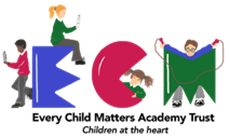
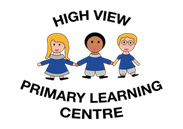
******High View Primary Learning Centre**

Mathematics Curriculum

Our aim is for the pupils to have a comprehensive and cohesive mathematics education so that they leave High View as competent mathematicians. This will be achieved by using the DFE’s Ready to Progress Criteria as the foundations before moving to the National Curriculum objectives. Where the RTP (Ready to Progress) meets the NC (National Curriculum) objectives, these will be indicated with the reference numbers in the objectives. All objectives will be covered by the time the children leave Year 6 ensuring that they are fully prepared to continue their education.

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|  | FS1 | FS2 | Year1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| Autumn | Number rhymes and songs  Counting, ordinality and cardinality  Shape  Size  Pattern  Numerals  Capacity  Positional language  ‘More’ | Counting, ordinality and cardinality  Subitising  Composition  Addition and subtraction  One more/one less than  Shape  Length  Weight | Place Value  Addition and Subtraction  Shape | Place Value  Addition and subtraction  Money  Multiplication and division | Place value  Addition and subtraction  Multiplication and division | Place Value  Addition and subtraction  Perimeter  Multiplication and division | Place value  Addition and subtraction  Statistics  Multiplication and division  Perimeter and area | Place value  4 operations  Fractions  Position and direction |
| Spring | Number rhymes and songs  Counting, ordinality and cardinality  Shape  Size  Capacity  More and less  Money  Days of the week  Length  Positional language  Pattern | Counting, ordinality and cardinality  Subitising  Composition  Addition and subtraction  One more/one less than  Shape  Capacity  Money  Pattern  Estimation | Addition and subtraction  Place Value  Length, height  Weight and volume | Multiplication and division  Shape  Statistics  Fractions  Length and height | Multiplication and division  Statistics  Money  Length and perimeter  fractions | Multiplication and division  Area  Fractions  Decimals | Multiplication and division  Fractions  Decimals and percentages | Decimals  Percentages  Algebra  Measurement  Perimeter area and volume  Ratio |
| Summer | Number rhymes and songs  Counting, ordinality and cardinality  Shape  Sequencing events  Calculating  Separating  More than / fewer tham  Sorting and classifying  Routes and locations  Weight | Counting, ordinality and cardinality  Subitising  Composition  Addition and subtraction  Money  Sharing  Doubling  Halving  Capacity | Multiplication and division  Fractions  Position and direction  Place value  Money  time | Position and direction  Problem solving  Time  Measurement  investigations | Fractions  Time  Shape  Mass and capacity | Decimals  Money/Time  Statistics  Shape  Position and direction | Decimals  Shape  Position and direction  Converting units  Volume | Shape  Problem solving  Statistics  investigations |

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| Ready to Progress | | | | | | |
| EYFS/Development matters/ Previous knowledge | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
|  |  | 2MD–1 Recognise  repeated addition  contexts, representing  them with multiplication  equations and calculating  the product, within the 2, 5 and 10 multiplication  tables. | 3MD–1 Apply known  multiplication and division facts to solve contextual problems with different  structures, including  quotitive and partitive  division. | 4MD–1 Multiply and  divide whole numbers by 10 and 100 (keeping to whole number quotients); understand this as equivalent to making a number 10 or 100 times the size. | 5MD–1 Multiply and  divide numbers by 10 and 100; understand this as equivalent to making a number 10 or 100 times the size, or 1 tenth or 1  hundredth times the size. | 6AS/MD–1 Understand  that 2 numbers can be related additively or multiplicatively, and quantify additive and multiplicative relationships  (multiplicative  relationships restricted to  multiplication by a whole  number). |
|  |  | 2MD–2 Relate grouping  problems where the  number of groups is  unknown to multiplication  equations with a missing  factor, and to division  equations (quotitive  division). |  | 4MD–2 Manipulate  multiplication and division  equations, and  understand and apply the  commutative property of  multiplication. | 5MD–2 Find factors and multiples of positive whole  numbers, including  common factors and  common multiples, and express a given number as a product of 2 or 3  factors. | 6AS/MD–2 Use a given additive or multiplicative  calculation to derive or complete a related  calculation, using  arithmetic properties,  inverse relationships, and place-value  understanding. |
|  |  |  |  | 4MD–3 Understand and  apply the distributive  property of multiplication. | 5MD–3 Multiply any  whole number with up to 4 digits by any one-digit number using a formal  written method | AS/MD–3 Solve  problems involving ratio relationships. |
|  |  |  |  |  | 5MD–4 Divide a number with up to 4 digits by a one-digit number using a  formal written method, and interpret remainders  appropriately for the  context. | 6AS/MD–4 Solve  problems with 2  unknowns. |

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| **NATIONAL CURRICULUM** | | | | | | |
| Multiplication and Division Facts | | | | | | |
| EYFS/Development matters/ Previous knowledge | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| . | *count in multiples of twos, fives and tens*  (copied from Number and Place Value) | *count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward*  (copied from Number and Place Value) | *count from 0 in multiples of 4, 8, 50 and 100*  (copied from Number and Place Value) | *count in multiples of 6, 7, 9, 25 and 1 000*  (copied from Number and Place Value) | *count forwards or backwards in steps of powers of 10 for any given number up to*  *1 000 000*  (copied from Number and Place Value) | *count in multiples of twos, fives and tens*  (copied from Number and Place Value) |
|  |  | recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers | recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables | recall multiplication and division facts for multiplication tables up to 12 × 12 |  |  |
| Mental Calculations | | | | | | |
| EYFS/Development matters/ Previous knowledge | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
|  |  |  | write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods (appears also in Written Methods) | 4MD–1 use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers | multiply and divide numbers mentally drawing upon known facts | 6AS/MD–1 perform mental calculations, including with mixed operations and large numbers |
|  |  | 2MD–1  show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot |  | 4MD–2 recognise and use factor pairs and commutativity in mental calculations (appears also in Properties of Numbers) | 5MD–1 multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 | *associate a fraction with division and calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. 3/8)*  (copied from Fractions) |
| **Written Calculations** | | | | | | |
| EYFS/Development matters/ Previous knowledge | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
|  |  | 2MD–1/ 2MD–2 calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs | 3MD–1 write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods (appears also in Mental Methods) | 4MD–3 multiply two-digit and three-digit numbers by a one-digit number using formal written layout | 5MD–3 multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers | 6AS/MD–2 multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication |
|  |  |  |  |  | 5MD–4 divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context | 6AS/MD–2 divide numbers up to 4-digits by a two-digit whole number using the formal written method of short division where appropriate for the context divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context |
|  |  |  |  |  |  | *use written division methods in cases where the answer has up to two decimal places* (copied from Fractions (including decimals)) |
| **PROPERTIES OF NUMBERS: MULTIPLES, FACTORS, PRIMES, SQUARE AND CUBE NUMBERS** | | | | | | |
| EYFS/Development matters/ Previous knowledge | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
|  |  |  |  | recognise and use factor pairs and commutativity in mental calculations (repeated) | 5MD–2 identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers.  know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers  establish whether a number up to 100 is prime and recall prime numbers up to 19 | identify common factors, common multiples and prime numbers  use common factors to simplify fractions; use common multiples to express fractions in the same denomination  (copied from Fractions) |
|  |  |  |  | recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3) | calculate, estimate and compare volume of cubes and cuboids using standard units, including centimetre cubed (cm3) and cubic metres (m3), and extending to other units such as mm3 and km3 | recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3) |
| Ratio and Proportion | | | | | | |
| EYFS/Development matters/ Previous knowledge | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
|  |  |  |  |  |  | AS/MD–3 solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts |
|  |  |  |  |  |  | solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison |
|  |  |  |  |  |  | solve problems involving similar shapes where the scale factor is known or can be found |
|  |  |  |  |  |  | solve problems involving unequal sharing and grouping using knowledge of fractions and multiples. |
| **ORDER OF OPERATIONS** | | | | | | |
| EYFS/Development matters/ Previous knowledge | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
|  |  |  |  |  |  | use their knowledge of the order of operations to carry out calculations involving the four operations |
| INVERSE OPERATIONS, ESTIMATING AND CHECKING ANSWERS | | | | | | |
| EYFS/Development matters/ Previous knowledge | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
|  |  |  | *estimate the answer to a calculation and use inverse operations to check answers* (copied from Addition and Subtraction) | *estimate and use inverse operations to check answers to a calculation*  (copied from Addition and Subtraction) |  | use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy |

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| VOCABULARY  These are the words that pupils will know, use and understand.  The pupils will know, use and understand the words in their current year group and the prior years. | | | | | | |
| EYFS/Development matters/ Previous knowledge | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| Sharing, doubling, halving, Number patterns | array multiplication, multiply, multiplied by  Multiple, division, dividing, grouping | groups of, times, once, twice, three times … ten times, repeated addition divide, divided by, divided into share, share equally, left, left over, one each, two each, three each … ten each, group in pairs, threes … tens Multiplication table, multiplication fact, division fact, row, column | factor product remainder | Inverse, square, squared cube, cubed | Quotient | Unknown, ratio  Part  Equal parts  Scale  Quantity  Relative  Factor  Simplest form  Equivalent |