

# Elements Academy

## Building Block 6



Nurturing inclusive learning communities

# Mathematics

	Higher Content
	Foundation Content

End of year exams!

Revision

Examination

Summer 1 + 2

**Reasoning**  
Multiplicative  
Geometric  
Algebraic

**Geometry**  
Geometry Revision  
Vector Geometry  
Ratio and Vectors  
Similarity and Vectors

**Algebra 3**  
Consolidation of reasoning problems.  
Using Algebra to solve problems in other topic areas  
Transformation of graphs  
Equations of circles  
Algebraic proof

Spring 1 + 2

**Algebra 2**  
Exploring Algebra- Rearranging formula  
Simultaneous equations- graphically  
Simultaneous equations  
Rearranging complex equations  
Further algebraic fractions – with factorising  
Solving simultaneous equations with quadratics

Autumn 1 + 2

**Proportional reasoning**  
Direct and Inverse Proportions  
Forming and solving equations and finding constant of proportionality  
Understanding Proportional graphs

BB  
6b

**Geometry 3**  
Review of Angles  
Introduction to bearings  
Angles in parallel lines and polygons  
Circles, area, circumference and vocabulary.  
Circle theorems, Angles within other topics  
Volume of Sphere, Cone Frustum

Summer 1 + 2

**Statistics**  
Review Data handling cycle  
Collecting Data  
Representing data  
Interpreting Data  
3D Draw and interpret;  
Histograms  
Cumulative Frequency  
Box Plots  
Frequency Diagrams  
Inter Quartile range

**Geometry 2**  
Solving triangles review of Pythagoras  
Introduction to Trigonometry in right angled triangles  
3D Pythagoras and Trigonometry  
Cosine Rule  
Sine Rule

Spring 1 + 2

**Algebra 1**  
Forming and solving equations  
Investigating Quadratic functions  
Expanding single and double brackets  
Factorising and Solving equations  
Solving and rearranging formula and expressions including algebraic fractions  
Solving quadratics- factorising, graph, formulae, completing the square

**Geometry 1**  
Symmetry and Transformations  
Vectors  
Constructions, Loci  
Similarity and Congruency  
Transformations – including enlargement with negative and fractional scale factors  
Combined transformations  
3D similarity and congruency and effects of scale factors on area/ volume.

**Proportional reasoning**  
Real life graphs  
Percentages and changes from graphs and tables  
Rates of change  
Area under a graph

**Number 2**  
HCF LCM  
Venn Diagrams  
Product of Primes

Standard Form  
Calculating with standard form  
Representing Inequalities

Autumn 1 + 2

**Number 1**  
Rounding and Estimation- Including Significant figures  
Money and best buys  
Percentage and Fraction Problems  
Frequency Trees

Maximum and minimum problems  
Limits of accuracy  
Surds  
Reverse Percentages  
Compound Interest

BB  
6a

welcome

# Elements Academy

## Building Blocks 3, 4, 5



The Bigger Picture

Key	Skills
Red	Teamwork
Orange	Communication
Yellow	Self-motivation
Light Green	Self-Awareness
Green	Problem solving
Light Blue	Leadership
Blue	Life skills
Dark Blue	Staying safe

Progression to:

- Building Blocks 6a and 6b

