Maths — Key Stage 3 Curriculum Plan — Year 9

Department Information:
Students have 8 one-hour lessons per fortnight. All students follow the National Curriculum which is supported by differentiated textbooks and resources to ensure students are challenged and supported appropriately. Students are assessed regularly and time in class is given for students to address any areas for development. The school subscribes to Sparx Maths, and this is set weekly for students to engage in independent study outside of lessons.

ACHIEVE in the curriculum:
*Students are encouraged to work **collaboratively** on problems, to show **ambition** through the resources they opt to work on, to show **endurance** to master concepts and to demonstrate **integrity** in their personalised home learning. We strive for students to share in our love of maths and ultimately be **happy** in their lessons.*

Curriculum Aims & Intent:
Students should build on Year 8 Maths and make connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems. They should also apply their mathematical knowledge in science, geography, computing and other subjects.
The course content covers:
Number,
Algebra,
Ratio, proportion and rates of change,
Geometry and measures,
Probability,
Statistics.

Resources:
https://www.pearsonactivelearn.com/app/home - online Maths Progress 3 textbooks (login as a student with school email and password: FurzePlatt1).
https://www.sparxmaths.uk/ - (select school and then click 'Login using Microsoft)
https://login.mymaths.co.uk/login (School username: furze password: reflect. Students are given their own portal login details in September)
https://play.ttrockstars.com/auth/school/student/1586 - Times Tables practice. (Username: MyMaths portal 4 numbers; password: MyMaths portal 3 letters)
www.nrich.org.uk – Enrichment resources for problem solving.
https://ukmt.org.uk/intermediate-challenges/intermediate-mathematical-challenge - past papers.

Students should bring to all Maths lessons: Pen, Pencil, Ruler, Eraser, Scientific Calculator (we recommend the Casio fx-83GT CW / fx-85GT CW) and laptops.

How we keep parents informed:
Progress reports are published 4 times per year, in October, December, March and July, with a face-to-face parents' evening in January. GCSE Options Evening is also in January.

How parents can help their child:
Please check that your child regularly completes their personalised SparxMaths home learning, which is set every Monday, and due the following Monday. Encourage them to seek help if they are struggling, but do not answer questions for them as the questions could quickly become too challenging. Please also ensure your child brings the appropriate equipment, including a calculator and laptop, to every maths lesson.

What we study and when:					
Term	**Unit, Topic Or Summary Of Work Covered**	**Knowledge, Understanding & Skills Developed**	**ACHIEVE / Personal Development Focus**	**How The Work Is Assessed**	**Careers Links**
1	Dealing with data	Surveys - Collecting data - Averages - Displaying and analysing data - Presenting and comparing data	All lessons offer opportunities for students to demonstrate our ACHIEVE values.	Unit assessment	News reporting, Sports statistics
	Multiplicative Reasoning	Enlargement - Negative and fractional scale factors - Percentage change - Compound measures - Direct and Inverse proportion		Unit assessment	Engineering, architecture
2	Sequences, inequalities & proportion	nth term or arithmetic sequences - non-linear sequences - Inequalities - Solving equations - Proportion		Cumulative assessment of all content to date.	
	Circles, Pythagoras & prisms	Circumference of a circle - Area of a circle - Pythagoras' Theorem - Prisms & cylinders - Errors and bounds		Unit assessment	Task: Package design – to hold 4 tennis balls
3	Graphs	Linear and non-linear graphs – Simultaneous equations		Unit assessment	
	Number	Number problems and reasoning - Place value & estimating - HCF & LCM - Calculating with powers and roots - Indices - (Surds)		Unit assessment	
4	Algebra	Simplifying expressions – (Substitution) – (Formulae) - Expanding brackets – Factorising – (Sequences)		Unit assessment	
	Interpreting & representing data	Statistical diagrams – (Averages) – (Range)			News reporting, Sports Statistics
5	Fractions, (ratio) & percentages	Fractions – Decimals – (Ratio) - Percentages		Unit assessment	
6	(Angles)	Angles in polygons - Pythagoras' theorem - Trigonometry		Cumulative assessment of all content to date.	Engineering
	(Equations, inequalities and sequences)	Solving equations – inequalities – formulae – nth term			