 **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.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 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 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Ready to Progress | | | | | | |
| EYFS/Development matters/ Previous knowledge | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| Begin to develop a sense of the number system by verbally counting forward to and beyond 20, pausing at each multiple of 10. | 1NPV–1 Count within 100, forwards and  backwards, starting with any number. |  | 3NPV–1 Know that 10 tens are equivalent to 1 hundred, and that 100 is 10 times the size of 10; apply this to identify and  work out how many 10s there are in other three-digit multiples of 10. | 4NPV–1 Know that 10 hundreds are equivalent to 1 thousand, and that  1,000 is 10 times the size of 100; apply this to identify and work out how many 100s there are in other four-digit multiples  of 100. | 5NPV–1 Know that 10 tenths are equivalent to  1 one, and that 1 is 10 times the size of 0.1.  Know that 100  hundredths are equivalent to 1 one, and that 1 is 100 times the size of 0.01.  Know that 10 hundredths are equivalent to 1 tenth, and that 0.1 is 10 times the size of 0.01. | 6NPV–1 Understand the  relationship between  powers of 10 from  1 hundredth to 10 million, and use this to make a  given number 10, 100, 1,000, 1 tenth, 1 hundredth or 1  thousandth times the size (multiply and divide by 10,  100 and 1,000). |
| Play games that involve moving along a numbered track, and understand that larger numbers are further along the track. |  | 2NPV–1 Recognise the place value of each digit in two-digit numbers, and  compose and decompose two-digit numbers using standard and nonstandard partitioning. | 3NPV–2 Recognise the place value of each digit in three-digit numbers, and compose and  decompose three-digit numbers using standard and non-standard partitioning. | 4NPV–2 Recognise the place value of each digit in four-digit numbers, and  compose and decompose four-digit numbers using standard and nonstandard partitioning. | 5NPV–2 Recognise the place value of each digit in numbers with up to 2 decimal places, and compose and decompose numbers with up to 2 decimal places using standard and nonstandard partitioning. | 6NPV–2 Recognise the place value of each digit in numbers up to 10  million, including decimal fractions, and compose and decompose numbers up to 10 million using standard and nonstandard partitioning. |
|  | 1NPV–2 Reason about the location of numbers to  20 within the linear  number system, including comparing using < > and = | 2NPV–2 Reason about the location of any two digit number in the linear number system, including  identifying the previous and next multiple of 10. | 3NPV–3 Reason about the location of any three digit number in the linear number system, including  identifying the previous and next multiple of 100  and 10. | 4NPV–3 Reason about the location of any four digit number in the linear number system, including  identifying the previous and next multiple of 1,000  and 100, and rounding to the nearest of each. | 5NPV–3 Reason about the location of any number with up to 2 decimals places in the linear number system,  including identifying the  previous and next multiple of 1 and 0.1 and rounding  to the nearest of each. | 6NPV–3 Reason about the location of any number up to 10 million,  including decimal  fractions, in the linear number system, and round numbers, as appropriate, including in  contexts. |
|  |  |  | 3NPV–4 Divide 100 into 2, 4, 5 and 10 equal parts, and read scales/number  lines marked in multiples of 100 with 2, 4, 5 and 10  equal parts. | 4NPV–4 Divide 1,000 into 2, 4, 5 and 10 equal parts, and read  scales/number lines marked in multiples of1,0 00 with 2, 4, 5 and 10 equal parts | 5NPV–4 Divide 1 into 2, 4, 5 and 10 equal parts, and read scales/number  lines marked in units of 1 with 2, 4, 5 and 10 equal parts. | 6NPV–4 Divide powers of 10, from 1 hundredth to  10 million, into 2, 4, 5 and 10 equal parts, and read  scales/number lines with labelled intervals divided  into 2, 4, 5 and 10 equal parts |
|  |  |  |  |  | 5NPV–5 Convert between units of measure, including using common decimals and fractions. |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **NATIONAL CURRICULUM** | | | | | | |
| Counting | | | | | | |
| EYFS/Development matters/ Previous knowledge | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| Recite numbers past 5.  Verbally count beyond 20, recognising the pattern of the counting system  Count beyond ten. | 1NPV–1  count to (and across) 100, forwards and backwards, beginning with 0 or 1, or from any given number |  |  | count backwards through zero to include negative numbers | interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero | use negative numbers in context, and calculate intervals across zero |
| Say one number for each item in order: 1,2,3,4,5.  Know that the last number reached when counting a small set of objects tells you how many there are in total (‘cardinal principle’). | count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens | count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward | count from 0 in multiples of 4, 8, 50 and 100; | count in multiples of 6, 7, 9, 25 and 1 000 | count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 |  |
| Understand the ‘one more than/one less than’ relationship between consecutive numbers. | given a number, identify one more and one less |  | find 10 or 100 more or less than a given number | find 1 000 more or less than a given number |  |  |
| Comparing Numbers | | | | | | |
| EYFS/Development matters/ Previous knowledge | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| Compare quantities using language: ‘more than’, ‘fewer than’.  Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity; | 1NPV–2  use the language of: equal to, more than, less than (fewer), most, least | compare and order numbers from 0 up to 100; use <, > and = signs | compare and order numbers up to 1 000 | order and compare numbers beyond  1 000.  *compare numbers with the same number of decimal places up to two decimal places*  (copied from Fractions) | read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit  (appears also in Reading and Writing Numbers) | read, write, order and compare numbers up to  10 000 000 and determine the value of each digit (appears also in Reading and Writing Numbers) |
| **IDENTIFYING, REPRESENTING AND ESTIMATING NUMBERS** | | | | | | |
| EYFS/Development matters/ Previous knowledge | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.  Subitise (recognise quantities without counting) up to 5. | identify and represent numbers using objects and pictorial representations including the number line | 2NPV–2 identify, represent and estimate numbers using different representations, including the number line | 3NPV–3  identify, represent and estimate numbers using different representations | 4NPV–3 identify, represent and estimate numbers using different representations |  |  |
| **READING AND WRITING NUMBERS** (including Roman Numerals) | | | | | | |
| EYFS/Development matters/ Previous knowledge | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| Experiment with their own symbols and marks as well as numerals.  Link the number symbol (numeral) with its cardinal number value. | read and write numbers from 1 to 20 in numerals and words. | read and write numbers to at least 100 in numerals and in words | read and write numbers up to 1 000 in numerals and in words  tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks  (copied from Measurement) | read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value. | read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit  (appears also in Comparing Numbers)  read Roman numerals to 1 000 (M) and recognise years written in Roman numerals. | read, write, order and compare numbers up to  10 000 000 and determine the value of each digit  (appears also in Understanding Place Value) |
| **UNDERSTANDING PLACE VALUE** | | | | | | |
| EYFS/Development matters/ Previous knowledge | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| Have a deep understanding of number to 10, including the composition of each number;  Show ‘finger numbers’ up to 5.  Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5. |  | 2NPV–2  recognise the place value of each digit in a two-digit number (tens, ones) | 3NPV–2 recognise the place value of each digit in a three-digit number (hundreds, tens, ones) | 4NPV–2 recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones)  *find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as units, tenths and hundredths*  (copied from Fractions) | 5NPV–2 read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit  (appears also in Reading and Writing Numbers)  *recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents*  (copied from Fractions) | 6NPV–2 read, write, order and compare numbers up to  10 000 000 and determine the value of each digit (appears also in Reading and Writing Numbers)  identify the value of each digit to three decimal places and multiply and divide numbers by 10, 100 and 1 000 where the answers are up to three decimal places (copied from Fractions) |
| ROUNDING | | | | | | |
| EYFS/Development matters/ Previous knowledge | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
|  |  |  |  | 4NPV–3  round any number to the nearest 10, 100 or 1 000 | round any number up to 1 000 000 to the nearest 10, 100, 1 000, 10 000 and 100 000 | round any whole number to a required degree of accuracy |
|  |  |  |  | *round decimals with one decimal place to the nearest whole number*  (copied from Fractions) | *round decimals with two decimal places to the nearest whole number and to one decimal place*  (copied from Fractions) | *solve problems which require answers to be rounded to specified degrees of accuracy* (copied from Fractions) |
| **PROBLEM SOLVING** | | | | | | |
| EYFS/Development matters/ Previous knowledge | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| Solve real world mathematical problems with numbers up to 5. | use place value and number facts to solve problems | solve number problems and practical problems involving these ideas. | solve number and practical problems that involve all of the above and with increasingly large positive numbers | 4NPV–4 solve number problems and practical problems that involve all of the above | solve number and practical problems that involve all of the above | use place value and number facts to solve problems |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 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 |
| Zero, Number, None  One, two, three ….. to twenty and beyond, teens numbers, eleven, twelve……twenty  How many…?  Count, count (up) to, count on (from, to), count back (from, to), count in ones, twos, fives, tens  Is the same as  More, less, few  Odd, even  Pattern, pair  Ones, tens, digit,  The same number as, as many as  More, larger, bigger, greater, fewer, smaller, less, fewest, smallest, least, most, biggest, largest, greatest  One more, ten more, one less, ten less  Compare, order, size  First, second, third, third……twentieth, last, last but one, before, after, next, between, | Numeral  twenty-one, twenty-two … one hundred  forwards, backwards  equal to, equivalent  most, least, many  multiple of  equal to  half-way between, above, below  > greater than, < less than | two hundred …….one thousand  Count in threes and fours  sequence, continue, predict  one-, two- or three-digit number, place, place value  stands for, represents, exchange  twenty first, twenty second etc | Count in, eights, fifties and so on to hundreds  Rule, relationship,  Roman numerals  Multiple of, factor of  one hundred more, one hundred less | ten thousand, hundred thousand, million  Count in, six, sevens, nines, twenty fives,  Integer, positive, negative, above/below zero, minus, negative numbers  one thousand more, one thousand less | ≥ greater than or equal to, ≤ less than or equal to  formula  divisibility, square number, prime number, ascending/  descending order  factor pair | factorise, prime factor, digit total |