

AUTUMN TERM

- Retrieval starters throughout the year
- Literacy in Maths used throughout the year- Frayer Modelling
- Introduction to Sparx Maths for home learning
- Number: Understanding Place Value, Decimals, Negative Numbers, Prime Numbers, Highest Common Factor and Lowest Common Multiple
- NRICH investigations throughout the year to gain a deeper understanding
- Introducing the grid method

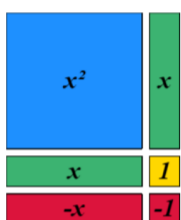
$$83 \times 37$$

	80	3
30		
7		

- Introduction to zero pairs for adding and subtracting negative numbers



- Understanding Algebraic Notation
- Algebra: algebraic notation, simplifying expressions and functions
- Introduction to Algebra Tiles



- Fractions: Ordering fractions, adding and subtracting with different denominators, converting between mixed and improper fractions, algebraic fractions
- KS3 Numeracy/literacy, Halloween murder mystery, Twelve days of Christmas
- Great mathematics: Egyptian numbers and their multiplication system (History)
- Recall, assessment and review

SPRING TERM

- Geometry: Notation and Construction, drawing and measuring angles, identifying different quadrilaterals, geometric construction
- Algebra: Substitution and Solving up to three step equations
- Ratio and Proportion: The introduction of Ratio Tables

	6
9	18

- Applying Ratio Tables to Speed, fractions of an amount and proportional problems
- Measure with ratio tables
- Geometry: Perimeter – Understanding regular, irregular and compound shapes.
- Great mathematics: Number systems through history including binary and hexadecimal
- Careers: Product development cycle (car)
- KS3 Numeracy: Easter maths challenge
- Recall, assessment and review

SUMMER TERM

- Sequences: Linear, Non-Linear, Fibonacci Sequences
- Mathematics in the Library
- Expanding a single bracket using the grid method

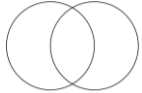
Expand $5(x + 3)$

	x	+3
5		

- Geometry: Area problems with triangles, parallelograms and compound shapes
- Geometry: Understand basic angle properties
- Data: Understand the Data Handling Cycling
- KS3 numeracy activity: Misleading data
- Data: Introduction to Probability
- Great mathematics: Platonic solids (Science)
- Recall, assessment and review

AUTUMN TERM

- Retrieval Starters throughout the year
- Literacy in Maths used throughout the year- Frayer Modelling
- SPARX Maths for home learning
- Understanding Ratio and how it is applied in Maths
- NRICH investigation: Mixing Lemonade Investigation
- Number, Data Handling and Algebra: The Power of Venn



- Geometry: Understanding the Cartesian Plane
- Making links with algebra, graphs and sequences
- NRICH: Squares in a rectangles Poster
- Number: Introduction of inequalities
- Data Handling: Frequency tables
- Great mathematics: Egyptian fractions (History)
- KS3 Numeracy: Christmas challenge
- Recall, assessment and review

SPRING TERM

- Fractions and Percentages
- Algebraic Manipulation with algebra tiles.
- Geometry: Angles in parallel lines and everything 360
- Number: Irrational Numbers
- Pi Day
- NRICH: Circles in Quadrilaterals
- Great mathematicians: Florence Nightingale and her work on polar charts and comparative pie charts. (Geography, history, science and RE)
- Careers: Product development cycle (car)
- KS3 Numeracy: Easter challenge
- Recall, assessment and review

SUMMER TERM

- Geometry: Measure, estimation, compound shapes and angles in regular polygons
- Number: Rules of Indices and Standard form
- NRICH Investigation: Pocket Money
- Data Handling: Probability and averages in tables
- NRICH Investigation: Interactive Spinners
- UKMT Challenge
- Great mathematicians: Alan Turing code breaking (History, IT and Re)
- KS3 Numeracy: Crypto currency.
- Recall, assessment and review

AUTUMN TERM

- Deeper thinking starters using problem solving questions and variety. Full year.
- Number: Indices and standard form calculations.
- Algebra: Expressions, solving equations, formulae and substitution.
- Data: Dealing with data, averages, analysis and comparing.
- Shape and algebra: Multiplicative reasoning, enlargement, percentage change, compound measures and direct/inverse proportion.
- Maths project Foundation: Sun dials.
- Maths project Higher: Speed Cameras.
- Great mathematician: Fibonacci sequences and introduce the golden ratio (History, Art, Design and Science).
- Royal Institute Lecture. How to get lucky. 2019 Pt1.
- KS3 Numeracy. Christmas challenge.
- Recall, assessment and review.

SPRING TERM

- Shape and ratio: Constructions, drawings and using scale.
- Algebra and ratio: Sequences, inequalities, equations and proportion.
- Shape and number: Pythagoras. Perimeter, area and volume of circles and prisms. Errors and bounds.
- Maths project Foundation: Reducing Road Accidents.
- Maths project Higher: You Reckon?
- Great mathematician: Pythagoras, his Pythagorean triples and irrational numbers (History).
- Careers: Product development cycle (car).
- Royal Institute Lecture. How to bend the rules. 2019 Pt2.
- KS3 Numeracy. Easter problem solving.
- Recall, assessment and review.

SUMMER TERM

- Algebra and shape: $y = mx + c$, simultaneous equations, quadratics and other curved graphs.
- Data: Probability, experimental and theoretical. Two way tables and Venn diagrams.
- Shape, number and ratio: Congruence and similarity. Trigonometry finding angles and lengths.
- Maths project Foundation: Save The Kangaroo.
- Maths project Higher: Mission Rainforest.
- Great mathematician: Waclaw Sierpinski's triangles and fractal theory (Geography).
- Royal Institute Lecture. How can we all win? 2019 Pt3.
- KS3 Numeracy. Financial awareness.
- Recall, assessment and review.