Fractions, decimals and percentages

Objectives	Y1	Y2	Y3	Y4	Y5	Y6
National curriculum objectives	-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	-recognise, find, name and write fractions 1/3, ¼ 2/4, ¾ of a length, shape, set of objects or quantity -Recognise the equivalence of 2/4 and ½ -write simple fractions for example, 1/2 of 6 = 3	-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, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators - recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators -recognise and show, using diagrams, equivalent fractions with small denominators -compare and order unit fractions, and fractions with the same denominators -add and subtract fractions with the same denominator within one whole [for example 5/7 + 1/7 = 6/7	-count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten. -recognise and show, using diagrams, families of common equivalent fractions -add and subtract fractions with the same denominator -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 -recognise and write decimal equivalents of any number of tenths or hundredths -recognise and write decimal equivalents to ¼, ½, ¾	-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, 2/5 + 4/5 = 6/5 or 1 whole and 1/5 -compare and order fractions whose denominators are all multiples of the same number -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 -read and write decimal numbers as fractions [for example, 0.71 = 71/100	-use common factors to simplify fractions; use common multiples to express fractions in the same denomination -compare and order fractions, including fractions > 1 -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 [for example ¼ x ½ = 1/8 -divide proper fractions by whole numbers (for example 1/3 ÷ 2 = 1/6) -identify the value of each digit in numbers given to three decimal places -associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, 3/8]

			-solve problems that involve all of the above	-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 -solve simple measure and money problems involving fractions and decimals to two decimal places	- recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents -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 -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 ½, ¼, 1/5, 2/5, 4/5 and those fractions with a denominator of a multiple of 10 or 25	-recall and use equivalences between simple fractions, decimals and percentages, including in different contexts
Dfe ready to progress criteria			**3F-1** Interpret and write proper fractions to represent 1 or several parts of a whole that is divided into equal parts **3F-2** Find unit fractions of quantities using known division facts	**4F-1** Reason about the location of mixed numbers in the linear number system. **4F-2** Convert mixed numbers to improper fractions and vice versa. **4F-3** Add and subtract improper and mixed	**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.	**6F-1** Recognise when fractions can be simplified, and use common factors to simplify fractions. **6F-2** Express fractions in a common denomination and use this to compare

			(multiplication tables fluency) **3F-3** Reason about the location of any fraction within 1 in the linear number system. **3F-4** Add and subtract fractions with the same denominator, within 1	fractions with the same denominator, including bridging whole numbers.	**5F-3** Recall decimal fraction equivalents for ¼, ½, 1/5 and 1/10) and for multiples of these proper fractions.	fractions that are similar in value. **6F-3** Compare fractions with different denominators, including fractions greater than 1, using reasoning, and choose between reasoning and common denomination as a comparison strategy.
Power Maths unit/s and when taught in school			Textbook 3B Taught in Spring Unit 8: Fractions (1) – lesson 1,3,4 (3F-1) Lessons 2,5,6,7,9 (3F-3) Textbook 3C Taught in Summer Unit 11: Fractions (2) – lesson 5,6, 8 (3F-2) Lessons 1-4 (3F-4)	Textbook 4B Taught in Spring Unit 8: Fractions (1) – lessons 3-4 (4F-1) lessons 5 and 6 (4F-2) Unit 9: Fractions (2) lessons 1-6 (4F-3)	Textbook 5A Taught in Autumn Unit 5: Fractions (1) lessons 1-3 (5F-2) Textbook 5B Taught in Spring Unit 8: Fractions (3) lessons 5-6 (5F-1) Unit 9: Decimals & Percentages – lessons 3 and 5 (5NF-3)	Textbook 6A Taught in Autumn Unit 4: Fractions (1) – lessons 1 and 2 (6F-1) Lesson 3 – (6F-2) Lesson 3 (6F-3)
Other resources to aid teaching	-Daily Fluent in 5 tasks -White Rose- summer 2 -NCETM pages 19-21 https://www.ncetm.org.uk/media/qjpctp24/mastery_assessment_y1.pdf	-Daily Fluent in 5 tasks -White Rose- summer 1 -NCETM pages 19-22 https://www.ncetm.org.uk/media/dnobtk14/mastery_assessment_yr2.pdf	-Daily Fluent in 5 tasks -White Rose- Spring 3, Summer 1, -NCETM pages 19 – 21 https://www.ncetm.org.uk/media/oaqfcvjq/mastery_assessment_y3.pdf	-Daily Fluent in 5 tasks -White Rose- Spring 4, Spring 3, Summer 1 -NCETM pages 18 – 21 https://www.ncetm.org.uk/media/x45na0cs/mastery_assessment_y4.pdf	-Daily Fluent in 5 tasks -White Rose- Autumn 4, Spring 2, Spring 3, Summer 3 -NCETM pages 17 – 20 https://www.ncetm.org.uk/media/lp0o2lgv/mastery_assessment_y5.pdf	-Daily Fluent in 5 tasks -White Rose- Autumn 3, Autumn 4, Spring 3, Spring 4 -NCETM pages 18 – 22 https://www.ncetm.org.uk/media/uitj1x5g/mastery_assessment_y6.pdf

Links to further activities to aid teaching:
White Rose materials link: https://whiterosemaths.co m/resources?year=year-1-new
NCETM materials link: https://www.ncetm.org.uk/classroom-resources/exemplification-of-ready-to-progress-criteria/
NCETM activities link: https://www.ncetm.org.uk/classroom-resources/assessment-materials-primary/
NRICH - **PRIMARY CURRICULUM MAP FOR ALL TOPICS**
https://docs.google.com/spreadsheets/d/1bIrdv1M9pKzoKrHeyxT5rkHbJUIJJWjYug2k4Xe9_es/edit#gid=5

Key: Highlighted objectives above link to the topic of place value taught
Red = recognise and write fractions
Blue = compare fractions
Green = fraction calculations
Orange = solve problems
Purple = Decimals: Recognise, write and compare