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.2	12	13	15	16	17	18	19	11	20	21	22
Topic	Ratio and proportion	Factors, powers and roots	Working in 3D	Handling data 2	Calculations 2	Graphs 2	Pythagoras and trigonometry	Circles and constructions	Combined Events (Probability)	Sequences	Units and proportionality
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 (eg. 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 lifelong 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 represent amounts using proportion	To find factors and multiples, HCF, LCM.	To know properties of 3D shapes including nets, to draw plans and elevations	To use frequency diagrams	To calculating with roots and indices	To plot cubic and reciprocal functions	To know and use Pythagoras' theorem including in 3d	To find circumference and area of a circle	To identify sets	To find nth term of linear sequences	To use compound measures
	To share in ratio, simplify ratio and use overlapping ratio and scales	To use powers and roots	To find volume of a prism	Averages and spread 2	To do exact calculations	To plot exponential and trigonometric functions	To know and use SOHCAHTOA including in 3d	To find length of arc and area of a sector	To use possibility spaces	To find nth term of quadratic sequences	To convert between units
	To find %, increase & decrease, percentage change & reverse percentages	To manipulate surds including rationalising	To find volume and surface area of 3d shapes	To draw and compare box plots and cumulative frequency graphs	To use standard form	To interpret real-life graphs	To know and use Sine and Cosine rules	To know and apply circle theorems	To draw and use tree diagrams with and without replacement	To recognise special sequences	To use direct and inverse proportion
				To draw and interpret scatter graphs and correlation		To find gradients and areas under graphs	To use Vectors	To perform standard constructions and use to solve loci problems	To use conditional probability		To find rates of change
				To draw and interpret time series		To know and use equation of a circle					To solve growth and decay problems