Maths
Year 10 foundation curriculum map

Year 10	T1	T2	T3	T4	T5	T6
Content / Topic for Term	Number skills Calculations and types of number Basic algebra Properties of shapes and angles	Fractions Decimals Percentages Solving equations and inequalities Linear graphs	Collecting and representing data Pythagoras and Trigonometry Ratio and proportion	Indices and Standard Form Perimeter and Area Volume Circles	Sequences Statistical Measures Probability	Real life graphs and measures Transformations Constructions and loci
Key knowledge for acquisition, recall and application in assessment or exam	• What BIDMAS stands for • Understand directed numbers in context • Place value of a number • Prime numbers up to 100 • Definitions of LCM and HCF • That estimation links to significant figures • Important buttons on a calculator • Define identity, equation, expression and formula • How to identify factors • Basic angle facts • Properties of triangles/quadrilaterals	• Define the term improper and mixed fractions • Basic FDP conversions • Formula for percentage change • How to find a multiplier • Define profit and loss in context • Define simple and compound interest • Steps to solve one and two-step equations • Define integer	• Know the terms discrete, continuous, quantitative and qualitative • Use proportion to compare pie charts • Describe types of correlation • Define mean, median, mode and range • Steps to find the mean from a frequency table • Know Pythagoras' Theorem • Know SOHCAHTOA ratios	• Define SIF • Use a calculator for SIF and interpret the display in SIF • Define a compound shape • Know the formulae for 2D and 3D shapes • Label the parts of a circle • Define and recognise a prism • Know the difference between area/ surface area and volume	• Recognise triangular, square, cube numbers • Recognise different types of sequence • Define mean/ median/ mode and range • Define the midpoint of two points • Difference between relative and experimental probability • Recognise a frequency tree, tree diagram,	• Steps needed to construct an SSS/ASA/SAS triangle • Define the term loci • Recognise types of conversion graph • Imperial and metric units • Formula triangle for S/D/T • Units of measure for length/area/volume • General equation of a line y=mx+c • Four types of transformations and key aspects of each • Describe a vector and how to denote it

	• Formula for interior angles in a polygon • Formula for exterior angles of a polygon • Three rules of bearings	• How to form an inequality and use correct notation • Define and use gradient and intercepts • Define the terms parallel and perpendicular	• Define depression and elevation • Difference between direct and inverse proportion • How to recognise the graphs of direct and inverse proportion	• Formula for density/ mass and volume	sample space and Venn diagram • Define independent, dependent, exhaustive, mutually exclusive events	
Key skills to apply in assessment or exam	• Apply the rules of BIDMAS to a calculation • Solve four operations to directed numbers • Provide an estimate using rounding • Calculate a missing bearing using three rules	• Use a multiplier to solve a percentage calculation • Solve an inequality • Plot a table of values • Find the equations of parallel and perpendicular lines	• Calculate the mean, median, mode and range from a list • Calculate the mean, median, mode and range from a table • Use Pythagoras' Theorem to find a missing side • Use SOHCAHTOA to find a missing side/angle • Read off a conversion graph • Solve a direct or inverse	• Convert between SIF and ordinary numbers • Apply the four rules of operations to SIF • Calculate the area/perimeter/ volume of a 2D/3D shape using the formulae • Use formula triangle for M/D/V	• Find the nth term of a linear sequence • Calculate the mean/median/ mode/ range from a list or table • Calculate the midpoint using averages • Interpret and construct a frequency tree • Use laws of probability to solve a problem • Use Venn diagrams/sample	• Use protractor and compasses to construct triangles • Use protractor and compasses to construct perpendicular bisector/angle bisector/loci • Use gradient/area under a graph • Interpret conversion graphs • Use S/D/T to solve problems • Calculate the rate of change from a distance/time graph

			proportion problem		spaces/frequency trees and tree diagrams to solve a probability problem	• Perform four different transformations and recognise a transformation • Use tracing paper for rotations and reflections • Apply vectors to all four operations and geometrical problems
Title of Knowledge Organiser	Basic number and decimals Properties of polygons	Inequalities Calculating with percentages	Representing data Pythagoras' Theorem Right-angled trigonometry	Indices Standard form Volume	Sequences Summarising fata	Shape transformations Loci and constructions Real life graphs