Programme of study for **Number and place value**
statutory requirements in bold, suggested steps in faint**, adult curriculum in green**

Step 1

Pupils will encounter experiences which enable them to:

Develop an awareness of number names through their enjoyment of action rhymes and songs that relate to their experience of numbers.

- *Listen to number songs as part of a small group*
- *Participate in reciting number rhymes and songs*
- *Use number names in rhymes*

Have an understanding that things exist, even when out of sight

- *Watch items as they are thrown or fall*
- *Observe an object being put into a container and removes it*
- *Look to see if an object is where they put it*
- *Look for objects inside or under a container.*

Show awareness of number and counting (AC,M4)

Step 2

Pupils will encounter experiences which enable them to:

Say some counting words randomly

- *Count when playing in any order*
- *Use counting words while sorting, counting objects – numbers are not accurately sequential*
- *Follow an adults counting sequence*
- *Help to count*

Step 3

Pupils will be provided with opportunities to:

Select a small number of objects from a group when asked
- *Respond to give me some ….*
- *Respond to give me some more …..*
- *Hand an adult the correct number of counters when asked 'please give me one/two'*

Recite some numbers in sequence

Experiment with symbols and marks representing ideas of number

Begin to make comparisons between quantities
- *Make a group of one; Make a group of 'lots'*
- *Use the terms 1 and lots*
- *Begin to match one to one*
- *Begin to match to equal sets*
- *Contrast quantities*

Join in counting to three, show awareness of 1 and 2 (AC,M5)
- *In familiar contexts respond to and join in rote counting to three eg when a race is beginning one two three go. [N1/M5.1]*
- *With support indicate awareness of one and two eg by responding appropriately to show one hand show two hands or by using eye pointing or blinking to indicate one or two as required [N1/M5.2]*
- *Indicate an awareness of differences between quantities where difference is marked eg one or two [N1/M5.3]*

Use some language of quantities, such as 'more' and 'a lot'

Step 4
Pupils will be provided with opportunities to:

Use some number names and language spontaneously
Use some number names accurately in play
Recite numbers in order to 5
- *Rote counting*

- *Point to objects as they count*
- *Count objects in a picture*

Join in counting to five, understand 1.1 corresponding count to three (AC, M6)
- *Join in counting to five for example by saying signing or indicating numbers in counting activities [N1/M6.1]*
- *Demonstrate an understanding of one-to-one correspondence in a range of contexts eg matching cups to saucers giving one pound coin to each person [N1/M6.2]*
- *Count reliably up to three objects and with some inconsistencies up to five objects [N1/M6.3]*

Know that numbers identify how many objects in a set
- *Use number names when asked how many – not always accurate*
- *Match numerals to sets - not always accurate*

Begin to represent numbers using fingers
- *Show up to 5 fingers correctly*
- *Know that they have five fingers on each hand*

Sometimes matches numeral and quantities correctly
- *Place objects in numbered containers*
- *Place objects onto number cards*

Show an interest in numerals in the environment
- *Points out numbers they see around them but doesn't always accurately name them*
- *Recognise numerals 1-3 reliably and 1-5 with some accuracy[N1/M6.4]*

Show an interest in representing numbers
- *Attempt to use appropriate ways to represent numbers (e.g. stickers, I.C.T, mark making, drawing)*

Step 5

Pupils will be given opportunities to:
recognise some numerals of personal significance
- *Recognise the number of their house, age, films*

Pupils will be taught to:

-Recognise numerals 1 to 5

- *When working with numerals 1-5 identify then record them, record them , and relate them to collections of objects – reliably up to three and with some inconsistencies to five [N1/M7.3]*

-Count objects up to 4 or 5 objects by saying one number name for each item

- *Count to 5 correctly*
- *Put out up to 5 objects*

Join in counting to ten and count up to five items (AC,M7)

- *Join in rote counting to ten eg when saying or signing numbers with others [N1/M7.1]*
- *Count at least five items reliably[N1/M7.2]*
- *Continue rote counting onwards within the range 1-10 for example with moving counters in a game or continuing to say, sign or indicate the next number when another person begins to count [N1/M8.1]*
- *Count reliably to five, and with inconsistencies up to ten [N1/M8.2]*

-Recite numbers to 10 in order

Count by rote to ten , count items to five (ten) (AC,M8)

- *Recognise numerals from 1-10 and relate them to sets of objects reliably up to five, and with more support to ten [N1/M8.4]*

-Count an irregular arrangement objects to 10

N1/E1.1 Count reliably up to 10 items

- *Develop one-to-one correspondence*
- *Put out up to 10 objects*

-Select the correct numeral to represent quantities from1 to 10

- ***Demonstrate an understanding of less eg when indicating which bottle has less water in it [N1/M7.4]***
- ***Recognise differences in quantity eg by comparing two sets of objects and indicating which is the bigger or smaller group [N1/M8.3]***

-Say the number that is one more or less than a given number to 10

-Find one more or one less from a group up to 10 objects

Stages to achieving this outcome

- *From 0-10 find the number before or after a given number.*
- *Identify missing numbers on a number line between 0-10*

- *Identify the number between two given numbers 0-10*
- *Identify which number is more and which number is less.*

Using concrete apparatus and number lines

- *In practical situations, add one to a number of objects eg respond to a request to add one item to three already in a box[N1/M7.6]*
- *In practical situations respond to add one, or take one away from a number of items within the 1-10 range [N1/M8.6]*

-Record, using marks that they can interpret and explain
- Use ordinal numbers first and second eg when indicating the position of people in a queue [N1/M7.5]
- With some inconsistencies identify the symbols +, - [N1/M7.7]
- Use ordinal numbers (first, second, third) when describing position for example when referring to winners in a competition [n1/M8.5]
- Recognise and apply +, - and = when asked to add or subtract [N1/M8.7]

Step 6
Pupils will be taught to:
- **Count to and across 20, forwards and backwards, beginning with 0 or 1, or from any given number.**

Stages to achieving this outcome:
- *Join in with rote counting between numbers 10-20.*
- *Continue counting onwards from a given number between 10 and 20.*
- *Begin to count up to 20 objects that can be moved.*

- Read numbers to 20 in numerals and words.

N1/E1.2 Read, write, order numbers to 10, including zero

Stages to achieving this outcome
- *Find a given number between 10 and 20*
- *Order numbers to 20 physically and using the computer.*
- *Match objects to numerals to 20.*
- *Identify all numbers in all familiar situations (e.g. clock, telephone, shop)*

N1/E1.3 Order and compare numbers up to 10 including zero.
N1/E2.1 Count reliably up to 20 items
- **Estimate how many objects they can see and check by counting them**

Stages to achieving this outcome
- *Understand that an estimate is a guess*
- *Accept that their guess won't always be correct*

-Write numbers to 20 in numerals.
- *Use numbers to record up to 20*
- *Record up to 20 objects. (use stickers, I.C.T, drawing)*

-Count in different multiples including ones, twos, fives and tens
- *Cross reference with multiplication and division steps 6 and 7*

-Given a number, identify one more and one less to 20
Stages to achieving this outcome
- *From 10 to 20 find the number before a given number.*
- *From 10 to 20 find the number after a given number.*
- *Say 1 more than a give number working within 10-20.*
- *Say 1 less than a give number working within 10-20.*
- *Identify missing numbers on a number line between 0-20*
- *Identify the number between two given numbers (0-20)*
- *Identify which number is more and which number is less.*

Using concrete apparatus and number lines

-Understand mathematical language of: equal to, more than, less than (fewer), most, least within numbers to 20.

Step 7

Pupils will be taught to:

-Count to and across 50, forwards and backwards, beginning with 0 or 1, or from any given number.
– recognise odd and even numbers up to 30

-Read numbers to 50 in numerals and words.
- *Find a given number between 20 and 50.*
- *Fill in the missing numbers working within 50.*
- *Relate cardinal numbers to date.*

-Write numbers to 50 in numerals.
- *Use numbers to record up to 50*
- *Record up to 50 objects. (use stickers, I.C.T, drawing)*

-Count in different multiples including ones, twos, fives and tens
- *Rote count in 2's to 20.*
- *Group objects into groups of 2.*
- *Count in 10s to 100*
- *Group objects such as coins, into groups of ten*

(Cross reference multiplication and division steps 6 and 7)

-Given a number, identify one more and one less to 50
- *From 20 to 50 find the number before or after a given number.*
- *On a number line find 1 more than a given number working 20 - 50.*
- *On a number line find 1 less than a given number working 20-50.*
- *Identify missing numbers on a number line between 20-50*
- *Identify the number between two given numbers (20-50)*
- *Identify which number is more and which number is less of two given numbers to 50.*

Understand and use mathematical language of: equal to, more than, less than (fewer), most, least within numbers to 50

Step 8

Pupils will be taught to:
-Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number.
N1/E2.2 Read, write, order and compare numbers to 100.
- *Continue rote counting onwards from a given number between 50 and 100.*

-Read numbers to 100 in numerals and words.
- *Find a given number between 50 and 100.*
- *Fill in the missing numbers working within 50.*

-Write numbers to 100 in numerals.
- *Use numbers to record up to 100*
- *Record up to 100 objects. (use stickers, I.C.T, drawing)*

-Count in different multiples including ones, twos, fives and tens
- *Rote count in 5's to 100.*
- *Group objects into groups of 5.*
- *Begin to use appropriate multiple for counting large numbers of objects.*

-Write numbers from 1 to 50 in words, and beyond if appropriate.
-Given a number, identify one more and one less to 100
- *From 50 to 100 find the number before a given number.*
- *From 50 to 100 find the number after a given number.*
- *Say 1 more than a give number working within 100.*
- *Say 1 less than a give number working within 50-100.*

-Understand and use mathematical language of: equal to, more than, less than (fewer), most, least within numbers to 100
-Compare and order numbers from 0 up to 100;
-use <, > and = signs
– understand the symbols for greater than, less than (L1)

Step 9

Pupils will be taught to:

-Count in steps of 2, 3, and 5 from 0, and count in tens from any number, forward or backward
- *Count in twos to 100*
- *Count in fives to 50*
- *Count in threes to 30*
- *Count from one given number to another up to 100 in regular steps of any of these numbers*

-Recognises multiples of:
- 10 end in 0
- 5 end in 0 or 5
- 2 end in 0,2,4,6,8

-Recognise the place value of each digit in a two-digit number (tens, ones)

Identify a number given the number of tens and units
Partition numbers to simplify a problem
E2.2:– understand that the position of a digit signifies its value
    – know what each digit in a two-digit number represents, including the use of zero as a place holder
Identify, represent and estimate numbers using different representations, including the number line
N1/E2.6 Approximate by rounding to the nearest 10
Begin to round numbers up or down to the nearest 10
Estimate the position of any number up to 100 on a number line
Estimate the position of any number up to 100 on a 100 square
Estimate quantities

Count from one given number to another up to 100

Read and write numbers to at least 100 in numerals and in words
Use place value and number facts to solve problems.

Step 10
Pupils will be taught how to:
-Count from 0 in multiples of 4, 8, 50 and 100;
-find 10 or 100 more or less than a given number
Count on or back in 100s to 1000
Count on or back in tens within hundreds
Count on or back in tens or hundreds starting from any two digit or three digit number up to 1000

Say the number 10 more than any 2 or 3 digit number
Say the number 10 less that any 2 or 3 digit number

-Recognise the place value of each digit in a three-digit number (hundreds, tens, ones)
-Show an understanding of place value in numbers up to 1000 and use this to make approximations.
-Compare and order numbers up to 1000
N1/E3.1 Count ,read, write order and compare numbers up to 1000
-Count on or back from given 3 digit number

– understand that the position of a digit signifies its value
   -   Recognise odd and even numbers
– know what each digit in a three-digit number represents, including the use of zero as a place holder
Identify, represent and estimate numbers using different representations
Read and write numbers to at least 1000 in numerals and words
Solve number problems and practical problems involving these ideas.
-Read prices up to £999.99
-Read quantities in grams
-Read 3 digit house numbers
N1/E3.7 Approximate by rounding numbers less than 1000 to the nearest 10 or 100

Step 11   Extension content

Count in multiples of 6, 7, 9, 25 and 1000

Find 1000 more or less than a given number

Count backwards through zero to include negative numbers
recognise negative numbers in practical contexts (e.g. temperatures)
– understand the words positive and negative
– know that 0 C is the temperature at which water freezes
– understand that a negative temperature is below zero

Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones)

Order and compare numbers beyond 1000

Identify, represent and estimate numbers using different representations
Round any number to the nearest 10, 100 or 1000

Solve number and practical problems that involve all of the above and with increasingly large positive numbers

Read Roman numerals to 100 (I to C) and understand how, over time, the numeral system changed to include the concept of zero and place value.

read, write, order and compare numbers, including large numbers
– understand that the position of a digit signifies its value
– know what each digit represents in a number up to seven digits, including the use of zero as a place holder