

## Year 9 Higher Scheme of Work

### 7H Perimeter Area & Volume

Learning Objectives	Sparx Topic Code
Learn to calculate the Perimeter of Shapes	M920, M635, M690, U351, U993
Learn to calculate the Area of Shapes	M390, M635, U993, M610, U945, M269, U970
Learn to calculate the Circumference and Area of a Circle, the area of a sector and the arc length	M169, U604, M231, U950, M430, U373, M280, U221
Learn to calculate the Volume of Shapes	M722, U174, M697, U915, M936, U464, U116, U617, U543
Learn how to identify and describe 3D Shapes	M767, U719, M518, U761, M229, U743, U484, U426
Learn to calculate the Surface Area of shapes	M534, U929, M661, U259, M936, U464, U893, U350, U561
Learn to Identify upper and lower bounds	M730, U657
Learn how to write error intervals for approximated figures and calculations	U587, U301

### 9H Equations and Inequalities

Learning Objectives	Sparx Topic Code
Learn how to solve quadratic equations through factorising	U228, U960
Learn how to solve simple quadratic equations by using inverse operations	M509, U325
Learn how to write quadratic expressions in vertex form	U397
Learn how to solve quadratic equations through completing the square	U589
Learn how to form and solve quadratic equations that arise out of a given context	U150
Learn how to solve simultaneous equations	M852, U760, U757, M658, U137
Learn how to represent an inequality on a number line	M384, U509
Learn how to solve linear inequalities involving positive and negative values for x	M118, M732, U759, U758
Learn how to solve double linear inequalities	U145

### 8H Transformations

Learning Objectives	Sparx Topic Code
Translations	M139, U196
Reflections	M290, U799
Enlargements	M178, U519, U134
Rotations	M910, U696
Describing transformations	M139, U196, M178, U519, U134, M290, U799, M910, U696
Invariance	M880, U799, U696, U134, U766
Combined transformations	M881, U766
Bearings	M260, U525, M416, U107
Constructions	M196, U678, M239, U245, M232, U787, U979
Loci	M253, U820

### 10H Probability

Learning Objectives	Sparx Topic Code
Use the product Rule for counting	U369
Express probability in words and numbers	M655, U803, M941, M938, U408, U510
Calculate the probability of a single event and the probability of an event not happening	M941, M938, U408, U510, M755, U683
Understand what mutually exclusive events are	M755, U683
Calculate the expectation in a simple probability experiment	M206, U166
Calculate experimental probability and relative frequency and be able to test for bias.	M332, U580
Calculate the probability of more than one event	M718, U104
Learn how to calculate the probability of independent events and use of probability trees	M299, U558
Learn how to calculate conditional probability	M572, U729
Learn how to create and use frequency trees	U280
Solve problems involving Venn Diagrams and Set Notation	M829, M419, M834, U476, U748, U296