MATHS MTP

Year 5

RtP objectives are in red – these are to be the priority and covered first before N.C objectives

Black objectives are objectives that are from the national curriculum.

The following RtP objectives are covered daily through Ten A Day:

- 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.
- 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.
- 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.
- 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.
- 5NPV–5 Convert between units of measure, including using common decimals and fractions.
- 5NF–1 Secure fluency in multiplication table facts, and corresponding division facts, through continued practice.
- 5NF – 2 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 1 tenth or 1 hundredth),
- 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.
- 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.
- 5MD–3 Multiply any whole number with up to 4 digits by any one-digit number using a formal written method. 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
- 5F–1 Find non-unit fractions of quantities.
- 5F–2 Find equivalent fractions and understand that they have the same value and the same position in the linear number system.
- 5F–3 Recall decimal fraction equivalents for 1 2 , 1 4 , 1 5 and 1 10 and for multiples of these proper fractions.

TERM 1:1	Week 1. Week 2. Week 3 and Week 4 Place Value	Week 5 and Week 6 Addition and subtraction	Week 7 and Week 8 Multiplication and division
Week 1 = 2 days of x tables (8 weeks)	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. 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 non-standard partitioning. 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. 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. 5NPV-5 Convert between units of measure, including using common decimals and fractions. Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000	5NF-2 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 1 tenth or 1 hundredth), for example: 8+6=14 0.8+0.6=1.4 0.08+0.06=0.14 3 x 4 = 12 0.3 x 4 = 1.2 0.03 x 4 = 0.12 Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) Add and subtract numbers mentally with increasingly large numbers	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. 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. 5MD-3 Multiply any whole number with up to 4 digits by any one-digit number using a formal written method. 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.

	Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000			Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers Multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers Multiply and divide numbers mentally drawing upon known facts 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 and divide whole numbers and those involving decimals by 10, 100 and 1000
TERM	Week 9	Week 10	Week 12 & Week 13	Week 14 & Week 15

1:2	Place Value	Fractions	Measurement	Geometry Properties of Shapes
(7 weeks) NFER wk 3	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. 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 non-standard partitioning. 5NPV-3 Reason about the location of any number with up to 2 decimals places	5F-1 Find non-unit fractions of quantities. 5F-2 Find equivalent fractions and understand that they have the same value and the same position in the linear number system. 5F-3 Recall decimal fraction equivalents for 1/2, 1/4, 1/5 and 1/10 and for multiples of these proper fractions. Compare and order fractions whose denominators are all multiples of the same number 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, $\frac{2}{5}+\frac{4}{5}=\frac{6}{5}=1\frac{1}{5}$] add and subtract fractions with the same denominator, and	5NPV-5 Convert between units of measure, including using common decimals and fractions. 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. Convert between different units of metric measure [for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre] understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres calculate and compare the area of rectangles (including squares), including using standard units.	5G-1 Compare angles, estimate and measure angles in degrees (°) and draw angles of a given size. 5G-2 Compare areas and calculate the area of rectangles (including squares) using standard units. • identify 3-D shapes, including cubes and other cuboids, from 2-D representations • know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles • draw given angles, and measure them in degrees (°) • identify: ○ angles at a point and 1

	in the linear number system, including identifying the previous and next multiple of 1 and 0.1 and rounding to the nearest of each. 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. 5NPV-5 Convert between units of measure, including using common decimals and fractions. Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit Count forwards or backwards in steps of	denominators that are multiples of the same number multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents round decimals with 2 decimal places to the nearest whole number and to 1 decimal place read, write, order and compare numbers with up to 3 decimal places solve problems involving number up to 3 decimal places recognise the per cent symbol (%) and understand that percent relates to 'number of parts per 100', and write percentages as a	square centimetres (cm^2) and square metres (m^2), and estimate the area of irregular shapes estimate volume [for example, using 1 cm^3 blocks to build cuboids (including cubes)] and capacity [for example, using water] use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling	whole turn (total 360°) ○ angles at a point on a straight line and half a turn (total 180°) ○ other multiples of 90° ○ use the properties of rectangles to deduce related facts and find missing lengths and angles ○ distinguish between regular and irregular polygons based on reasoning about equal sides and angles

	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 Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000	fraction with denominator 100, and as a decimal fraction solve problems which require knowing percentage and decimal equivalents of $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{2}{5}$, $\frac{4}{5}$ and those fractions with a denominator of a multiple of 10 or 25		
TERM 2:1	Place Value Week 16	Addition and Subtraction Week 17	Multiplication & Division Week 18 and Week 19	Fractions and Decimals Week 20 & Week 21
(6 weeks)	Read, write, order and compare numbers to at least 1 000 000 and	Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)	Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers	compare and order fractions whose denominators are all

	determine the value of each digit 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 Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000 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	Add and subtract numbers mentally with increasingly large numbers 5NF-2 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 1 tenth or 1 hundredth), for example: 8+6=14 0.8+0.6=1.4 0.08+0.06=0.14 3 × 4 = 12 0.3 × 4 = 1.2 0.03 × 4 = 0.12	Multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers Multiply and divide numbers mentally drawing upon known facts 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 and divide whole numbers and those involving decimals by 10, 100 and 1000 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. 5MD-2 Find factors and multiples of positive whole numbers, including common factors and common multiples, and express a	multiples of the same number identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths 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, $\frac{2}{5}+\frac{4}{5}=\frac{6}{5}=1\frac{1}{5}$] add and subtract fractions with the same denominator, and denominators that are multiples of the same number multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams

	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. 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 non-standard partitioning. 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.		given number as a product of 2 or 3 factors. 5MD-3 Multiply any whole number with up to 4 digits by any one-digit number using a formal written method. 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.	read and write decimal numbers as fractions [for example, 0.71 = $\frac{71}{100}$] recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents round decimals with 2 decimal places to the nearest whole number and to 1 decimal place read, write, order and compare numbers with up to 3 decimal places solve problems involving number up to 3 decimal places recognise the per cent symbol (%) and understand that percent relates to 'number of parts per 100', and write percentages as a fraction with denominator

	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. 5NPV-5 Convert between units of measure, including using common decimals and fractions.			100, and as a decimal fraction solve problems which require knowing percentage and decimal equivalents of $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{2}{5}$, $\frac{4}{5}$ and those fractions with a denominator of a multiple of 10 or 25 5F-1 Find non-unit fractions of quantities. 5F-2 Find equivalent fractions and understand that they have the same value and the same position in the linear number system. 5F-3 Recall decimal fraction equivalents for 1/2, 1/4, 1/5 and 1/10 and for multiples of these proper fractions.
TERM 2:2	Geometry – properties of shape Week 22 and Week 23		Fractions and Decimals Week 24	Geometry – Position and direction Week 26 and Week 27

(6 weeks)
 	
Wk 4
NFER
	• identify 3-D shapes, including cubes and other cuboids, from 2-D representations
	• know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles
	• draw given angles, and measure them in degrees (°)
	• identify:
	  ○ angles at a point and 1 whole turn (total 360°)
	  ○ angles at a point on a straight line and half a turn (total 180°)
	  ○ other multiples of 90°
	  ○ use the properties of rectangles to deduce related facts and find missing lengths and angles
	  ○ distinguish between regular and irregular polygons based on reasoning about equal sides and angles
	5G-1 Compare angles, estimate and measure angles in degrees (°) and draw angles of a given size.
	5G-2 Compare areas and calculate the area of rectangles (including squares) using standard units.
		compare and order fractions whose denominators are all multiples of the same number
		
		identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths
		
		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, $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$]
		
		add and subtract fractions with the same denominator, and denominators that are multiples of the same number
		
		multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams
			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.

		read and write decimal numbers as fractions [for example, 0.71 = $\frac{71}{100}$] recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents round decimals with 2 decimal places to the nearest whole number and to 1 decimal place read, write, order and compare numbers with up to 3 decimal places solve problems involving number up to 3 decimal places recognise the per cent symbol (%) and understand that percent relates to 'number of parts per 100', and write percentages as a fraction with denominator 100, and as a decimal fraction solve problems which require knowing percentage and decimal	

		equivalents of $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{2}{5}$, $\frac{4}{5}$ and those fractions with a denominator of a multiple of 10 or 25 5F-1 Find non-unit fractions of quantities. 5F-2 Find equivalent fractions and understand that they have the same value and the same position in the linear number system. 5F-3 Recall decimal fraction equivalents for 1/2, 1/4, 1/5 and 1/10 and for multiples of these proper fractions.	
TERM 3:1	Statistics Week 28 and Week 29	Measure Week 30 and Week 31	Word Problems (4 operations) Week 32 and Week 33
(6 weeks)	Solve comparison, sum and difference problems using information presented in a line graph complete, read and interpret information in tables, including timetables.	convert between different units of metric measure [for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre] understand and use approximate equivalences between metric units	Solve number problems and practical problems that involve place value with numbers to 3 decimal players. Solve addition and subtraction multi-step problems in contexts.

		and common imperial units such as inches, pounds and pints measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres calculate and compare the area of rectangles (including squares), including using standard units, square centimetres (cm^2) and square metres (m^2), and estimate the area of irregular shapes estimate volume [for example, using 1 cm^3 blocks to build cuboids (including cubes)] and capacity [for example, using water] use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling 5NPV-5 Convert between units of measure, including using common decimals and fractions. 5NPV-4 Divide 1 into 2, 4, 5 and 10 equal parts, and read	deciding which operations and methods to use and why. Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.

		scales/number lines marked in units of 1 with 2, 4, 5 and 10 equal parts.	
TERM 3:2	Statistics Week 34 and Week 35	The Four Operations (Problem Solving, reasoning and word problems) Week 37	Week 38, Week 39 and Week 40 Teacher discretion
(7 weeks) Wk 3 NFER	Solve comparison, sum and difference problems using information presented in a line graph Complete, read and interpret information in tables, including timetables.	Solve number problems and practical problems that involve place value with numbers to 3 decimal players. Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why. Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign	Time? Consolidation? RtP objectives that have not been marked off of RtP Assessment sheet? Misconceptions from NFER tests?

		Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.	