Lode Heath School

Mathematics Department

**Year 9 Higher
Spring Term**

Assignment Title	Unit 3: Interpreting and representing data	Date set	Spring 1

Summary of Unit 3	Key Words
Display data in several different ways. Interpret the graphs to help analyse the data.	Mean, median, mode, range, average, discrete, continuous, qualitative, quantitative, data, scatter graph, line of best fit, correlation, positive, negative, sample, population, stem and leaf, frequency, table, sort, pie chart, estimate.

Prior Knowledge:

1) Find the mean, median and mode of:

     a) 0, 1, 1, 3, 5

     b) 5, 0, 1, 6, 5, 4, 1

2) What is the exact middle of:

    a)　4 and 10　　　　　　　b) 11 and 20　　　　　　　c) 4.5 and 10.5

LEARNING JOURNEY

Level	Task Description
4-5	**3.1 Statistical diagrams 1** *(GCSE Statistics)* 　　Construct and use back-to-back stem and leaf diagrams. 　　Construct and use frequency polygons and pie charts.
4	**3.2 Time series** *(GCSE Statistics)* 　　Plot and interpret time series graphs. 　　Use trends to predict what might happen in the future.
4-5	**3.3 Scatter graphs** *(GCSE Statistics)* 　　Plot and interpret scatter graphs. 　　Determine whether or not there is a linear relationship between two variables.
4	**3.4 Line of best fit** *(GCSE Statistics)* 　　Draw a line of best fit on a scatter graph. 　　Use the line of best fit to predict values.
4-5	**3.5 Averages and range** *(GCSE Statistics)* 　　Decide which average is best for a set of data. 　　Estimate the mean and range from a grouped frequency table. 　　Find the modal class and the group containing the median.
4-5	**3.6 Statistical diagrams 2** *(GCSE Statistics)* 　　Construct and use two-way tables. 　　Choose appropriate diagrams to display data. 　　Recognise misleading graphs.

Assignment Title	Unit 4: Fractions, Ratio and Percentages	Date set	Spring 2

Summary of Unit 4	Key Words
Calculate using fractions. Use percentages to work out increases and decreases of amounts. Use ratio and proportion to solve problems.	Addition, subtraction, multiplication, division, fractions, mixed, improper, recurring, reciprocal, integer, decimal, termination, percentage, VAT, increase, decrease, multiplier, profit, loss, ratio, proportion, share, parts

Prior Knowledge:

1) Simplify 15:25

2) Find the common multiple of 5 and 6

3) Change $\dfrac{12}{7}$ into a mixed number

4) Covert $3\dfrac{3}{5}$ into an improper fraction

5) Find   a) 10% of 50   b) 15% of 420   c) 60% of 80   d) 95% of 320

LEARNING JOURNEY

Level	Task Description
3-5	**4.1 Fractions** Add, subtract, multiply and divide fractions and mixed numbers. Find the reciprocal of an integer, decimal or fraction.
4-5	**4.2 Ratios** Write ratios in the form 1 : n or n : 1. Compare ratios. Find quantities using ratios. Solve problems involving ratios.
4-5	**4.3 Ratio and proportion** Convert between currencies and measures. Recognise and use direct proportion. Solve problems involving ratios and proportion.
4-6	**4.4 Percentages** Work out percentage increases and decreases. Solve real-life problems involving percentages. Calculate reverse percentages
4-5	**4.5 Fractions, decimals and percentages** Convert between fractions, decimals and percentages. Solve simple equations.

| Assignment Title | Unit 5: Angles and trigonometry | Date set | Summer 1 |