Year 9 Higher:	**Subject:** Mathematics	**Term 1:**	**Term 2:**	**Term 3:**	**Term 4:**	**Term 5:**	**Term 6:**
Subject Concepts: 	5 Concept areas: 1) Number 2) Algebra 3) Geometry & Measure 4) Statistics & Probability 5) Ratio & Proportion	**Number 1** • Problem solving • Reasoning • LCM, HCF • Indices • Surds • Standard form	**Algebra 2** • Indices • Expand and factorise • Equations • Formulae • Sequences	**Interpreting and Representing Data3** • Statistical Diagrams • Scatter Graphs • Averages and Range **Fractions, Ratio and Percentages 4** • Fractions (Problem solving /STEM on 4 operation) • Decimals • Percentages • Ratio and Proportion	**Angles and Trigonometry 5** • Triangles, quadrilaterals and polygons • Pythagoras • Trigonometry	**Graphs 6** • Linear graphs • Real life Graphs • Quadratic, Reciprocal and Cubic graphs • Rates Of Change • Line Segments	**Area and Volume 7** • Perimeter and Area • Units and Accuracy • Prisms • Circles and Sectors • Cylinders, Spheres, Pyramids and Cones **Transformations and Constructions 8** • All transformations • 3D solids • Bearings and Scale drawings • Constructions and Loci
Personal Skills: 	Leadership	Analyse and apply: seek greater depth of understanding eg ask questions	Analyse and apply: seek greater depth of understanding eg ask questions	Analyse and apply: seek greater depth of understanding eg ask questions	Analyse and apply: seek greater depth of understanding eg ask questions	Analyse and apply: seek greater depth of understanding eg ask questions	Analyse and apply: seek greater depth of understanding eg ask questions
	Organisation	Analyse and apply: record and complete homework by scheduling this into their home time. Organise and bring own equipment	Analyse and apply: record and complete homework by scheduling this into their home time. Organise and bring own equipment	Analyse and apply: record and complete homework by scheduling this into their home time. Organise and bring own equipment	Analyse and apply: record and complete homework by scheduling this into their home time. Organise and bring own equipment	Analyse and apply: record and complete homework by scheduling this into their home time. Organise and bring own equipment	Analyse and apply: record and complete homework by scheduling this into their home time. Organise and bring own equipment
	Resilience	Analyse and apply: mark their own work and then reflect on their own learning.	Analyse and apply: mark their own work and then reflect on their own learning.	Analyse and apply: mark their own work and then reflect on their own learning.	Analyse and apply: mark their own work and then reflect on their own learning.	Analyse and apply: mark their own work and then reflect on their own learning.	Analyse and apply: mark their own work and then reflect on their own learning.
	Initiative	Analyse and apply: share ideas on how to improve whilst helping each other.	Analyse and apply: share ideas on how to improve whilst helping each other.	Analyse and apply: share ideas on how to improve whilst helping each other.	Analyse and apply: share ideas on how to improve whilst helping each other.	Analyse and apply: share ideas on how to improve whilst helping each other.	Analyse and apply: share ideas on how to improve whilst helping each other.
	Communication	Analyse and apply: be able to relate to each other and differentiate where necessary to explain to peers or whole group.	Analyse and apply: be able to relate to each other and differentiate where necessary to explain to peers or whole group.	Analyse and apply: be able to relate to each other and differentiate where necessary to explain to peers or whole group.	Analyse and apply: be able to relate to each other and differentiate where necessary to explain to peers or whole group.	Analyse and apply: be able to relate to each other and differentiate where necessary to explain to peers or whole group.	Analyse and apply: be able to relate to each other and differentiate where necessary to explain to peers or whole group.
Work Skills: 	Creativity	Solving problems in a variety of ways			Shapes in art and nature		Transformations in art & nature
	Collaboration	Learning & reflecting on KS3 together Team problem solving	Team work to solve problems	Working together to solve problems		Working together to solve problems	
	Critical Thinking	Problem Solving – reasoning & thinking about our thinking (metacognition)		Data – reasoning & thinking about our thinking	Problem solving & multi-step problems		Problem solving involving shapes
	Careers Skills	Link to Science	Link to banking	Link to data analysis	Link to architecture	Link to Science	Link to air and sea related careers
Literacy/Numeracy Skills: 	Literacy	New vocabulary linked to new concepts Incidental language based on ability groups Write report on statistics & findings	New vocabulary linked to new concepts Incidental language based on ability groups	New vocabulary linked to new concepts Incidental language based on ability groups	New vocabulary linked to new concepts Incidental language based on ability groups Writing reasoning with correct punctuation & use of mathematical keywords & symbols	New vocabulary linked to new concepts Incidental language based on ability groups	New vocabulary linked to real – life application of Maths Write reports Incidental language based on ability groups
	Numeracy	Number skills Numeracy check-up every Friday Numeracy Ninjas / Maths Box weekly check-up & staff to reflect on reasoning after	Numeracy check-up every Friday Numeracy Ninjas / Maths Box weekly check-up & staff to reflect on reasoning after	Numeracy check-up every Friday Numeracy Ninjas / Maths Box weekly check-up & staff to reflect on reasoning after	Numeracy check-up every Friday Numeracy Ninjas / Maths Box weekly check-up & staff to reflect on reasoning after	Numeracy check-up every Friday Numeracy Ninjas / Maths Box weekly check-up & staff to reflect on reasoning after	Numeracy check-up every Friday Numeracy Ninjas / Maths Box weekly check-up & staff to reflect on reasoning after
Extra-Curricular: 		Homework weekly Monday & Tuesday after school homework & revision support Thursday lunch club	Homework weekly Monday & Tuesday after school homework & revision support Thursday lunch club	Homework weekly Monday & Tuesday after school homework & revision support Thursday lunch club UKMT Intermediate Challenge Science Week – Big Bang Fair Maths House competitions	Homework weekly Monday & Tuesday after school homework & revision support Thursday lunch club	Homework weekly Monday & Tuesday after school homework & revision support Thursday lunch club	Homework weekly Monday & Tuesday after school homework & revision support Thursday lunch club