TBSHS Year 7 Mathematics – Summer Term

Progression Pathway	Content and Concepts (depth of understanding and application)	Skills Development
7 – 9	Pupils working on this path way will have shown they are able to complete the prior skills and are expected to be able to: • Design and use two-way tables for grouped and discrete data • Interpret, analyse and compare the distributions of data sets from univariate empirical distributions through appropriate graphical representation involving discrete, continuous and grouped data • Interpret, analyse and compare the distributions of data sets from univariate empirical distributions through appropriate measures of central tendency (median, mean, mode and modal class) and spread (range, including consideration of outliers) • Apply statistics to describe a population • Know correlation does not indicate causation; interpolate and extrapolate apparent trends whilst knowing the dangers of so doing • Interpret, analyse and compare the distributions of data sets from univariate empirical distributions through appropriate measures of central tendency including quartiles and inter-quartile range • Infer properties of populations or distributions from a sample, whilst knowing the limitations of sampling • Compare and convert between different representations	Pupils use developed knowledge with confidence and skill, combined with careful planning, to ensure accurate working with fully justified answers. They are able to confidently assess and adapt different methods to solve more challenging problems. Pupils consider the significance of errors in methods, and working out, and actively try to minimise these. They are able to confidently self-assess all work and propose solutions to solve any errors identified.
6 – 8	Pupils working on this path way will have shown they are able to complete the prior skills and are expected to be able to: • Plot and interpret box and whisker plots • Compare and comment on two sets of data using their median • Use and interpret frequency polygons • Draw estimated lines of best fit; make predictions	Pupils use developed knowledge with confidence and skill, combined with careful planning, to ensure accurate working with fully justified answers. They are able to confidently assess and adapt different methods to solve more challenging problems. When solving problems pupils consider the significance of errors in their methods, and working out, and actively try to minimise these. They are able to confidently self-assess all work and propose solutions to solve any errors identified.
5 – 7	Pupils working on this path way will have shown they are able to complete the prior skills and are expected to be able to: • Interpret and construct pie charts and line graphs and use these to solve problems • Interpret two-way tables • Draw scatter diagrams and understand correlation • Interpret, and comment on, data using its correlation • Construct and accurately analyse pie charts • Construct and interpret frequency diagrams	Pupils are able to work independently on topics involving multi-step approaches. They can confidently identify errors in their own work, and that of peers, and suggest a possible solution to improve. They are able to link some steps in methods to wider theories.
4 – 6	Pupils working on this path way will have shown they are able to complete the prior skills and are expected to be able to: • Solve comparison, sum and difference problems using information presented in a line graph • Complete, read and interpret information in graphs and tables, including timetables • Compare distributions using the range and an average	Takes independent responsibility for working through problems. Is able to recall and explain how basic steps combine to solve problems. Still requires some support, on occasion, and can reflect to identify some of their own errors.
3 – 5	Pupils working on this path way will have shown they are able to complete the prior skills and are expected to be able to: • Collect and group discrete and continuous data • Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs • Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs • Calculate mean, median, mode and range from raw data	Pupils can solve problems as part of a group and complete multi-stage problems. They still require some scaffolding to support their understanding and application of core methods. They are able to identify some possible errors in their work and possible challenges.
2 – 4	Pupils working on this path way will have shown they are able to complete the prior skills and are expected to be able to: • Interpret and present data using bar charts, pictograms and tables • Construct pictograms, where the symbols represents a group of units, to communicate information they have gathered, and they interpret information to them in this form	Pupils can solve problems when the steps are clearly broken down into their core components and explained in full to them with additional scaffolding. They are able to complete simple tasks but often require support to link methods and theories to practical questions.

1 – 3	Pupils working on this path way will have shown they are able to complete the prior skills and are expected to be able to: • Sort and classify simple data using one or more criterion • Interpret and construct tally charts, block diagrams and simple tables • Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs	Pupils can understand basic concepts that are the foundation to simple methods. They are starting to work independently or following written instructions. They still need significant support and scaffolding to complete multi-stage techniques and problem solving.