Summer Learning Journey for Maths
Year 10H Unit 7 – Further Statistics

How does this unit link to prior learning?

- Discrete and continuous data
- Averages
- Inequalities notation
- Multiplying fractions and integers

Prior Knowledge Check

1) What is the difference between discrete and continuous data? Give examples of each.

2) What numbers are represented in these inequalities?

a) $3 < x < 10$ b) $-2 \leq x < 1$

3) Calculate the following:

a) $\frac{2}{3} \times 4$ b) $\frac{7}{8} \times 3$ c) $\frac{5}{9} \times 6$

What will you be learning about?

- Work with data to produce and interpret cumulative frequency graphs, box plots and histogram

We will develop our learning each week by focusing on:

	RAG		RAG
1. Sampling • Understand how to take a simple random sample. • Understand how to take a stratified sample.		**2. Cumulative frequency** • Draw and interpret cumulative frequency tables and diagrams. • Work out the median, quartiles and interquartile range from a cumulative frequency diagram.	
3. Box Plots. • Draw and interpret box plots, understanding the relevance of each part.		**4. Stem and leaf diagrams** • Find the quartiles and the interquartile range from stem-and-leaf diagrams.	
5. Drawing histograms • Understand frequency density. • Draw histograms.		**6. Interpreting histograms** • Interpret histograms.	

7. Comparing and describing populations • Compare two sets of data using median and interquartile range.		**8. Revision Lesson** • Select topics you feel the class need to revise. • Classroom based or Mathswatch. • problems involving direct proportion	
9. Assessment Lesson (non-calculator) • Do 10-minute top up and go through answers together, students self-assess. • Open book assessment done in silence. Draw and use tree diagrams without replacement.		**10. Feedback Lesson** • Student to highlight their traffic light sheet. • Teacher to go through test and students to self-assess in green. Students to complete the NOW section of the WOW-HOW-NOW sheet.	

Key Vocabulary

Sample	Population	Frequency	Frequency density	Quartiles	Median	Cumulative

How will this help you in the future?

Further statistics is useful in adult life because it helps people collect, analyse, and interpret data to make reliable decisions. Adults use statistics to understand information such as survey results, medical studies, economic reports, and news claims. It helps people identify trends, measure reliability, and judge whether results are meaningful or due to chance. Understanding statistics allows adults to think critically about data, avoid being misled by graphs or averages, and make evidence-based choices in everyday life.

Many jobs rely on further statistics. Statisticians and data analysts use it to model data and draw conclusions. Scientists and researchers apply statistics to design experiments and test hypotheses. Medical professionals use statistical evidence to evaluate treatments and public health risks. Economists, financial analysts, and business managers use statistics to forecast performance and guide decisions. Careers in psychology, education, sports analysis, and marketing also depend on statistical methods to evaluate behaviour and outcomes. Overall, further statistics is essential for working with data accurately and making informed decisions in many professions.