St James Fraction, Decimal and Percentage Journey

COUNTING IN FRACTIONAL STEPS						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
		Pupils should count in fractions up to 10, starting from any number and using the 1/2 and 2/4 equivalence on the number line (Non Statutory Guidance)	count up and down in **tenths** Number lines Blank fraction strips	count up and down in **hundredths** Number lines Blank fractions 100 squares		

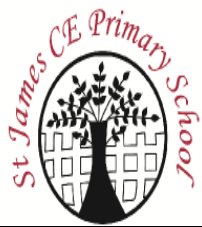| RECOGNISING FRACTIONS						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	recognise, find and name a half as one of two equal parts of an object, shape or quantity Shapes to cut out Cubes Ten frames	recognise, find, name and write fractions $\frac{1}{3}$ of a length, shape, set of objects or quantity Shapes to cut out Cubes Bar models	recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with **small denominators** Blank Fraction walls Counters	recognise that **hundredths** arise when dividing an object by one hundred and dividing tenths by ten Number discs (BPP) Place value charts (BPP) Number lines	recognise and use **thousandths** and relate them to tenths, hundredths and decimal equivalents (appears also in Equivalence) Base 10 Number discs (.PBR)	
	recognise, find and name a quarter as one of four equal parts	recognise, find, name and write fractions $\frac{1}{4}$, $\frac{2}{4}$ and	recognise that tenths arise from dividing an object into 10 equal parts and in			

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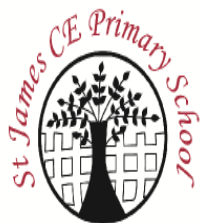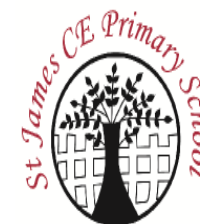|						
	of an object, shape or quantity Shapes to cut out Cubes Ten frames	$^3/_4$ of a length, shape, set of objects or quantity Shapes to cut out Cubes Bar models	dividing one – digit numbers or quantities by 10. recognise and use **fractions as numbers**: unit fractions and non-unit fractions with small denominators Part-whole (partitioning) Blank fraction strips			
COMPARING FRACTIONS						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
			compare and order unit fractions, and fractions with the same denominators Part wholes (Partitioning) Fraction walls Blank fraction strips Number lines		**compare and order** fractions whose **denominators are all multiples** of the same number Blank fraction strips	**compare and order** fractions, including fractions >1 Fraction walls Blank fraction strips

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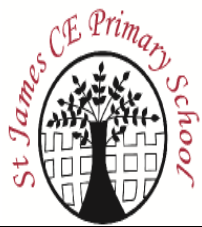# St James Fraction, Decimal and Percentage Journey

COMPARING DECIMALS						
EYFS	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** Number cards Dice Number lines Number discs (P.PB) Place value charts (P.PB)	Read and write numbers with up to **three decimal places** Base 10 Number discs (YP.PBR) Number cards **order and compare** numbers with up to **three decimal places** Base 10 Number discs (YP.PBR) Number cards	identify the **value** of each digit in numbers given to **three decimal places** Base 10 Arrow cards (P.PBG) Place value charts (P.PBG)

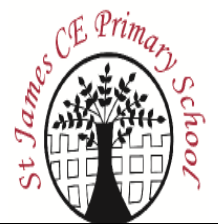| ROUNDING INCLUDING DECIMALS						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
				round decimals with one decimal place to the nearest whole number	**round decimals** with two decimal places to the nearest whole number and to one	solve problems which require answers to be rounded to specified

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					decimal place Number lines	degrees of accuracy
				Rulers Number lines		

EQUIVALENCE (INCLUDING FRACTIONS, DECIMALS AND PERCENTAGES)						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
		write simple fractions e.g. $^1/_2$ of 6 = 3 and recognise the equivalence of $^2/_4$ and $^1/_2$. Bar models	recognise and show, using diagrams, **equivalent fractions** with small denominators Bar models Blank fraction strips Fraction walls Number lines Fraction cards Blank fraction circles	recognise and show, using diagrams, families of common **equivalent fractions** Fraction cards Fraction walls Number cards	identify, name and write **equivalent fractions** of a given fraction, represented visually, including tenths and hundredths Blank fraction strips	use **common factors**
						use **common multiples**
						use common factors to **simplify fractions**; use common multiples to express fractions in the same denomination Fraction walls Bar models Blank fraction strips
				recognise and write **decimal equivalents** of any number of **tenths or hundredths** Place value charts (YP.PB)	read and write **decimal numbers as fractions** (e.g. 0.71 = $^{71}/_{100}$) Base 10 Number discs (.PBR) Numbers in words	associate a fraction with division and calculate **decimal fraction equivalents** (e.g. 0.375) for a simple fraction (e.g. $^3/_8$)

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				Number cards Number discs	sheets	
					recognise and use **thousandths** and relate them to tenths, hundredths and decimal equivalents Base 10 Number discs (.PBR)	
				recognise and write decimal equivalents to $\frac{1}{4}$; $\frac{1}{2}$; $\frac{3}{4}$	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 100 Squares	recall and use **equivalences between simple fractions, decimals and percentages,** including in different contexts.
ADDITION AND SUBTRACTION OF FRACTIONS						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6

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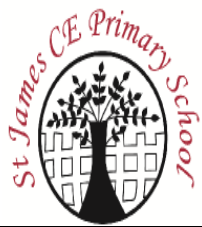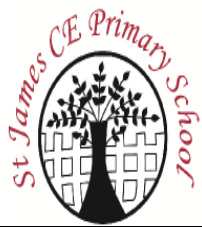# St James Fraction, Decimal and Percentage Journey

			add fractions with the same denominator within one whole (e.g. $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$) Blank fraction strips Blank fraction circles Number lines	add fractions with the same denominator Blank fraction strips	add fractions with the same denominator and multiples of the same number Bar models	add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions Blank fraction strips Bar models
			subtract fractions with the same denominator within one whole (e.g. $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$) Blank fraction strips Blank fraction circles Number lines	subtract fractions with the same denominator Blank fraction strips	subtract fractions with the same denominator and multiples of the same number Bar models	
					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. $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$)	

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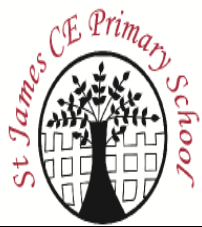# St James Fraction, Decimal and Percentage Journey

					Number lines Bar models	
MULTIPLICATION AND DIVISION OF FRACTIONS						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
					multiply proper fractions by whole numbers, supported by materials and diagrams Black fraction strips	**multiply simple pairs of proper fractions**, writing the answer in its simplest form (e.g. $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$) Bar models
					multiply mixed numbers by whole numbers, supported by materials and diagrams Blank fraction strips	**multiply** one-digit numbers with up to **two decimal places** by whole numbers Number discs (P.PB)
						divide proper fractions by whole numbers (e.g. $\frac{1}{3} \div 2 = \frac{1}{6}$) Bar models Blank fraction strips Number cards
MULTIPLICATION AND DIVISION OF DECIMALS						

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St James Fraction, Decimal and Percentage Journey

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
				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 Blank fractions strips Place value charts (YP.P)		**multiply** one-digit numbers with up to **two decimal places** by whole numbers Number discs (P.PB) 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 **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 Number discs (P.PB)

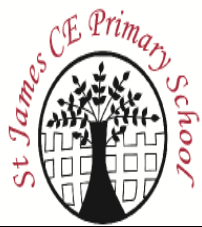| PROBLEM SOLVING						
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| | | | | **solve problems** that involve all of the above

Bar models
Blank fraction strips | **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

Part whole (Partitioning)
Number cards
Bar models
Number discs (P.P)
Place value charts (P.PB) | |
| | | | | | 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. | |

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