	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	**Algebraic Thinking**						**Place Value and Proportion**					
	Sequences		Understand and use algebraic notation		Equality and equivalence		Place value and ordering integers and decimals			Fraction, decimal and percentage equivalence		
Spring	**Applications of Number**						**Directed Number**			**Fractional Thinking**		
	Solving problems with addition & subtraction		Solving problems with multiplication and division			Fractions & percentages of amounts	Four operations with directed number			Addition and subtraction of fractions		
Summer	**Lines and Angles**						**Reasoning with Number**					
	Constructing, measuring and using geometric notation			Developing geometric reasoning			Developing number sense		Sets and probability		Prime numbers and proof	

WRM – Year 7 Autumn Term

Autumn Half Term 1 – Algebraic Thinking

Block 1 – Weeks 1 and 2

Exploring sequences

- Describe and continue sequences in diagram and number forms, both linear and non-linear
- Compare numerical and graphical forms

Block 2 – Weeks 3 and 4

Understanding and using algebraic notation

- Use single function machines and series of two function machines with numbers, bar models and letters
- Use and interpret algebraic notation
- Understand and use inverse operations
- Form and substitute into expressions, including to generate sequences.
- Represent functions graphically

Block 3– Weeks 5 and 6

Equality and equivalence

- Understand equality
- Use fact families
- Form and solve one-step equations
- Understand equivalence of algebraic expressions
- Collect like terms

Notes/Links/Interleaving

- Calculators should be used throughout this unit, building in teaching efficient use of calculators and informal estimation
- All material is this unit is revisited and extended in forthcoming units

Additional Higher Content

This introductory unit is designed to be accessed by all students – exemplification documents will illustrate tasks suitable for students of different levels of prior attainment including challenge for higher attainers.

Autumn Half Term 2 – Place Value and Proportion

Block 4 – Weeks 7 to 9

Place value and ordering

- Recognise and use integer place value up to one billion
- Recognise and use decimal place value to at least hundredths
- Work out intervals and use number lines
- Compare and order numbers
- Use ordered lists to find the range and the median of a set of numbers
- Round numbers to positive powers of ten
- Round numbers to one significant figure

Block 5 – Weeks 10 to 12

Fraction, decimal and percentage equivalence

- Represent tenths and hundredths on diagrams and number lines
- Interchange between fractions, decimals and percentages for multiples of one tenths and one quarter
- Interpret pie charts
- Equivalent fractions
- Convert between other fractions, decimals and percentages

Notes/Links/Interleaving

- Solve equations with fractions, including fractional coefficients
- Consider sequences with fractions

Additional Higher Content

- Explore and use standard index form
- Explore fractions above one
- Convert multiples of one eighth to decimals and percentages

WRM – Year 7 Spring Term

Spring Half Term 1 – Application of Number

Block 1 – Weeks 1 and 2

Addition and Subtraction

- Use mental and formal written methods of addition with integers and decimals, including choosing the most appropriate method
- Solve problems in the context of perimeter, money and frequency trees and tables
- Solve problems in the context of bar charts and line charts

Block 2 – Weeks 3 to 5

Multiplication and division

- Multiply by 10, 100 and 1000, 0.1 and 0.01, and convert metric units
- Use mental and formal written methods of multiplication and division
- Find the HCF and LCM of small numbers
- Evaluate areas of triangles, rectangles and parallelograms
- Find the mean of a set of numbers
- Find simple fractions and percentages of amounts
- Begin to use the order of operations

Block 3 – Week 6

Fractions and percentages of amounts

- Work out simple fractions and percentages of amounts, with and without a calculator

Notes/Links/Interleaving

- Perimeter problems to revisit equations and simplifying
- Tables to include distance charts and simple timetables
- Revisit rounding
- Choosing when to use mental, written or calculator methods
- Order of operations to be revisited with negative numbers

Additional Higher Content

- Explore addition of numbers given in standard form
- Evaluate the area of a trapezium
- Find the HCF and LCM of algebraic expressions
- Find areas involving algebraic expressions
- Use fractions greater than 1

Spring Half Term 2 – Directed Number and Fractional Thinking

Block 4 – Weeks 7 to 9

Directed Number

- Order directed numbers, both in contextualised and abstract situations
- Revisit four operations to include directed number
- Use a calculator with directed number
- Solve two-step equations (with and without a calculator)
- Use the order of operations

Block 5 – Weeks 10 to 12

Adding and subtracting fractions

- Represent tenths and hundredths on diagrams and number lines
- Convert mixed numbers and improper fractions
- Add and subtracting fractions with
  - the same denominator
  - one denominator a multiple of the other
  - different denominators
- Add and subtract fractions and decimals e.g. $\frac{3}{4} + 0.2$

Notes/Links/Interleaving

- Include inequality number lines
- Revisit sequences, substitution and equations

Additional Higher Content

- Negative square roots
- Higher powers

WRM – Year 7 Summer Term

Summer Half Term 1 – Lines and angles

Block 1 – Weeks 1 to 3

Construction and measuring

- Understand and use letting and labelling notation for lines and angles
- Draw and measure lines and angles accurately
- Classify angles
- Identify and draw parallel and perpendicular lines
- Recognise types of triangle, quadrilateral and other polygons
- Construct triangles given SSS, SAS, ASA
- Draw and interpret pie charts

Block 2 – Weeks 4 to 6

Geometric Reasoning

- Calculate and use angles at a point, angles on a straight line and vertically opposite angles
- Calculate missing angles in triangles and quadrilaterals

Notes/Links/Interleaving

- Revisit simplifying and perimeter in e.g. polygons
- Form and solve equations in geometric settings
- Revisit mental and formal methods of addition and subtraction, including with decimals

Additional Higher Content

- Understand and use parallel lines rules
- Understand and use the sum of angles in any polygon
- Derive simple proofs using angles rules

Summer Half Term 2 – Reasoning with number

Block 3 – Weeks 7 and 8

Developing Number Sense

- Mental arithmetic strategies
- Use known facts to derive other facts,
- Evaluate an algebraic expression given a related fact
- Use estimation

Block 4 – Weeks 9 and 10

Sets and Probability

- Understand and use set notation
- Draw and interpret Venn diagrams
- Understand and use the language of probability
- Calculate the probability of a single event
- Use the sum of probabilities of an event is 1

Block 5 – Weeks 11 and 12

Prime numbers and proof

- Recognise prime, square and triangle numbers
- Express a number as a product of prime factors
- Powers and roots
- Make and test conjectures
- Understand and use counterexamples

Notes/Links/Interleaving

- Revisit FDP equivalence, and simple FDP addition and subtraction
- Revisit factors and multiples, both numerically and algebraically

Additional Higher Content

- Understand and use the complement of a set
- Use prime factors to find HCFs and LCMs