Charts and Graphs: Maths : Year 6 : Summer Term, Week 9

PlanBee

	Learning Objective	Overview	Assessment Questions	Resources
Lesson 1	To interpret and construct line graphs with two variables.	Children will identify and consider differences between discrete and continuous data, and explore why line graphs are preferable for showing continuous data or discrete time data. They will then conduct simple 'fair tests' or play games enabling them to collect data with two variables which may be presented using line graphs.	• Can children identify which types of data are best presented using line graphs? • Can children accurately plot data points for two variables on a line graph? • Can children make statements about two variables shown on a line graph?	• Slides • Heat Loss Experiment 1A/1B/1C • Hot water (from hot tap, or stored in tea urns), thermometers, stopwatches • 0.5mm squared paper and/or 2mm graph paper • Challenge Card 1 (FSD…? activity only) • Tape measures, chalk, beanbags (FSD…? activity only)
Lesson 2	To interpret and construct pie charts.	Children will consider the uses of pie charts as well as how they are well suited for presenting certain types of data. They will also practise accurately drawing pie charts using given sets of data and their corresponding degrees. Children may then either complete tables of survey data with missing values, presenting them using pie charts, or collect and present their own pie chart data.	• Can children explain how pie charts are helpful/unhelpful for showing different types of data? • Can children interpret data presented in pie charts 'at a glance'? • Can children accurately draw pie charts when given the degrees for each proportion in a set of data?	• Slides • Worksheets 2A/2B/2C • Protractors • Challenge Card 2 (FSD…? activity only)
Lesson 3	To accurately construct pie charts using given sets of data and their corresponding angles.	Children will start to learn how proportions of a set of data may be converted to proportions of 360 degrees, enabling them to plot them on pie charts. The learning in this lesson focusses on converting only proportions which are factors (or multiples of factors) of 360. Children may then make pie charts either by completing given sets of data or by collecting and converting their own sets of data.	• Can children interpret data shown using pie charts? • Can children use a mathematical model to convert proportions of whole amounts which are factors of 360 to proportions of 360°? • Can children draw pie charts to show sets of data?	• Slides • Worksheets 3A/3B/3C • Challenge Card 3 (FSD…? activity only)
Lesson 4	To use a multi-step method for converting proportions of amounts, drawing pie charts to show them.	Children will build on prior learning, practising a method for converting any proportion to a proportion of 360 degrees. Using calculators, they will practise this multi-step method which allows them to draw pie charts accurately showing proportions of any size, from any set of data.	• Can children convert multiples of factors of 360 to proportions of 360° using a written method? • Can children use calculators to convert any proportion into a proportion of 360°? • Can children round proportions to the nearest degree before drawing pie charts?	• Slides • Challenge Cards 4A/4B/4C • Converting to Degrees help sheet • Tiddlywinks Target Sheet • Calculators • Sticky notes (FSD…? activity only; optional)
Lesson 5	To use pie charts and line graphs to present data, solve problems or make predictions.	Children will briefly recap prior learning about reading data and making pie charts and line graphs, then apply their learning either by making fact-filled infographics or by completing a charts and graphs 'quiz'.	• Can children interpret line graphs, spotting patterns and predicting trends? • Can children present data in charts and graphs either by hand or using spreadsheet software? • Can children solve problems using charts and graphs?	• Slides • Challenge Card 5A/5B • Spreadsheet software • Quiz 5 (FSD…? activity only)

NB: 'FSD? activity only' refers to the alternative 'Fancy Something Different…?' activity within the lesson plan