term***: Multiply by 10 and 100 recognising the importance of place value
3AS-1	Calculate complements to 100	• Unit 4: Addition and subtraction	***Autumn term:*** *Patterns of numbers within 100*
3AS-2	Add and subtract up to three-digit numbers using columnar methods	• Unit 4: Addition and subtraction	***Autumn term:*** Choose and discuss efficient calculation strategies for 3-digit addition and subtraction, emphasising using number bonds / make ten
3AS-3	Manipulate the additive relationship: Understand the	• Unit 4: Addition and subtraction	***Throughout year***: Derive facts from known facts 'If I know…, what else do I know?'

	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.		
3MD-1	Apply known multiplication and division facts to solve contextual problems with different structures, including quotitive and partitive division.	• Unit 7: Deriving multiplication and division facts • Unit 12: Securing multiplication and division	***Throughout year:*** Derive facts from known facts 'If I know…, what else do I know?'
3F-1	Interpret and write proper fractions to represent 1 or several parts of a whole that is divided into equal parts.	• Unit 9: Fractions	***Autumn term:*** Recognise, find and write fractions of lengths, shapes and quantities
3F-2	Find unit fractions of quantities using known division facts (multiplication tables fluency).	• Unit 9: Fractions	***Autumn term:*** Recognise, find and write fractions of lengths, shapes and quantities
3F-3	Reason about the location of any fraction within 1 in the linear number system.	• Unit 9: Fractions	***Spring term:*** Recognise that two halves are equal to one whole, three thirds are equal to one whole and four quarters are equal to one whole Count on in halves, thirds and quarters within 10 ***Summer term:*** Count in halves, thirds, quarters and tenths from any number
3F-4	Add and subtract fractions with the same denominator, within 1.	• Unit 9: Fractions	***Spring term:*** Recognise that two halves are equal to one whole, three thirds are equal to one whole and four quarters are equal to one whole Count on in halves, thirds and quarters within 10 ***Summer term:*** Count in halves, thirds, quarters and tenths from any number
3G-1	Recognise right angles as a property of shape or a description of a turn, and identify right angles in 2D shapes presented in different orientations.	• Unit 10: Angles and shape	***Spring term:*** Identify right angles and that two right angles make a half turn
3G-2	Draw polygons by joining marked points, and identify parallel and perpendicular sides.	• Unit 10: Angles and shape	***Summer term***: Identify pairs of perpendicular and parallel lines

Year 4			
Reference	**Description**	**Links to MM programme of study**	**Maths Meeting guidance**
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.	• Unit 1: Place Value	***Autumn term*** (additional guidance): Order and compare numbers within 10 000
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.	• Unit 1: Place Value	***Autumn term*** (additional guidance): Order and compare numbers within 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.	• Unit 1: Place Value	***Autumn term*** (additional guidance): Order and compare numbers within 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.	• Unit 1: Place Value	***Autumn term*** (additional guidance): Order and compare numbers within 10 000
4NF-1	Recall multiplication and division facts up to 12 x 12 , and recognise products in multiplication tables as multiples of the corresponding number.	• Unit 5: Securing multiplication facts	***Autumn term:*** Using the multiplication tables up to 12 × 12
4NF-2	Solve division problems, with two-digit dividends and one-digit divisors, that involve remainders and interpret remainders appropriately	• Unit 5: Securing multiplication facts	***Autumn term:*** Calculate multiplications and divisions mentally using a range of strategies (including known facts, halving, doubling, applying place value, inverse, commutativity etc).
4NF-3	Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 100),	• Unit 3: Multiplication and division	***Autumn term:*** Derive facts from known facts

4MD-1	Multiply and divide whole numbers by 10 and 100 (keeping to whole number quotients); understand this as equivalent to making a number 10 or 100 times the size.	• Unit 3: Multiplication and division	***Spring term:*** Divide by ten and 100 to get a decimal fraction
4MD-2	Manipulate multiplication and division equations, and understand and apply the commutative property of multiplication.	• Unit 3: Multiplication and division	***Autumn term:*** Derive facts from known facts Calculate multiplications and divisions mentally using a range of strategies (including known facts, halving, doubling, applying place value, inverse, commutativity etc).
4MD-3	Understand and apply the distributive property of multiplication.	• Unit 3: Multiplication and division	***Autumn term:*** Calculate multiplications and divisions mentally using a range of strategies (including known facts, halving, doubling, applying place value, inverse, commutativity etc).
4F-1	Reason about the location of mixed numbers in the linear number system.	• Unit 6: Fractions	***Spring term:*** Use the number line to represent numbers (including decimals), fractions (including mixed numbers) and measures
4F-2	Convert mixed numbers to improper fractions and vice versa.	• Unit 6: Fractions	***Spring term:*** Use the number line to represent numbers (including decimals), fractions (including mixed numbers) and measures
4F-3	Add and subtract improper and mixed fractions with the same denominator, including bridging whole numbers,	• Unit 6: Fractions	
4G-1	Draw polygons, specified by coordinates in the first quadrant, and translate within the first quadrant.	• Unit 12: Position and direction	***Summer term:*** Describe positions on a 2-D grid as coordinates in the first quadrant
4G-2	Identify regular polygons, including equilateral triangles and squares, as those in which the side-lengths are equal and the angles are equal. Find the perimeter of regular and irregular polygons.	• Unit 11: 2D shape and symmetry	***Spring term***: Calculate the perimeters of rectilinear 2-D shapes on centimetre grids
4G-3	Identify line symmetry in 2D shapes presented in different orientations. Reflect shapes in a line of symmetry and complete a symmetric figure or pattern with respect to a specified line of symmetry.	• Unit 11: 2D shape and symmetry	***Autumn term:*** Identify lines of symmetry in the surrounding environment and regular 2-D shapes

Year 5			
	Description	**Links to MM programme of study**	**Maths Meeting guidance**
5NPV-1	Know that 10 tenths are equivalent to 1 one, and that 1 is 10 times the size of 0.1. Know that 100 hundredths are equivalent to 1 one, and that 1 is 100 times the size of 0.01. Know that 10 hundredths are equivalent to 1 tenth, and that 0.1 is 10 times the size of 0.01.	• Unit 6 – Fractions and decimals • Unit 8 – Fractions, decimals and percentages • Unit 11: calculating with whole numbers and decimals	***Autumn term:*** Count up and down in hundredths Decimal notation of tenths and hundredths using place value board ***Spring term:*** Read, order and compare number with up to three decimal places
5NPV-2	Recognise the place value of each digit in numbers with up to 2 decimal places, and compose and decompose numbers with up to 2 decimal places using standard and nonstandard partitioning.	• Unit 6 – Fractions and decimals	***Spring term:*** Identify the place value in a number with up to three decimal places
5NPV-3	Reason about the location of any number with up to 2 decimals places in the linear number system, including identifying the previous and next multiple of 1 and 0.1 and rounding to the nearest of each.	• Unit 6 – Fractions and decimals	***Spring term:*** Compare and order fractions, including mixed number and improper fractions whose denominators are multiples of the same number
5NPV-4	Divide 1 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in units of 1 with 2, 4, 5 and 10 equal parts.	• Unit 6 – Fractions and decimals	***Spring term:*** Read, order and compare number with up to three decimal places Compare and order decimals and fractions
5NPV-5	Convert between units of measure, including using common decimals and fractions	• Unit 10 – Converting units of measure	***Autumn term:*** Convert between different units of metric measure ***Summer term:*** Use all four operations to solve problems involving measure, using decimal notation
5NF-1	Secure fluency in multiplication table facts, and corresponding division facts, through continued practice.	• Unit 4 – Multiplication and division	***Autumn term:*** Recalling and using multiplication facts up to 12 x 12
5NF-2	Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by	• Unit 2: Problem solving with integer addition and subtraction	***Autumn term:*** Count forwards and backwards in steps of powers of ten (including tenths and hundredths) Add, subtract, multiply and divide numbers mentally with increasingly

	1 tenth or 1 hundredth),	• Unit 4: Multiplication and division	large numbers, drawing upon known facts
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.	• Unit 4 – Multiplication and division	***Autumn term:*** Add, subtract, multiply and divide numbers mentally with increasingly large numbers, drawing upon known facts
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.	• Unit 4 – Multiplication and division	***Spring term:*** Identify multiples and factors, including finding all factor pairs and common factors of two numbers
5MD-3	Multiply any whole number with up to 4 digits by any one-digit number using a formal written method.	• Unit 4 – Multiplication and division	***Autumn term***: (additional guidance)Multiply two-digit and three-digit numbers by a one-digit number using formal written layout
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.	• Unit 4 – Multiplication and division	
5F-1	Find non-unit fractions of quantities.	• Unit 6 – Fractions and decimals	***Autumn term:*** Find fractions of simple amounts and quantities (linking this to division)
5F-2	Find equivalent fractions and understand that they have the same value and the same position in the linear number system.	• Unit 6 – Fractions and decimals	***Autumn term:*** (additional guidance) Recognise and show, using diagrams, families of common equivalent fractions
5F-3	Recall decimal fraction equivalents for 1/2, 1/4, 1/5 and 1/10, and for multiples of these proper fractions.	• Unit 6 – Fractions and decimals	***Autumn term:*** (additional guidance) Recognise and write decimal equivalents to 1/2, 1/4, and 3/4 any number of tenths or hundredths ***Spring term:*** (additional guidance) Read decimal numbers as fractions
5G-1	Compare angles, estimate and measure angles in degrees (°) and draw angles of a given size.	• Unit 7: Angles	***Autumn term:*** Identify acute and obtuse angles and compare and order angles by size ***Spring term:*** Identify: angles at a point and one whole turn (total 360o); angles at a point on a straight line and a turn (total 180o); other multiples of 90o

5G-2	Compare areas and calculate the area of rectangles (including squares) using standard units.	• Unit 5: 2-D shape, perimeter and area	***Spring term:*** Calculate and compare the area and perimeter of rectangles

Year 6			
	Description	**Links to MM programme of study**	**Maths Meeting guidance**
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).	• Unit 1: Integers and decimals	Counting should be daily practice and include negative numbers, decimal and fractions, larger integers etc.
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 nonstandard partitioning.	• Unit 1: Integers and decimals	Counting should be daily practice and include negative numbers, decimal and fractions, larger integers etc.
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.	• Unit 1: Integers and decimals	Counting should be daily practice and include negative numbers, decimal and fractions, larger integers etc.
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.	• Unit 2: Multiplication and division	Counting should be daily practice and include negative numbers, decimal and fractions, larger integers etc.
6AS/MD-1	Understand that 2 numbers can be related additively or multiplicatively, and quantify additive and multiplicative relationships (multiplicative relationships restricted	• Unit 3: Calculation problems	Add, subtract, multiply and divide numbers mentally with increasingly large numbers, drawing upon known facts

	to multiplication by a whole number).		
6AS/MD-2	Use a given additive or multiplicative calculation to derive or complete a related calculation, using arithmetic properties, inverse relationships, and place-value understanding.	• Unit 3: Calculation problems	Add, subtract, multiply and divide numbers mentally with increasingly large numbers, drawing upon known facts
6AS/MD-3	Solve problems involving ratio relationships.	• Unit 10: Proportion problems	Explore the language of ratio and proportion and make connections to previous experiences with fractions and multiplication
6AS/MD-4	Solve problems with 2 unknowns.	• Unit 3: Calculation problems • Unit 10: Proportion problems	Finding unknowns with operations on both sides
6F-1	Recognise when fractions can be simplified, and use common factors to simplify fractions.	• Unit 4: Fractions	Compare and order fractions, including mixed number and improper fractions whose denominators are multiples of the same number
6F-2	Express fractions in a common denomination and use this to compare fractions that are similar in value.	• Unit 4: Fractions	Compare and order fractions, including mixed number and improper fractions whose denominators are multiples of the same number
6F-3	Compare fractions with different denominators, including fractions greater than 1, using reasoning, and choose between reasoning and common denomination as a comparison strategy.	• Unit 4: Fractions	Compare and order fractions, including mixed number and improper fractions whose denominators are multiples of the same number
6G-1	Draw, compose, and decompose shapes according to given properties, including dimensions, angles and area, and solve related problems.	• Unit 5: Missing angles and lengths • Unit 6: Coordinates and shape	