Number: Fractions, Decimals and Percentages

COUNTING IN FRACTIONAL STEPS							
Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
			count in fractions up to 10, starting from any number and using the 1/2 and 2/4 equivalence on the number line	count up and down in tenths	count up and down in hundredths		

RECOGNISING FRACTIONS							
Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	know that objects and amounts can be split into parts know that all of the parts together is the whole	recognise, find and name a half as one of two equal parts of an object, shape or quantity	recognise, find, name and write fractions $^{1}/_{3}$, $^{1}/_{4}$, $^{2}/_{4}$ and $^{3}/_{4}$ of a length, shape, set of objects or quantity write simple fractions e.g. $^{1}/_{2}$ of 6 = 3	recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators *(denominators up to 10)*	recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten	recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents	
				recognise that tenths arise from dividing an object into 10 equal parts and in dividing one – digit numbers or quantities by 10.			
		recognise, find and name a quarter as one of four equal parts of an object, shape or quantity		recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators *(denominators up to 10)*			

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COMPARING FRACTIONS							
Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	recognise when a part is bigger or smaller than another part			compare and order unit fractions, and fractions with the same denominators (*denominators up to 10*) reason about the location of fractions in the linear number system	reason about the location of fractions in the linear number system	compare and order fractions whose denominators are all multiples of the same number reason about the location of fractions in the linear number system	compare and order fractions, including fractions >1 reason about the location of fractions in the linear number system

COMPARING DECIMALS							
Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
					compare numbers with the same number of decimal places up to two decimal places reason about the location of decimals to 1dp in the linear number system	read, write, order and compare numbers with up to three decimal places reason about the location of decimals to 2dp in the linear number system	identify the value of each digit in numbers given to three decimal places reason about the location of decimals to 3dp in the linear number system

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ROUNDING INCLUDING DECIMALS							
Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
					identify previous and next whole number round decimals with one decimal place to the nearest whole number	identify previous and next whole number and multiple of 0.1 round decimals with two decimal places to the nearest whole number and to one decimal place	identify previous and next whole number and multiple of 0.1 and 0.01 round decimals with three decimal places to the nearest whole number, tenth and hundredth solve problems which require answers to be rounded to specified degrees of accuracy
EQUIVALENCE (INCLUDING FRACTIONS, DECIMALS AND PERCENTAGES)							
Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
			recognise the equivalence of $^{2}/_{4}$ and $^{1}/_{2}$.	recognise and show, using diagrams, equivalent fractions with small denominators	recognise and show, using diagrams, families of common equivalent fractions	identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths	use common factors to simplify fractions use common multiples to express fractions in the same denomination

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					recognise and write decimal equivalents of any number of tenths or hundredths	read and write decimal numbers as fractions (e.g. 0.71 = $^{71}/_{100}$)	associate a fraction with division and calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. $^{3}/_{8}$)
						recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents	
					recognise and write decimal equivalents to $^{1}/_{4}$; $^{1}/_{2}$; $^{3}/_{4}$	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 as a decimal fraction	recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.

ADDITION AND SUBTRACTION OF FRACTIONS

Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
				add and subtract fractions with the same denominator within one whole (e.g. $^{5}/_{7} + {}^{1}/_{7} = {}^{6}/_{7}$) *(denominators up to 10)*	add and subtract fractions with the same denominator *(denominators beyond 10)*	add multiple fractions with the same denominator *(any number)* subtract fractions with the same denominator *(any number)* add and subtract fractions with the same denominator and multiples of the same number (e.g. $\frac{1}{3} + \frac{4}{6}$)	add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions

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						recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number (e.g. $^{2}/_{5} + {}^{4}/_{5} = {}^{6}/_{5} = 1{}^{1}/_{5}$)	
MULTIPLICATION AND DIVISION OF FRACTIONS							
Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
						multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams	multiply simple pairs of proper fractions, writing the answer in its simplest form (e.g. $^{1}/_{4} \times {}^{1}/_{2} = {}^{1}/_{8}$) multiply proper fractions and mixed numbers by whole numbers
							multiply one-digit numbers with up to two decimal places by whole numbers

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							divide proper fractions by whole numbers (e.g. $^{1}/_{3} \div 2 = {}^{1}/_{6}$)
MULTIPLICATION AND DIVISION OF DECIMALS							
EYFS		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
							multiply one-digit numbers with up to two decimal places by whole numbers
					find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths		multiply and divide numbers by 10, 100 and 1000 where the answers are up to three decimal places
							identify the value of each digit to three decimal places and multiply and divide numbers by 10, 100 and 1000 where the answers are up to three decimal places
							associate a fraction with division and calculate decimal

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							fraction equivalents (e.g. 0.375) for a simple fraction (e.g. $^{3}/_{8}$)
							use written division methods in cases where the answer has up to two decimal places
PROBLEM SOLVING							
Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
				solve problems that involve all of the above	solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number	solve problems involving numbers up to three decimal places	solve problems using the year 6 criteria
					solve simple measure and money problems involving fractions and decimals to two decimal places.	solve problems which require knowing percentage and decimal equivalents of $^{1}/_{2}$, $^{1}/_{4}$, $^{1}/_{5}$, $^{2}/_{5}$, $^{4}/_{5}$ and those with a denominator of a multiple of 10 or 25.	solve problems involving the calculation of percentages