

## Fractions, Decimals, Percentages, Ratio and Proportion Year 3 Contents

### Planning grid

#### Starters

FD3S1	<b>Folding a square</b> Investigating ways of folding a square into quarters
FD3S2	<b>Half of a square</b> Investigating ways of shading half of a square
FD3S3	<b>Doubling and halving</b> Finding doubles of whole numbers to 20 and halves of even numbers to 40
FD3S4	<b>Fractions of shapes</b> Identifying unit fractions of shapes
FD3S5	<b>Fractions of amounts</b> Finding unit fractions of amounts of objects
FD3S6	<b>Simple equivalent fractions</b> Using fractions of shapes to identify equivalent fractions
FD3S7	<b>Multiplying and dividing by 4</b> Using doubling and halving to multiply and divide by 4 mentally
FD3S8	<b>Positioning numbers on a number line</b> Identifying the positions of whole numbers on a number line and fractional relationships between them
FD3S9	<b>Identifying numbers on a number line</b> Identifying the numbers one quarter of the way along, three quarters of the way along and at the end of a number line, given the halfway value
FD3S10	<b>Estimating a fraction of an amount</b> Estimating what fraction of a jar is filled
FD3S11	<b>Halves and quarters on a number line</b> Identifying the positions of mixed numbers on a number line

#### Lessons

FD3L1	<b>Fractions in context</b> Identifying unit fractions of shapes and groups in an everyday context
FD3L2	<b>Equal and unequal parts</b> Recognising what is not one half or one quarter
FD3L3	<b>Finding the whole</b> Working out the whole of a quantity given a half or a quarter, or another simple unit fraction
FD3L4	<b>Fractions of a quantity</b> Recognising unit fractions of a quantity and simple fractions that are several parts of a quantity
FD3L5	<b>Fraction walls</b> Describing the lengths of rods using fraction vocabulary
FD3L6	<b>Equal fractions</b> Investigating simple equivalent fractions
FD3L7	<b>Fractions on a number line</b> Ordering fractions on a number line
FD3L8	<b>Estimating a fraction</b> Estimating simple fractions of shapes and quantities
FD3L9	<b>Comparing fractions</b> Comparing simple fractions of quantities

## Fractions, Decimals, Percentages, Ratio and Proportion Year 4 Contents

### Planning grid

#### Starters

FD4S1	<b>What is the fraction?</b> Identifying fractional parts of groups and representing objects using mixed numbers
FD4S2	<b>Fractions that are the same</b> Identifying equivalent fractions
FD4S3	<b>Fraction wall</b> Identifying what fraction needs to be added to a given fraction to make a whole
FD4S4	<b>Comparing fractions</b> Comparing fractions to decide whether they are greater or less than one half
FD4S5	<b>Fractions of numbers</b> Using division to find unit fractions of numbers
FD4S6	<b>Finding fraction relationships</b> Finding what fraction a smaller shape is of a larger shape
FD4S7	<b>Tile patterns</b> Making repeating patterns with a given proportion of tiles of one colour
FD4S8	<b>Ordering amounts of money</b> Ordering amounts of money, less than £10, written in decimal notation
FD4S9	<b>Money totals</b> Finding totals of amounts of notes and coins and expressing them in pounds, using decimal notation, and in pence
FD4S10	<b>Lengths as decimals</b> Converting lengths, written in centimetres, to metres using decimal notation
FD4S11	<b>Rounding money amounts</b> Rounding amounts of money, written using decimal notation, to the nearest pound

#### Lessons

FD4L1	<b>Equal fractions</b> Recognising simple fractions that are several parts of a whole, then equivalences, such as $\frac{1}{2}$ , $\frac{2}{4}$ ...
FD4L2	<b>Fractions making 1</b> Identifying pairs of fractions that total one whole
FD4L3	<b>Fraction order</b> Comparing fractions, one of which is a half
FD4L4	<b>Fractions and division</b> Using division to find unit fractions of quantities
FD4L5	<b>Comparing quantities</b> Comparing two shapes, amounts of money, measures... in order to make a statement about what fraction of the larger the smaller is
FD4L6	<b>Proportion</b> Exploring simple ideas of proportion, using language such as 'one in every'
FD4L7	<b>Tenths and decimals</b> Reading, writing and ordering tenths as decimals
FD4L8	<b>Money</b> Using decimal notation to express amounts of money
FD4L9	<b>Reading scales</b> Writing measurements using fractions and decimal fractions

## Fractions, Decimals, Percentages, Ratio and Proportion Year 5 Contents

### Planning grid

#### Starters

FD5S1	<b>Counting in fractions</b> Counting on in fractional steps using improper fractions and mixed numbers
FD5S2	<b>Equivalents snap</b> Recognising equivalent fractions
FD5S3	<b>Fractions wall</b> Representing fractions as a wall of rods
FD5S4	<b>Order fractions</b> Ordering familiar fractions on a number line
FD5S5	<b>What's my number?</b> Finding fractions of numbers by dividing
FD5S6	<b>Inverse relationships with decimals</b> Multiplying decimals to find the missing number in sentences such as '3.5 is one half of ... ?'
FD5S7	<b>Ratio</b> Using multiples to show a ratio pattern
FD5S8	<b>Cube patterns</b> Making ratio patterns with cubes
FD5S9	<b>Tenths and hundredths</b> Multiplying and dividing by 10 and 100
FD5S10	<b>Multiplying decimals</b> Multiplying decimals and recording the result
FD5S11	<b>Adding and subtracting decimals</b> A class game of adding and subtracting decimals
FD5S12	<b>Ordering decimals</b> Putting decimals in order
FD5S13	<b>Count on</b> Putting fractions and decimals on a line
FD5S14	<b>Rounding decimals</b> Changing mixed numbers to decimals, and rounding
FD5S15	<b>Equivalents</b> Finding equivalent fractions and decimals
FD5S16	<b>Fraction measures</b> Finding fractions of measures
FD5S17	<b>Understanding percentages</b> Putting percentages on a number line and finding percentages of whole numbers
FD5S18	<b>Percentages grid</b> A class game of adding percentages
FD5S19	<b>Percentages bingo</b> A class game of bingo using fraction, decimal and percentage equivalents

## Lessons

<b>FD5L1</b>	<b>Dividing pizzas</b> Sharing pizzas to demonstrate the relationship between fractions and division
<b>FD5L2</b>	<b>Improper fractions and mixed numbers</b> Finding improper fractions and mixed numbers that are equivalent
<b>FD5L3</b>	<b>Relating fractions to division</b> Relating finding a unit fraction of a number to division
<b>FD5L4</b>	<b>Finding fractions</b> Using known fractions of numbers to work out new fractions, and checking fractions of numbers using division
<b>FD5L5</b>	<b>Using fractions to identify numbers on a number line</b> Using relationships between fractions to calculate fractions of numbers mentally
<b>FD5L6</b>	<b>Describing ratios and proportions</b> Describing and investigating ratios and proportions in repeating patterns
<b>FD5L7</b>	<b>Shopping offers involving ratio</b> Working out information about shopping items when you get one free item for every given number bought
<b>FD5L8</b>	<b>Comparing decimals</b> Using understanding of decimal place value to compare decimals with up to two decimal places
<b>FD5L9</b>	<b>Ordering decimals</b> Counting in hundredths from 0.01 to 5 and comparing decimals with two decimal places
<b>FD5L10</b>	<b>Rounding decimals</b> Positioning decimals with one decimal place on a number line to round them to the nearest whole number
<b>FD5L11</b>	<b>Mixed numbers and decimals</b> Dividing whole numbers by 4 and expressing an answer that is not a whole number as a mixed number and as a decimal
<b>FD5L12</b>	<b>Showing percentages</b> Colouring different percentages of a grid with 100 squares
<b>FD5L13</b>	<b>Percentages and fractions</b> Finding equivalent percentages and fractions
<b>FD5L14</b>	<b>Percentages of amounts</b> Finding 10% of an amount and using this to work out other percentages of the same amount
<b>FD5L15</b>	<b>Percentage reductions</b> Finding simple percentage reductions of prices that are multiples of 10, and using them to calculate new prices

## Fractions, Decimals, Percentages, Ratio and Proportion Year 6 Contents

### Planning grid

#### Starters

FD6S1	<b>Fraction patterns</b> Identifying and continuing patterns of equivalent fractions
FD6S2	<b>Finding factors</b> Identifying factors and common factors of numbers
FD6S3	<b>Ordering fractions</b> Ordering up to five fractions
FD6S4	<b>What's the remainder?</b> Working out remainders when dividing
FD6S5	<b>Finding fractions</b> Finding a unit fraction of a number that equals a given number
FD6S6	<b>What's the fraction?</b> Identifying the fractions of various grids that are coloured
FD6S7	<b>Decimal counting</b> Counting on and back in decimal fraction steps
FD6S8	<b>Sort by rounding</b> Rounding a set of decimals with one or two places to the nearest whole number or tenth
FD6S9	<b>Comparing distances</b> Comparing two distances with up to two decimal places
FD6S10	<b>Zap the digits</b> Using a calculator to change a decimal number to zero, digit by digit
FD6S11	<b>Place value bingo</b> A bingo game involving recognition of the value of each digit in a number with three decimal places
FD6S12	<b>Equivalent pairs</b> Matching pairs of decimal and fraction equivalents in the traditional game of pelmanism
FD6S13	<b>Which is bigger?</b> Comparing pairs of percentages of quantities
FD6S14	<b>Percentage bingo</b> Matching equivalent fractions and percentages in a game of bingo
FD6S15	<b>Parts of quantities</b> Identifying true and false statements about fractions and percentages of units of measure and money
FD6S16	<b>Fraction count</b> Counting on and back in fractions
FD6S17	<b>Decimal positions</b> Ordering decimals with either one or two decimal places or a mixture of both
FD6S18	<b>Showing ratios and proportions</b> Colouring a grid of squares in a given ratio or proportion
FD6S19	<b>Odd one out</b> Identifying which fraction, decimal or percentage out of three is not equivalent to the other two

## Lessons

FD6L1	<b>Fraction relationships</b> Identifying the relationships between fractions, e.g. that $\frac{1}{6}$ is a half of $\frac{1}{3}$
FD6L2	<b>Simplest forms</b> Reducing fractions to simplest forms by cancelling common factors
FD6L3	<b>Ordering fractions</b> Ordering fractions by converting them to fractions with a common denominator
FD6L4	<b>Mixed numbers</b> Converting improper fractions to mixed numbers and vice versa
FD6L5	<b>Fractions of numbers and quantities</b> Calculating fractions of numbers and quantities
FD6L6	<b>Ratio and proportion</b> Investigating ideas of ratio and proportion in different contexts
FD6L7	<b>Tenths, hundredths, thousandths</b> Positioning and identifying numbers with up to three places of decimals on a number line
FD6L8	<b>Rounding decimals</b> Rounding decimals with up to two decimal places to the nearest whole number and to the nearest tenth
FD6L9	<b>Ordering decimals</b> Ordering mixed sets of measures or decimal numbers with up to three decimal places
FD6L10	<b>Decimal calculations</b> Using knowledge of place value to change one number to another in one step and to solve simple problems involving measures
FD6L11	<b>Fraction and decimal equivalences</b> Converting decimals to fractions and mixed numbers and vice versa, using a number line for support
FD6L12	<b>Calculator conversions</b> Using a calculator to convert fractions to their decimal equivalents
FD6L13	<b>Percentages of money</b> Finding simple percentages and using percentages that are known to deduce unknown percentages
FD6L14	<b>Percentages and fractions</b> Converting simple fractions to percentages and vice versa
FD6L15	<b>Percentages, fractions and decimals</b> Finding decimal and fraction equivalents to decimals and solving percentage problems