INTENT
The ambitious curriculum in Mathematics will provide students with opportunities to develop skills linked to numerical thinking, as well as an awareness of the application of numerical, geometric and abstract algebraic

Bilton School Planning for Progress over Time
Programme of Study

The bigger picture:
We look to develop the following skills in our mathematicians:
FLUENCY • Quick and accurate recall of key facts • Knowledge/selection of appropriate techniques/strategies.
REASONING • Applying logical thinking to a situation to derive the correct problem solving strategy • The bridge between fluency and problem solving.
PROBLEM SOLVING • Finding a way to apply knowledge and skills to answer unfamiliar types of problems.

This skill sets allows our learners to flourish with the skills needed to function in an ever evolving world.

IMPLEMENTATION

Higher pt.1	1	2	3	4	5	6	7	8	9	10	14
Topic	Calculations 1	Expressions	Angles and polygons	Handling data 1	Fractions, decimals and %	Formulae and functions	Working in 2D	Probability	Measures and accuracy	Equations and inequalities	Graphs 1
Progress and assessment	End of topic assessments completed using end points as the assessment criteria.										
Homework	Set on Classcharts and will re-enforce the work completed in class.										
Literacy (including reading)	Key words issued at the start if every topic. 'Two for Two' and 'Three for Three' shared with students. Problem solving questions integrated into lessons.										
Social, Moral, Spiritual and Cultural Development	To analyse and represent data. To use a calculator efficiently and understand the errors introduced by rounding. To understand bearings and use scales. To solve problems involving proportion (e.g. Recipes, enlargements). To draw plans and elevations of 3d shapes and find surface area and volume. To solve growth and decay problems such as calculating interest for saving and spending.										
British Values and Cultural Capital	Use MWB in classrooms to develop independence, self-esteem and build confidence. Within lessons, respect is encouraged and anything other than this is challenged. Mistakes are welcomed and used as discussion points to address misconceptions. A variety of approaches to solving problems are taught and discussed. Students are encouraged to develop resillience (linked to developing life long learners). Students are given a choice of tasks in lessons (red, amber, green/bronze, silver, gold) often linked to their levels of learning. E-safety is promoted through blended learning opportunities (MathsWatch)										
End Points	To know place value and round to dp and sf	To simplify expressions	To know and use angle facts	To know types of sampling including random and stratified	To find fractions and percentages of amounts	To substitute into expressions and formulae	To measure lengths and angles including scale drawings and bearings	To calculate probability from experiments	To round to sf and use estimations	To solve linear equations including brackets, fractions and unknown on both sides	To find and use equation of a straight line
	To add and subtract negatives and decimals and use BIDMAS	To know the laws of indices	To know and use angles on parallel lines	To organise data and collect data	To calculations four operations with fractions	To change the subject of a formulae	To find area of a 2D shape	To calculate theoretical probability	To use calculator methods	To solve quadratic equations by factorising	To plot linear and quadratic functions
	To multiply and divide negatives and decimals	To expand and factorise single brackets	To know and use angle facts of triangles and quadrilaterals	To represent data in bar charts and pie charts	To convert between fractions, decimals and percentages	To use functions including inverse and composite	To carry out and identify transformations	To identify mutually exclusive events	To convert between units of measure	To solve quadratic equations using quadratic formula	To be able to identify properties of quadratic functions including roots and turning points
		To simplify algebraic fractions	To prove congruence and similarity	To find averages and spread from a list and frequency table	To convert recurring decimals to fractions	To understand equivalences in algebra	To enlarge shapes including negative SF		To use compound measures	To solve quadratice equations by completing the square	To use velocity-time graphs to find acceleration and distance (Kinematic graphs)
		To do four operations with algebraic fractions	To find polygon angles	To draw scatter graphs and lines of best fit		To expand double and triple brackets	To combine transformations		To find bounds of accuracy	To solve simultaneous linear and quadratic equations algebraically and graphically	
				To draw and use cumulative frequency polygons		To factorise quadratics				To use iteration to find approximate solutions	
				To draw and use box plots						To solve linear and quadratic Inequalities	
				To compare data sets						To identify regions from inequality graphs	