| Topic Name | Term | Skills Developed | Link to NC Subject Content | Next link in curriculum | Other Notes |
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| SEQUENCES | Autumn | * Begin to reason deductively in geometry, number and algebra, including using geometrical constructions
* Use algebra to generalise the structure of arithmetic, including to formulate mathematical relationships
 | * Move freely between different numerical, algebraic, graphical and diagrammatic representations
* Make and test conjectures about patterns and relationships
* Generate sequences from a term-to-term rule
* Recognise arithmetic and geometric sequences
 | * Year 7 Autumn - Understand algebraic notation
 | KEY\*

| Number |
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| Geometry |
| Ratio and Proportion |
| Algebra |
| Statistics |

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| UNDERSTAND AND USE ALGEBRAIC NOTATION | Autumn | * Use algebra to generalise the structure of arithmetic, including to formulate mathematical relationships
 | * Recognise and use relationships between operations including inverse operations
* Substitute values in expressions, rearrange and simplify expressions
* Use and interpret algebraic notation
 | * Year 7 Autumn – Equality and equivalence
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| EQUALITY AND EQUIVALENCE | Autumn | * Develop their mathematical knowledge, in part through solving problems and evaluating the outcomes, including multi-step problems
 | * Simplify and manipulate algebraic expressions to maintain equivalence by collecting like terms
* Use algebraic methods to solve linear equations in one variable
 | * Year 7 Spring - Directed Number
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| PLACE VALUE AND ORDERING INTEGERS AND DECIMALS | Autumn | * Extend understanding of the number system and place value to include decimals, fractions, powers and roots
 | * Understand and use place value for decimals, measures and integers of any size
* Round numbers to an appropriate degree of accuracy
* Interpret and compare numbers in standard form
 | * Year 7 Autumn - Fraction, Decimal and Percentage Equivalence
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| FRACTION, DECIMAL AND PERCENTAGE EQUIVALENCE | Autumn | * Extend their understanding of the number system; make connections between number relationships, and their algebraic and graphical representations
 | * Move freely between different numerical representations
* Express one quantity as a fraction of another, where the fraction is less than one and greater than one
* Compare two quantities using percentages
* Work with percentages greater than 100%
 | * Year 7 Spring - Fractions and Percentages of Amounts
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| SOLVING PROBLEMS WITH ADDITION AND SUBTRACTION | Spring | * Develop their mathematical knowledge, in part through solving problems and evaluating the outcomes, including multi-step problems
 | * Derive and apply formulae to calculate and solve problems involving perimeter
* Construct and interpret appropriate tables, charts and diagrams for ungrouped numerical data
 | * Year 7 Spring - Solving problems with multiplication and division
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| SOLVING PROBLEMS WITH MULTIPLICATION AND DIVISION | Spring | * Select and use appropriate calculation strategies to solve increasingly complex problems
 | * Derive and apply formulae to calculate and solve problems involving: perimeter and area of triangles, parallelograms and trapezia
* Substitute numerical values into formulae and expressions, including scientific formulae
 | * Year 7 Summer - Developing Geometric Reasoning
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| FRACTIONS AND PERCENTAGES OF AMOUNTS | Spring | * Select and use appropriate calculation strategies to solve increasingly complex problems
 | * Use the four operations, including formal written methods, applied to integers, decimals, proper and improper fractions
* Interpret integers and fractions as operators
 | * Year 8 Spring - Fractions and Percentages
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| DIRECTED NUMBER | Spring | * Extend their understanding of the number system; make connections between number relationships, and their algebraic and graphical representations
 | * Use four operations, including formal written methods, applied to integers both positive and negative
* Understand and use the concepts of vocabulary of expressions, equations, inequalities, terms and factors
* Forming and solving linear equations, including two-step equations
 | * Year 8 Spring - Brackets, equations and inequalities
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| FRACTIONAL THINKING | Spring | * Move freely between different numerical, algebraic, graphical and diagrammatic representations [for example, equivalent fractions, fractions and decimals, and equations and graphs]
 | * Order positive and negative integers, decimals and fractions; use the number line as a model for ordering of the real numbers; use the symbols =, ≠, , ≤, ≥
* Use the four operations, including formal written methods, applied to integers, decimals, proper and improper fractions, and mixed numbers, all both positive and negative
 | * Year 8 Spring - Fractions and Percentages
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| CONSTRUCTING, MEASURING AND USING GEOMETRIC NOTATION | Summer | * Use language and properties precisely to analyse numbers, algebraic expressions, 2-D and 3-D shapes, probability and statistics.
 | * Begin to reason deductively in geometry including using geometrical constructions
* Use the standard conventions for labelling sides and angles
* Identify and construct triangles
 | * Year 7 Summer - Geometric Reasoning
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| GEOMETRIC REASONING | Summer | * Begin to reason deductively in geometry, number and algebra, including using geometrical constructions
 | * Apply the properties of angles at a point, angles at a point on a straight line and vertically opposite angles
* Understand and use the relationship between parallel lines and alternate and corresponding angles
 | * Year 8 Summer - Angles in parallel lines and polygons
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| DEVELOPING NUMBER SENSE | Summer | * Select and use appropriate calculation strategies to solve increasingly complex problems
 | * Begin to reason deductively in number and algebra
 | * Year 8 Spring - Number Sense
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| SETS AND PROBABILITY | Summer | * Develop their mathematical knowledge, in part through solving problems and evaluating the outcomes, including multi-step problems
 | * Understand that the probabilities of all possible outcomes sum to 1
* Enumerate sets and unions/intersections of sets systematically, using tables, grids and Venn diagrams
 | * Year 8 Autumn - Tables and Probability
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| PRIME NUMBERS AND PROOF | Summer | * Begin to reason deductively in geometry, number and algebra, including using geometrical constructions
 | * Use integer powers and associated real roots (square, cube and higher), recognise powers of 2, 3, 4 and 5
* Make and test conjectures about patterns and relationships; look for proofs or counterexamples
 | * Year 8 Spring - Number Sense
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\* Throughout the entire curriculum, content and skills are revisited and reused continuously. The colour code refers to the main strand each topic falls under.