

Ratio, Percentages and Proportion: Maths : Year 6 : Summer Term

	Learning Objective	Overview	Assessment Questions	Resources
Lesson 1	To use fractions and percentages to describe parts of a whole.	Children will study a variety of missing number word problems involving calculating parts of a whole expressed as fractions or percentages. They will develop strategies for visualising and solving these problems, as well as learning a method for simplifying fractions.	<ul style="list-style-type: none"> Can children solve missing number problems involving fractions? Can children solve missing number problems involving percentages? Can children identify when ratios may be more appropriate than fractions or percentages when describing related values? 	<ul style="list-style-type: none"> Slides Challenge Rings 1A/1B/1C sheets Challenge Cards 1A/1B/1C Calculators Worksheet 1 (FSD...? activity only) Pony beads (optional) (FSD...? activity only)
Lesson 2	To find and use ratios when reading maps and plans.	Children will consider why ratios with a '1' are helpful, particularly when reading maps or solving problems involving scale. They will also develop methods for calculating distances using maps, including those where the gridlines are different to the scale given.	<ul style="list-style-type: none"> Can children use ratios when reading maps? Can children use ratios when reading detailed, small-scale maps and plans? Can some children draw simple plans according to a given scale? 	<ul style="list-style-type: none"> Slides Worksheets 2A/2B/2C Challenge Card 2 (FSD...? activity only) Big paper, colouring pencils, felts or paints, sticky notes (FSD...? activity only)
Lesson 3	To use ratios and multiplication and division facts to solve proportion problems.	Children will develop strategies for solving ratio problems such as increasing/decreasing the proportions of ingredients in recipes. They will then practise the skills they have learned, either by solving word problems or by calculating ratios during a practical, group activity.	<ul style="list-style-type: none"> Can children use their times tables knowledge to recognise relationships between numbers in ratio scaling problems and suggest ways of solving them? Can children solve one-step scaling problems by finding or recognising common factors? Can some children solve two-step scaling problems involving both dividing and multiplying? 	<ul style="list-style-type: none"> Slides Worksheets 3A/3B/3C Bunting Challenge 3A/3B (FSD...? activity only) Bunting Design 3A/3B/3C/3D (FSD...? activity only) Ribbon/string, scissors, glue (FSD...? activity only)
Lesson 4	To interpret data, and solve problems, by finding percentages.	Children will build on prior learning by comparing, developing and practising strategies for solving tricky percentage problems using mental and written methods. They will apply their knowledge by solving a variety of word problems, or explore ways in which pocket calculators and calculator apps may be used to find 'tricky' percentages of amounts.	<ul style="list-style-type: none"> Can children use a mathematical model to solve missing number problems, including those involving percentages? Can children interpret data given as percentages? Can children interpret percentage readouts on a calculator by rounding and/or approximating? 	<ul style="list-style-type: none"> Slides Percentage Problem cards 4A/4B/4C Challenge Cards 4A/4B/4C Calculating Percentages Fact Sheet (FSD...? activity only) A variety of calculators and calculator apps on desktops, tablets and other devices (FSD...? activity only)
Lesson 5	To solve problems involving fractions, percentages and ratios.	Children will recap various methods for solving missing number problems involving fractions, ratios and percentages. They will then solve a variety of word problems, choosing methods to solve them.	<ul style="list-style-type: none"> Can children select and use an appropriate model to help them visualise and solve a missing number problem? Can children solve trickier missing number problems involving two or more steps to solve them? Can children identify when it may be more appropriate to use a calculator to solve a missing number problem? 	<ul style="list-style-type: none"> Slides Worksheets 5A/5B/5C Calculators Treasure Hunt Cards 5A-5F (FSD...? activity only) Ratio...Master! Certificates (FSD...? activity only) Treasure Hunt Challenge 5 sheet (FSD...? activity only)