

GCSE UNIT SUMMARY: UNIT 3: Drawing and interpreting graphs, tables and charts

3a) Tables, charts and graphs

Unit Description	Taught	Revision Priority
Use suitable data collection techniques (data to be integer and decimal values);		
Design and use data-collection sheets for grouped, discrete and continuous data, use inequalities for grouped data, and introduce \leq and \geq signs; Sort, classify and tabulate data, both discrete and continuous quantitative data, and qualitative data; Extract data from lists and tables;		
Use correct notation for time, 12- and 24-hour clock and work out time taken for a journey from a timetable;		
Construct tables for time-series data;		
Design, complete and use two-way tables for discrete and grouped data;		
Calculate the total frequency from a frequency table;		
Read off frequency values from a table;		
Read off frequency values from a frequency table;		
Find greatest and least values from a frequency table;		
Identify the mode from a frequency table;		
Identify the modal class from a grouped frequency table;		
Plotting coordinates in first quadrant and read graph scales in multiples;		
Produce and interpret: <ul style="list-style-type: none"> • pictograms; • composite bar charts; • dual/comparative bar charts for categorical and ungrouped discrete data; • bar-line charts; • vertical line charts; • line graphs; and line graphs for time-series data; • histograms with equal class intervals; • stem and leaf (including back-to-back); 		
Calculate total population from a bar chart or table;		
Find greatest and least values from a bar chart or table;		
Find the mode from a stem and leaf diagram;		
Identify the mode from a bar chart;		
Recognise simple patterns, characteristic and relationships in bar charts and line graphs;		
Interpret and discuss any data.		

3b) Pie Charts

Unit Description	Taught	Revision Priority
Interpret tables; represent data in tables and charts;		
Know which charts to use for different types of data sets;		
Draw circles and arcs to a given radius;		
Know there are 360 degrees in a full turn, 180 degrees in a half turn, and 90 degrees in a quarter turn;		
Measure and draw angles, to the nearest degree; Construct pie charts for categorical data and discrete/continuous numerical data;		
Interpret simple pie charts using simple fractions and percentages; $\frac{1}{2}$, $\frac{1}{4}$ and multiples of 10% sections;		
From a pie chart find the mode; and the total frequency;		
Understand that the frequency represented by corresponding sectors in two pie charts is dependent upon the total populations represented by each of the pie charts.		

3c) Scatter graphs

Unit Description	Taught	Revision Priority
Draw scatter graphs; and interpret points on a scatter graph;		
Identify outliers and ignore them on scatter graphs;		
Draw the line of best fit on a scatter diagram by eye, and understand what it represents;		
Use the line of best fit make predictions; interpolate and extrapolate apparent trends whilst knowing the dangers of so doing;		
Distinguish between positive, negative and no correlation using lines of best fit;		
Use a line of best fit to predict values of a variable given values of the other variable;		
Interpret scatter graphs in terms of the relationship between two variables;		
Interpret correlation in terms of the problem;		
Understand that correlation does not imply causality;		
State how reliable their predictions are, i.e. not reliable if extrapolated.		