KS3 Statistics and Probability Progression Grid

By the end of KS3, pupils will be able to:

- Draw, interpret and use bar charts, line graphs and pictograms.
- Find and use the mean, mode, median and range to solve problems.
- Compare distributions using averages and the range.
- Construct and interpret pie charts.
- Identify misleading graphs.
- Design and criticise questionnaires.
- Read and interpret grouped and ungrouped frequency tables.
- Find the mean from grouped and ungrouped frequency tables.
- Identify and represent discrete and continuous data.
- Draw and interpret scatter graphs.
- Understand and describe linear correlation, and identify non-linear relationships.
- Draw and use lines of best fit.
- Use the language of probability and understand that the sum of probabilities of all possible outcomes is 1.
- Use the probability scale.
- Generate and use sample spaces to find probabilities.
- Interpret and create Venn diagrams, and use these to find probabilities.
- Solve problems and find probabilities using frequency trees.
- Represent data and find probabilities using two-way tables.
- Use the product rule for finding the total number of possible outcomes.
- Compare experimental and theoretical probability.

	Statistics - Represent and Interpret Data: Acquire and Apply	**Statistics - Statistical Measures: Acquire and Apply**	**Statistics - Bivariate Data: Acquire and Apply**	**Probability: Acquire and Apply**
Year 9 Greater Depth	Can confidently and consistently apply the skills and knowledge of representing and interpreting data to complex and challenging problem solving contexts in mathematics, in combination with other related mathematical concepts.	Can confidently and consistently apply statistical measures to complex and challenging problem solving contexts in mathematics, in combination with other related mathematical concepts.	Can confidently and consistently apply the skills and knowledge of bivariate data to complex and challenging problem solving contexts in mathematics, in combination with other related mathematical concepts.	Can interpret probability tree diagrams. Can use probability tree diagrams to solve ‘without replacement’ problems.
Year 9 Expected Year 8 Greater Depth	Can confidently apply the skills and knowledge of representing and interpreting data to a range of problem solving contexts in mathematics.	Can find the mean from an ungrouped frequency table. Can find the mean from a grouped frequency table.	Can confidently apply the skills and knowledge of bivariate data to a range of problem solving contexts in mathematics.	Can use the product rule for finding the total number of possible outcomes. Can compare experimental and theoretical probability. Can understand and use relative frequency, including convergence. Can use frequency tree diagrams to find probabilities.
Year 8 Expected Year 7 Greater Depth	Can recognise different types of data. Can read and interpret ungrouped frequency tables. Can read and interpret grouped frequency tables. Can represent data in two-way tables. Can draw, interpret and solve problems with pictograms. Can draw and interpret line graphs. Can draw and interpret multiple bar charts. Can identify misleading graphs. Can design and criticise questionnaires. Can represent grouped discrete data. Can represent continuous data grouped into equal classes.	Can understand mean, mode and median, and choose the most appropriate average. Can identify outliers. Can compare distributions using averages and the range.	Can draw and interpret scatter graphs. Can understand and describe linear correlation. Can draw and use lines of best fit. Can identify non-linear relationships.	Can construct sample spaces for one or more events. Can find probabilities from a sample space. Can find probabilities from two-way tables. Can find probabilities from Venn diagrams. Can understand and use the complement of a set.
Year 7 Expected	Can solve problems with line charts and bar charts. Can solve problems with frequency trees. Can interpret pie charts using a protractor. Can draw pie charts.	Can find the range of a set of numbers. Can find the mean of a set of numbers. Can solve problems using the mean.		Can use the language of probability. Can calculate the probability of a single event. Can use the probability scale. Can understand that the sum of probabilities of all possible outcomes is 1.

				Can generate sample spaces for single events. Can identify and represent sets. Can interpret and create Venn diagrams. Can understand and use the intersection and union of sets.