# Maths

### Subject Leader: Mrs P Leon pleon@taptonschool.co.uk

**Curriculum Intent:** We build confidence with mathematical reasoning which is essential for everybody's future We ensure that all students have the mathematical fluency, reasoning and problem-solving skills to not only excel in assessments, but to fulfil their hopes and dreams in the world beyond We motivate, challenge and inspire a very able cohort, whilst supporting and nurturing students who lack confidence and those that struggle with Mathematics. We deliver a curriculum which allows students to achieve the best they can.

	Core Knowledge	Procedural Knowledge
	Topics:	Students will:
	Guided by the subject content of the KS4	Become fluent in the fundamentals of
	National Curriculum, building on KS3 and	mathematics, through varied and frequent
	preparing for KS5, and the OCR GCSE Maths	practice with increasinaly complex problems
	Syllabus under the headings:	over time, so that they develop conceptual
	Number	understanding and the ability to recall and
		apply knowledge rapidly and accurately
	Ratio proportion and rates of	Reason mathematically by following a line of
	change	enquiny conjecturing relationships and
	Geometry and measures	appendix and developing an argument
	Probability	justification or proof using mathematical
	Statistics	
		Pagson how and why the mathematics works
	Each and of year accompant will examine all of	Solve problems by applying their mathematics
	Each end of year assessment will examine all of	to a variate of routing and paperouting problems
	me neddings above. The exact content of core	To a valiety of routine and nonroutine problems
	curriculum is defined by the schemes of work for	with increasing sophistication, including
	each year group which are based on the UCK	breaking down problems into a series of simpler
	GCSE syliddus.	steps and persevering in seeking solutions.
		Be able to apply their mathematics to solve
	Using Our Number System	proplems which are both abstract and from the
	Accuracy	real world
	Fractions	Be able to apply their mathematical knowledge
	Percentages	in science, geography, computing and other
	Ratio and Proportion	subjects.
	Number properties	Have a willingness to have a go and know that
	Starting Algebra	making mistakes is part of the learning process
	Sequences	Develop mathematical skills through
	Functions and Graphs	independent practice in and out of lesson
	Algebraic methods	Set out mathematics in an ordered and
	Working with Quadratics	structured way, showing all working and take
	Properties of non-linear graphs	pride in their work
	Units and scales	Have a good level of subject oracy and be able
	Properties of snapes	to justity and explain their mathematical
	Measuring shapes	reasoning
		Be able to describe numbers and snapes in
	Iransformations	terms of their properties
	Ihree-dimensional shapes	Use geometric instruments accurately and
	Vectors	effectively
	Statistical Measures	Use a scientific calculator
	Statistical diagrams	Be able to apply proportional reasoning in a
	Collecting Data	range of problems – pie charfs, recipes, value
	<ul> <li>Probability</li> </ul>	for money, rates of change
		understand the importance of algebra to solve
		Plot coordinates and draw graphs
		Recail, apply and manipulate a range of
	<u> </u>	i iormulae ana analyse ana compare data sets
Homework:		

Weekly homework is set using predominantly Hegarty and sometimes Mathswatch, mostly practising the skills learnt that week

Revision tasks are also set as homework to prepare for the 2 main assessments.

In Year 11 there will be a programme of practice exam papers and students will need to do some at home

#### Assessment:

2 main formative assessments in Year 10 assessing the skills taught and the student's ability to apply the skills and knowledge to answering GCSE questions

2 summative assessments including the Trial Exams where students will do a full GCSE in exam conditions in Year 11

Assessment for learning during lessons is key to assessing students informally in every Maths lesson so teaching is tailored to the students.

#### Links to Personal Development:

Mathematical knowledge, skills and their application to problem solving is key and requires resilience and the willingness to make mistakes and learn from them

The curriculum is linked to the real world wherever possible

We make cross curricular links with Science, Technology, Geography, Food etc wherever possible

We support students to get the best grades that they can, so that they have as much career choice as possible

## How is my knowledge developed further at Key Stage Five (Y12 and Y13)?

The study of GCSE Higher Maths will facilitate your access to a number of A Level courses including Maths, Further Maths and Sciences. Foundation GCSE Maths will facilitate the study of Core Maths which supports the study of subjects such as Geography and Psychology.