		Fractions and decimals	When Vocabulary is first introduced
EYFS	Doubling and halving (Spring)	• solve problems, including doubling, halving and sharing • Explore the relationship between doubling and halving	Double Descrbe Group Half Share
Year 1	Fractions (Spring)	• recognise, find and name a half as one of two equal parts of an object, shape or quantity • recognise, find and name a quarter as one of four equal parts of an object, shape or quantity	Divide Fraction Quarter
Year 2	Fractions (Spring)	• 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 for example, 1 2 of 6 = 3 • recognise the equivalence of 2 4 and 1 2	Denominator Division Non-unit fraction Numerator Relationship Unit fraction Vinculum
Year 3	Fractions (Spring)	• recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators • recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators • count up and down in tenths • recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10 • recognise and show, using diagrams, equivalent fractions with small denominators • add and subtract fractions with the same denominator within one whole [for example, 5 7 + 1 7 = 6 7] • compare and order unit fractions, and fractions with the same denominators • solve problems that involve all of the above	

Year 4	Fractions (Spring)	• add and subtract fractions with the same denominator • 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, 2 5 + 4 5 = 6 5 = 11 5] (Y5) • recognise and show, using diagrams, families of common equivalent fractions • count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten • 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	Decimal fraction Equivalent Improper fraction Mixed numbers Proper fraction Simplify Tenths Hundredths
	Decimals (Spring)	• 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 • recognise and write decimal equivalents of any number of tenths or hundredths • recognise and write decimal equivalents to 1 4 , 1 2 , 3 4 • round decimals with one decimal place to the nearest whole number • compare numbers with the same number of decimal places up to two decimal places	

Year 5	Fractions and decimals (Spring)	• compare and order fractions whose denominators are all multiples of the same number • recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents • 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, 2 5 + 4 5 = 6 5 = 11 5] • identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths • read and write decimal numbers as fractions [for example, 0.71 = 71 100] • round decimals with two decimal places to the nearest whole number and to one decimal place • read, write, order and compare numbers with up to three decimal places	Thousandths Percentage
	Fractions, decimals and percentages (Spring)	• 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 • solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates • 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, and as a decimal • solve problems which require knowing percentage and decimal equivalents of 1 2 , 1 4 , 1 5 , 2 5 , 4 5 and fraction and decimal equivalents of percentages that are multiples of 10 and 25 • solve problems involving number up to three decimal places • use all four operations to solve problems involving measure (for example length, mass, volume, money) using decimal notation, including scaling • associate a fraction with division (Y6)	

		• use common factors to simplify fractions; use common multiples to express fractions in the same denomination (Y6)	
Year 6	Fractions (Autumn)	• use common factors to simplify fractions; use common multiples to express fractions in the same denomination • compare and order fractions, including fractions > 1 • associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, 3 8] • recall and use equivalences between simple fractions and decimals, including in different contexts • generate and describe linear number sequences (with fractions) • add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions	Common fraction Proportion Ratio
	Fractions (Spring)	• multiply simple pairs of proper fractions, writing the answer in its simplest form [for example, 1 4 × 1 2 = 1 8] • divide proper fractions by whole numbers [for example, 1 3 ÷ 2 = 1 6] • recall and use equivalences between simple fractions and decimals, including in different contexts	
	Percentages and statistics (Spring)	• recall and use equivalences between simple fractions, decimals and percentages, including in different contexts • solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison • interpret and construct pie charts and line graphs and use these to solve problems • calculate and interpret the mean as an average	
	Proportion problems (Summer)	• solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts	

| | | • solve problems involving similar shapes where the scale factor is known or can be found
• solve problems involving unequal sharing and grouping using knowledge of fractions and multiples | |