

Percentage and Proportion: Maths: Year 5: Summer Term, Week 6

	Learning Objective	Overview	Assessment Questions	Resources
Lesson 1	To recognise percentages, understand what they mean, and compare them to equivalent fractions and decimals.	Firstly children will consider, then define, what percentages are, with reference to percentage statistics. After that they will compare percentages and their fraction equivalents and learn how to convert percentages to decimals using place value knowledge.	<ul style="list-style-type: none"> • Can children express percentages as fractions? • Can children compare percentages to equivalent fractions and decimals? • Can children express percentages as decimals? 	<ul style="list-style-type: none"> • Slides • Percentage Activity 1A–1D sheets • Percentage Party!!! board game and instructions (FSD...? activity only)
Lesson 2	To use known and derived facts (and ad hoc methods) to calculate percentages and solve percentage problems.	With reference to pie charts and stacked bar charts, children will read and compare percentages. They will then devise and use ad hoc methods for finding percentages of amounts which are exact multiples of 100. Some children may also use ad hoc methods for finding percentages of 50 and 25. After this, children will solve one- and two-step percentage problems.	<ul style="list-style-type: none"> • Can children read and compare percentages shown using charts and graphs? • Can children devise and explain ad hoc methods for calculating percentages of multiples of 100? • Can children devise and explain ad hoc methods for calculating percentages of common fractions of 100 such as $\frac{1}{2}$, $\frac{1}{4}$ and multiples of $\frac{1}{5}$? 	<ul style="list-style-type: none"> • Slides • Worksheets 2A/2B/2C • Percentage Speed Challenge cards (FSD...? activity only)
Lesson 3	To find and use algorithms for calculating percentages of amounts and converting fractions to percentages.	Children will use doubling, repeated addition or place value knowledge to find percentages of multiples of 100. They will then learn how to use four-cell models to visualise and solve percentage problems, including those where the amounts given must be expressed as a fraction, then converted into a percentage.	<ul style="list-style-type: none"> • Can children express percentages and proportions of amounts as fractions? • Can children use an algorithm to find percentages of amounts? • Can children use an algorithm to express fractions as percentages? 	<ul style="list-style-type: none"> • Slides • Worksheets 3A/3B/3C <p>FSD...? activity only:</p> <ul style="list-style-type: none"> • Challenge Card 3 • Poster paper and/or presentation software
Lesson 4	To find one per cent of any amount using place value knowledge.	Children will practise finding 1% of multiples of 100, then learn how to find 1% of other amounts (e.g. £150) using place value knowledge. Following this they may either practise finding one per cent of two-, three- and four-digit amounts, or find one per cent more or less of amounts found on everyday objects.	<ul style="list-style-type: none"> • Can children explain how 1% of 100 is calculated, and how this can help when finding 1% of other amounts? • Can children use place value knowledge to find one per cent of amounts? • Can children correctly identify amounts which are not 1% of a total amount? 	<ul style="list-style-type: none"> • Slides • Worksheets 4A/4B/4C <p>FSD...? activity only:</p> <ul style="list-style-type: none"> • One Per Cent More or Less instructions • Sticky notes
Lesson 5	To use a two-step algorithm to find percentages and fractions of amounts.	Now they know how to find one per cent of an amount, children will consider ways in which they can easily find two, three or four per cent using repeated addition or doubling. They will write and improve instructions for finding percentages. They may then either practise finding small percentages or explore ways in which spreadsheets and coding languages may be used to automatically calculate percentages.	<ul style="list-style-type: none"> • Can children find one per cent of an amount, including amounts where one per cent is a decimal number with one decimal place? • Can children devise, refine and use a two-step algorithm for finding percentages? • Using their algorithm, can children find two and four per cent of amounts where one per cent is a decimal number with one decimal place? 	<ul style="list-style-type: none"> • Slides • Worksheets 5A/5B/5C <p>FSD...? activity only:</p> <ul style="list-style-type: none"> • Teacher's Notes • Spreadsheet software