Lode Heath School

Mathematics Department

**Year 8 Foundation
Summer Term**

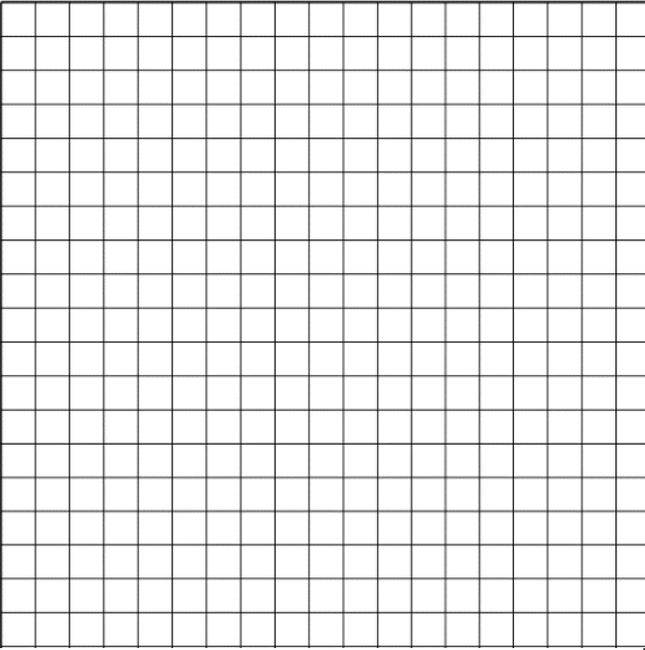| Assignment Title	Unit 9: Statistics, graphs and charts	Date set	Summer 1

Summary of Unit 9	Key Words
Be able to draw pie charts. Display and interpret data and two way tables. Calculate averages.	Interpret, mode, mean, median, range, key, frequency, sum, correlation, causation, bias, misleading, compare.

Prior Knowledge

Draw a bar chart for the amount of rainfall in each month over the first six months of the year (remember your labels):

Month	Jan	Feb	Mar	Apr	May	Jun
Rainfall (mm)	45	43	41	35	27	8

	LEARNING JOURNEY
	9.1 Pie charts *(GCSE Statistics)* Interpret simple pie charts. Calculate angles and draw pie charts.
	9.2 Using tables *(GCSE Statistics)* Drawing and interpreting two-way tables. Calculating the mean from a simple frequency table. Tallying data into a grouped frequency table, designing a grouped frequency table, using a ≤ x < b notation, finding modal class and estimating range.
	9.3 Stem and leaf diagrams *(GCSE Statistics)* Drawing and interpreting stem and leaf diagrams with different stem values. Finding mode, median and range from stem and leaf diagrams, and comparing them for different data sets.
	9.4 Comparing data *(GCSE Statistics)* Compare data using averages and range, including mean calculated from frequency table. Compare data using the shape of a line graph or pie chart. Draw line graphs to compare sets of data. Decide on the most appropriate average to use.
	9.5 Scatter graphs *(GCSE Statistics)* Draw scatter graphs. Describe types of correlation. Draw a line of best fit by eye on a scatter graph.
	9.6 FINANCE: Misleading graphs Identify graphs and charts that are misleading because of the scales used and missing axis labels, mainly in financial contexts.

Assignment Title	Unit 10: Straight-line graphs	Date set	Summer 2

Summary of Unit 10	Key Words
Plot straight line graphs using a variety of methods. Calculate gradients of a graph. Using direct proportion.	Direct proportion, Gradients, Plot, Gradient, Equation, Linear function, Midpoint.

Prior Knowledge
1. Find the value of $2x+3$ when x =4   2. Describe how you would plot these plot these coordinates (3,2)   (-2 4)   3. Simplify this ratio 28:14   4. What number is halfway between 8 and 14?

LEARNING JOURNEY

	Task Description

	10.1 Direct proportion on graphs
	    Recognising when values are in direct proportion.
	    Plotting graphs and reading values to solve problems.

	10.2 Gradients *(GCSE Statistics)* Plot a straight-line graph and work out its gradient.

	10.3 Equations of straight lines *(GCSE Statistics)*
	    Plot the graphs of linear functions.
	    Find midpoints of line segments.
	    Write the equations of straight line graphs in the form y = mx + c

	10.4 STEM: Direct proportion problems
	    Identify and describe practical examples of direct proportion.
	    Solve problems involving direct proportion with or without a graph.