**Curriculum Overview for Mathematics**

**Year 7**

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| **Half Term 1:** **Properties of Number****Declarative Knowledge:**Know the order of operations and know that multiplication/division and addition/subtraction are equal to each otherKnow that multiplication is commutative Describe numbers using ‘composite’ or ‘prime’**Procedural Knowledge:**Use a variety of methods to multiply numbers List multiples of numbers Find factors of numbersUse prime factor decompositionFind the Highest Common Factor (HCF) and Lowest Common Multiple (LCM) of numbers **Conditional Knowledge:** Use prime factor decomposition and Venn diagrams to find the HCF and LCMUse partitioning, arrays and mental strategies to simplify larger calculations **Half Term 1:** **Directed Number****Declarative Knowledge:**Label a number line with integers Know what a zero pair is**Procedural Knowledge:**Represent zero pairs using a variety of methodsAdd and subtract with negative numbersMultiply and divide with negative numbers Use a scientific calculator to calculate with negative numbers **Conditional Knowledge:** Use the order of operations when calculating with powers/roots and negative numbers | Books | Modelling reading of questions by the class teacher – teaching like a Mathematician Two key words at the start of each lesson defined Expectation of Mathematical vocabulary used in lessons |
| Speech | Array, factors, product, composite numbers, prime numbers, multiples, square numbers, cube numbers, highest common factor, lowest common multiple, index form, order of operations, groupings, brackets, Venn diagram, intersection, systematic listing, powers and roots, multiply, divide, addition, and subtraction.Zero pair, positive, negative, number line, direction, sign, greater than, less than, addition, subtraction, multiplication, division, credit, debit. |
| Checklist RTL | There will be a formal end of half-term exam incorporating the 2 units studied during the half-term. We will re-teach during an Exam Review lesson after the assessment |
| Home | Key Knowledge Organiser test – revise the key knowledge organiser given at the start of the unitDr Frost Maths – practising skills using DrFrostMaths.com (a unique username and password will be provided by the school) |
| **Half Term 2: Place Value, including Metric Units****Declarative Knowledge:**Know the prefixes of metric units of measurement **Procedural Knowledge:**Convert fluently between metric units of length, mass and volume/capacity Convert fluently between units of time and money**Conditional Knowledge:**Questions in a context, including reasoning and problem-solving questions **Half Term 2: Place Value, including Standard Form****Declarative Knowledge:**Know the positions of place value headings in a place value tableRead numbers written in Standard Form**Procedural Knowledge:**Compare and order numbers Round numbers to degree of accuracy Multiply and divide by powers of 10**Conditional Knowledge:** Questions in a context, including reasoning and problem-solving questions Understand where Standard Form is used in scientific understanding of the universe  | Books | Modelling reading of questions by the class teacher – teaching like a Mathematician Two key words at the start of each lesson defined Expectation of Mathematical vocabulary used in lessons |
| Speech | Place value, place value table, column headings including decimals and fractions, length, distance, mass, weight, volume, capacity, metre, centimetre, millimetre, tonne, kilogram, gram, milligram Litre, millilitre Hour, minute, second.Place value, column headings including decimals. Estimate, accuracy, round, to a certain number of decimal places, integer, powers of ten, indices, approximate, order of magnitude, check, solution, over and under estimate. |
| Checklist RTL | There will be a formal end of half-term exam incorporating the 2 units studied during the half-term and will recall work from Half-Term 1We will re-teach during an Exam Review lesson after the assessment |
| Home | Key Knowledge Organiser test – revise the key knowledge organiser given at the start of the unitDr Frost Maths – practising skills using DrFrostMaths.com (a unique username and password will be provided by the school) |