

Handling Data: Maths : Year 4 : Summer Term, week 9

	Learning Objective	Overview	Assessment Questions	Resources
Lesson 1	To solve problems using information presented in a variety of tables and graphs.	Children will read and interpret a variety of data shown in bar charts with different scales, including stacked bar charts showing discrete data year-on-year. They will practise rapidly solving problems about data in graphs using familiar mental methods, and devise questions of their own which may be answered using data in given graphs.	<ul style="list-style-type: none"> Can children read data in graphs, including stacked bar charts, with a variety of scales? Can children use mental methods to solve problems about data in graphs? Can children, using appropriate vocabulary, devise their own questions about data in graphs? 	<p>Slides</p> <p>Graphs 1A–1F</p> <p>Question Cards 1A–1C</p> <p>Quiz 1 sheet (FSD...? activity only)</p> <p>Answers 1 sheet (FSD...? activity only)</p>
Lesson 2	To plan and conduct surveys, collecting data which may be presented and interpreted using graphs.	Children will consider and learn about what makes an effective survey question, including thinking about when 'other' or 'nothing' answer choices may be appropriate. They may then either devise a survey according to a given brief or design one to find out about a query of their own.	<ul style="list-style-type: none"> Can children identify features of effective, useful survey questions? Can children suggest questions where having 'nothing' or 'other' answer choices would be appropriate? Can children devise survey questions and collect/compile survey data? 	<p>Slides</p> <p>Example Uniform Questions</p> <p>Worksheets 2A–2C</p> <p>Survey Ideas cards(FSD...? activity only)</p>
Lesson 3	To present discrete data accurately in graphs, using appropriate scales.	Children will identify what is wrong with a 'flawed' bar chart showing common mistakes done when drawing them. They will also develop strategies for selecting and using appropriate scales when drawing bar charts. Children may then either plot given or collected data on bar charts, or find interesting ways of presenting given data using 'graphic' bar charts in the style of newspapers and news websites.	<ul style="list-style-type: none"> Can children identify common mistakes, or misleading design choices, made when creating bar charts? Can children identify features of accurate, helpful bar charts? Can children select appropriate scales when drawing bar charts on squared/graph paper? 	<p>Slides</p> <p>Survey 3 sheet</p> <p>0.5 cm squared paper and 2 mm graph paper</p> <p>Visual Data 3 sheet (FSD...? activity only)</p> <p>Bar Chart Data 3 cards</p>
Lesson 4	To present sets of data with high/large values using bar charts with appropriate scales.	Children are challenged to identify common mistakes and difficulties when plotting data on graphs. They will go on to consider the challenges associated with presenting data sets with high/large values on bar charts at different scales, as well as the advantages of using spreadsheet software. Children may then either draw bar charts showing given data sets, or use spreadsheet software to automatically produce bar charts.	<ul style="list-style-type: none"> Can children identify common, easily made mistakes when plotting data on graphs? Can children select and use appropriate scales when plotting data with high/large values on bar charts? Can children estimate where to draw the tops of bars when their values do not exactly align with gridlines? 	<p>Slides</p> <p>Worksheets 4A–4C</p> <p>1 cm squared paper, 0.5 cm squared paper and 2 mm graph paper</p> <p>Big Number Data 4 (FSD...? activity only)</p> <p>Spreadsheet software (FSD...? activity only)</p>
Lesson 5	To present discrete data showing changes over time using time graphs.	Children will identify ways in which time data may be presented in meaningful ways, then learn how to plot time data on line graphs at different scales and on different types of paper. They may then either plot given sets of data or collect and plot their own data, either on paper or using spreadsheet software.	<ul style="list-style-type: none"> Can children suggest reasons why line graphs are appropriate for showing data with changes over time? Can children select and use appropriate scales for line graphs showing time data? Can children draw, read and interpret time graphs? 	<p>Slides</p> <p>Worksheets 5A–5C</p> <p>0.5 cm squared paper and 2 mm graph paper</p> <p>Sticky notes</p> <p>Time Activities 5 (FSD...? activity only)</p> <p>Thermometers, tape measures, metre rules (FSD...? activity only)</p> <p>Spreadsheet software (optional, FSD...? activity only)</p>