

Parts and Percentages: Maths : Year 6 : Spring Term, Week 4

	Learning Objective	Overview	Assessment Questions	Resources
Lesson 1	To use ratios to describe related values and to solve problems.	Children will start to use ratios to solve scaling problems involving related amounts which can be easily visualised or drawn using grids or arrays. They will practise using a model for calculating increases in ratios, then apply what they've learned by solving slightly more complex, but similar, ratio problems.	<ul style="list-style-type: none"> Can children use drawings or resources to help visualise a ratio problem? Can children use mathematical models to help solve ratio problems? Can children use times tables knowledge to help solve ratio problems? 	<ul style="list-style-type: none"> Slides Worksheets 1A/1B/1C Brick Wall Challenge sheet (FSD...? activity only) Lego® or similar resource (FSD...? activity only)
Lesson 2	To select and use appropriate methods for solving problems involving ratios and scaling up.	Children will consider the efficiency of a variety of strategies for visualising ratio problems and learn a logical, efficient process for solving them. Following this, they may either work individually to apply their learning while solving some challenging, but highly differentiated, ratio problems – or undertake a group ratio scaling challenge.	<ul style="list-style-type: none"> Can children evaluate the efficiency of various problem-solving strategies? Can children select and use appropriate methods for solving ratio problems? Can children draw or write to explain and/or prove their ideas regarding a problem? 	<ul style="list-style-type: none"> Slides Worksheets 2A/2B/2C Challenge Cards 2A/2B (FSD...? activity only) Ribbon (FSD...? activity only)
Lesson 3	To select and use appropriate methods for solving problems involving ratios and scaling down.	Starting by looking at ratios of simple patterns on grids, children will consider how the scale of ratios can be decreased. They will then learn about an efficient method for scaling down ratios and practise using this method, either by solving a variety of word problems, or by working together on a group challenge.	<ul style="list-style-type: none"> Can children use division to solve ratio problems involving scaling down? Can children use models to help visualise and solve ratio problems? Can children identify efficient methods for solving ratio problems in a variety of contexts? 	<ul style="list-style-type: none"> Slides Worksheets 3A/3B/3C Challenge Cards 3A-3E (FSD...? activity only) Scales, measuring jugs/cylinders, smoothie ingredients* (FSD...? activity only; *see Challenge Cards for ingredients)
Lesson 4	To solve problems involving the calculation of percentages.	Children will learn and practise making rough drawings of common fractions inside a circle, then use this knowledge to draw estimated pie charts of given sets of percentages. After that, they will learn a simple algorithm for finding the values of percentages, then practise these skills either by interpreting given sets of data, or by playing a percentage value board game.	<ul style="list-style-type: none"> Can children estimate relative sizes of percentages by drawing pie charts? Can children use an algorithm to find percentages of amounts and vice versa? Can children use an efficient process to help understand and solve word problems involving the calculation of percentages? 	<ul style="list-style-type: none"> Slides Worksheets 4A/4B/4C 'Storm The Tower!' game board, cards and instructions (FSD...? activity only)
Lesson 5	To solve problems involving the calculation of percentages and use percentages for comparison of amounts.	Children will apply prior learning as they find values of percentages, then calculate percentage increases and decreases in a variety of word problems involving money and measure. Some children may additionally work together to find and choose discount prices for a range of sale items during a group challenge.	<ul style="list-style-type: none"> Can children estimate relative sizes of percentages by drawing pie charts? Can children use an algorithm to find percentages of amounts and vice versa? Can children use an efficient process to help understand and solve word problems involving the calculation of percentages? 	<ul style="list-style-type: none"> Slides Worksheet 5A/5B Challenge Cards Discount Day Instructions, Price Tags and Items (FSD...? activity only)