

Number: Fractions - National Curriculum and RTP mapping with White Rose Small Steps

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
COUNTING, RECOGNISING and WRITING FRACTIONS					
<p>recognise, find and name a half as one of two equal parts of an object, shape or quantity</p> <p>recognise, find and name a quarter as one of four equal parts of an object, shape or quantity</p>	<p>recognise, find, name and write fractions $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$ and $\frac{3}{4}$ of a length, shape, set of objects or quantity</p> <p><i>Pupils should count in fractions up to 10, starting from any number and using the $\frac{1}{2}$ and $\frac{2}{4}$ equivalence on the number line (Non Statutory Guidance)</i></p>	<p>count up and down in tenths</p> <p>recognise that tenths arise from dividing an object into 10 equal parts and in dividing one – digit numbers or quantities by 10</p> <p>recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators</p> <p>recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators</p> <p>.</p>	<p>count up and down in hundredths</p> <p>recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten</p>	<p>identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths</p> <p>recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents (appears also in Equivalence)</p>	
Summer 2	Summer 1	Spring 3	Spring 4 Summer 1	Autumn 4	

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COMPARING FRACTIONS (including EQUIVALENCE)					
	recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$	compare and order unit fractions, and fractions with the same denominators recognise and show, using diagrams, equivalent fractions with small 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 compare and order fractions, including fractions >1
	Summer 1	Spring 3	Spring 3	Autumn 4	Autumn 3

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CALCULATION - ADDITION, SUBTRACTION, MULTIPLICATION AND DIVISION OF FRACTIONS					
	write simple fractions e.g. $\frac{1}{2}$ of 6 = 3 and.	add and subtract fractions with the same denominator within one whole (e.g. $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$)	add and subtract fractions with the same denominator	add and subtract fractions with the same denominator and multiples of the same number 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 multiply simple pairs of proper fractions, writing the answer in its simplest form (e.g. $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$) divide proper fractions by whole numbers (e.g. $\frac{1}{3} \div 2 = \frac{1}{6}$)
	Summer 1	Summer 1	Spring 3	Autumn 4 Spring 2	Autumn 3 Autumn 4

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FRACTIONS - PROBLEM SOLVING					
		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		
		Spring 3 Summer 1	Spring 3		

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DECIMALS – RECOGNISE, WRITE AND COMPARE					
			<p>recognise and write decimal equivalents of any number of tenths or hundredths</p> <p>recognise and write decimal equivalents to $\frac{1}{4}$; $\frac{1}{2}$; $\frac{3}{4}$</p> <p>round decimals with one decimal place to the nearest whole number</p> <p>compare numbers with the same number of decimal places up to two decimal places</p>	<p>read and write decimal numbers as fractions (e.g. $0.71 = \frac{71}{100}$)</p> <p>recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents</p> <p>round decimals with two decimal places to the nearest whole number and to one decimal place</p> <p>read, write, order and compare numbers with up to three decimal places</p>	<p>identify the value of each digit in numbers given to three decimal places</p>
			Spring 4 Summer 1	Spring 3 Summer 3	Spring 3

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FRACTIONS, DECIMALS AND PERCENTAGES					
			<p>solve simple measure and money problems involving fractions and decimals to two decimal places.</p>	<p>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</p> <p>solve problems involving numbers up to three decimal places</p> <p>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 with a denominator of a multiple of 10 or 2</p>	<p>associate a fraction with division and calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. $\frac{3}{8}$)</p> <p>recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.</p>
			<p>Spring 3 Spring 4 Summer 1</p>	<p>Spring 3</p>	<p>Spring 3 Spring 4</p>

Year 3 RTP Fractions

Ready to progress criteria	Block	Steps
3F-1 Interpret and write proper fractions to represent 1 or several parts of a whole that is divided into equal parts.	Spring 3	1 – Understand the denominators of unit fractions 3 – Understand the numerators of non-unit fractions 4 – Understand the whole
3F-2 Find unit fractions of quantities using known division facts (multiplication tables fluency).	Summer 1	4 – Unit fractions of a set of objects
3F-3 Reason about the location of any fraction within 1 in the linear number system.	Spring 3	2 – Compare and order unit fractions 5 – Compare and order non-unit fractions 7 – Fractions on a number line 8 – Count in fractions on a number line
3F-4 Add and subtract fractions with the same denominator, within 1	Summer 1	1 – Add fractions 2 – Subtract fractions

Year 4 RTP Fractions

Ready to progress criteria	Block	Steps
4F-1 Reason about the location of mixed numbers in the linear number system.	Spring 3	4 – Number lines with mixed numbers 5 – Compare and order mixed numbers
4F-2 Convert mixed numbers to improper fractions and vice versa.	Spring 3	7 – Convert mixed numbers to improper fractions 8 – Convert improper fractions to mixed numbers
4F-3 Add and subtract improper and mixed fractions with the same denominator, including bridging whole numbers.	Spring 3	12 – Add fractions and mixed numbers 14 – Subtract from whole amounts 15 – Subtract from mixed numbers

Year 5 RTP Fractions

Ready to progress criteria	Block	Steps
5F-1 Find non-unit fractions of quantities.	Spring 2	4 – Calculate a fraction of a quantity 5 – Fraction of an amount
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 unit fraction 2 – Find fractions equivalent to a non-unit fraction 3 – Recognise equivalent fractions
5F-3 Recall decimal fraction equivalents for $\frac{1}{4}$, $\frac{1}{2}$, $\frac{1}{5}$ and $\frac{1}{10}$ and for multiples of these proper fractions.	Spring 3	2 – Equivalent fractions and decimals (tenths) 3 – Equivalent fractions and decimals (hundredths) 4 – Equivalent fractions and decimals

Year 6 RTP Fractions

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