

St. Nicholas CE Primary Academy



Progression in Number and Place Value

The following document outlines what children should be able to do by the end of the year for number and place value. For each year group, children should be solving problems based on these number and place value skills.

EYFS

- Estimate how many objects they can see and then count them
- Select correct numeral for 1-20 objects
- Count an irregular arrangement of objects
- Record using marks they can explain
- Begin to identify own mathematical problems based on own fascinations

Year 1

- Count to 100 forwards beginning with 0 or 1
- Count to 100 forwards from any given number
- Count across 100 forwards
- Count from 100 backwards
- Count across 100 backwards
- Count in multiples of 5 to at least 50
- Count in multiples of 2 to at least 20
- Count in multiples of 10 to at least 100
- Read all numbers up to 100 in numerals
- Write all numbers up to 100 in numerals
- Read numbers 1-20 in words
- Write numbers 1-20 in words
- Identify 1 less than any given 1 or 2 digit number
- Identify 1 more than any given 1 or 2 digit number
- Use the words equal to correctly
- Use the words more than correctly
- Use the words less than (fewer) correctly
- Use the word most correctly
- Use the word least correctly
- Identify and represent numbers using objects
- Identify and represent numbers using pictorial representations
- Identify and represent numbers on a number line
- Count at least 20 objects reliably
- Use counting up to 20 to solve simple problems (e.g. how many more do I have now?)

- Order numbers 1-20 correctly
- Recognise 0 as 'none' and 'zero' in stories and rhymes
- Recognise 0 as 'none' and 'zero' when counting and ordering
- Double numbers up to 5 rapidly
- Halve numbers up to 10
- Recognise odd and even numbers up to 20
- Partition 2 digit number in to tens and units with Base 10 equipment

Year 2

- Count in steps of 2 forwards from zero
- Count in steps of 2 backwards from 20
- Count in steps of 3 forwards from zero
- Count in steps of 3 backwards from 30
- Count in steps of 5 forwards from zero
- Count in steps of 5 backwards from 50
- Count in steps of 10 forwards from zero
- Count in steps of 10 backwards from 100
- Count in steps of 10 forwards from any 2 digit number
- Count in steps of 10 backwards from any 2 digit number
- Recognise the place value of each digit in a two-digit number (tens and units)
- Estimate numbers up to 100
- Represent numbers using different representations
- Use models such as the number line to represent numbers
- Compare numbers up to 100 using correct mathematical vocabulary (more than, less than, more, fewer, equal to)
- Compare numbers up to 100 using the $<$ $>$ and $=$ signs
- Order numbers up to 100
- Recognise odd and even numbers
- Round any 2 digit number to the nearest multiple of 10
- Double all numbers to 10 rapidly
- Halve even numbers up to 20 rapidly
- Read numbers to 100 in numerals
- Read number to 100 in words
- Write numbers to 100 in numerals

- Write numbers to 100 in words
- Partition 2 digit numbers in to tens and units
- Use place value and number facts to solve problems
- Count up to 50 objects reliably
- Group objects in to 1s, 2s, 5s, 10s to make counting easier
- Know what each digit is worth in a 2 digit number (including zero as a place holder)
- Know/recall all the number facts up to 10 rapidly
- Identify what a number sequence is increasing/decreasing by (2s, 3s, 5s, 10s) from any 2 digit number
- Continue the sequence

Year 3

- Count on in tens from any number up to 1000
- Count back in tens from any number up to 1000
- Count from 0 in multiple of 4
- Count from 0 in multiples of 8
- Count from 0 in multiples of 50
- Count from 0 in multiple of 100
- Find 10 more than a given number up to 1000
- Find 10 less than a given number up to 1000
- Find 100 more than a given number up to 1000
- Find 100 less than a given number up to 1000
- Recognise what is happening in a sequence for 2, 3, 4, 5, 8, 10, 50, 100 (increasing/decreasing by) from any 2 or 3 digit number
- Continue those sequences (increasing decreasing by 2, 3, 4, 5, 8, 10, 50, 100) from any 2 or 3 digit number
- Read numbers to 1000 in words
- Read numbers to 1000 in figures
- Write numbers to 1000 in words
- Write numbers to 1000 in figures
- Recognise the place value of each digit in a three-digit number (hundreds, tens and units)
- Understand that 0 can be used as a place holder
- Compare numbers up to 1000 using correct mathematical vocabulary
- Compare numbers up to 1000 using the < and > signs
- Order a set of numbers up to 1000
- Position numbers on a number line
- Estimate numbers up to 1000
- Halve numbers up to 100
- Double numbers up to 50
- Partition a 3 digit number in to hundreds, tens and units
- Partition 2 digit numbers in different ways
- Know by heart all number facts up to 20
- Round 2 digit numbers to the nearest multiple of 10
- Round 3 digit numbers to the nearest multiple of 10
- Round 3 digit numbers to the nearest multiple of 100
- Use £.p notation

Year 4

- Count in multiples of 6
- Count in multiples of 7
- Count in multiples of 9
- Count in multiples of 25
- Count in multiples of 100
- Find 1000 more than a given number
- Find 1000 less than a given number
- Count backwards through 0 to include negative numbers
- Recognise the place value of each digit in a 4 digit number (thousands, hundreds, tens, units)
- Understand that 0 can be used as a place holder
- Partition 3 digit numbers in to hundreds, tens and units
- Partition 3 digit numbers in different ways
- Partition 4 digit numbers in to thousands, hundreds, tens and units
- Order numbers beyond 1000
- Compare numbers beyond 1000 using the correct mathematical vocabulary
- Compare numbers beyond 1000 using the < and > signs
- Estimate numbers up to 1000
- Estimate numbers beyond 1000
- Place numbers up to 1000 on a number line
- Place numbers beyond 1000 on a number line
- Round any 2, 3 or 4 digit number to the nearest multiple of 10
- Round any 3 or 4 digit number to the nearest multiple of 100
- Round any 4 digit number to the nearest multiple of 1000
- Recognise negative numbers on a thermometer
- Read all 3 digit numbers in figures
- Read all 3 digit numbers in words
- Write all 3 digit numbers in figures
- Write all 3 digit numbers in words
- Compare numbers using < > and =
- Double numbers to 100 using mental methods
- Double 3 digit numbers using partitioning
- Halve numbers to 100 mentally
- Halve 3 digit numbers using partitioning
- Convert simple fractions in to decimals (using fraction wall to support)
- Start to understand the value of tenths and hundreths
- *Read Roman numerals to 100 (I to C)*
- *Know that over time the numeral system changed to include the concept of zero and place value*

Year 5

- Read numbers to at least 1,000,000
- Write numbers to at least 1,000,000
- Order numbers to 1,000,000
- Compare numbers to 1,000,000
- Understand the value of each digit in numbers up to 1,000,000
- Understand that 0 can be used as a place holder
- Partition 4 digit numbers in different ways
- Partition 5 digit numbers in to tens-thousands, thousands, hundreds, tens, units
- Count forwards in steps of 10 from any given number up to 1,000,000
- Count backwards in steps of 10 from any given number up to 1,000,000
- Count forwards in steps of 100 from any given number up to 1,000,000
- Count backwards in steps of 100 from any given number up to 1,000,000
- Count forwards in steps of 1000 from any given number up to 1,000,000
- Count backwards in steps of 1000 from any given number up to 1,000,000
- Count forwards in steps of 10,000 from any given number up to 1,000,000
- Count backwards in steps of 10,000 from any given number up to 1,000,000
- Interpret negative numbers in context
- Count forwards with positive and negative numbers through 0
- Count backwards with positive and negative numbers through 0
- Position negative numbers on a number line
- Round any number up to 1,000,000 to the nearest multiple of 10
- Round any number up to 1,000,000 to the nearest multiple of 100
- Round any number up to 1,000,000 to the nearest multiple of 1000
- Round any number up to 1,000,000 to the nearest multiple of 10,000
- Round any number up to 1,000,000 to the nearest multiple of 100,000
- Use rounding to make approximations
- Recognise whether a sequence is increasing or decreasing by any number up to 12
- Continue this sequence
- Recognise whether a sequence is increasing or decreasing by 25, 50, 75, 100, 1000
- Continue this sequence
- Double any 4 digit number (mentally or partitioning)
- Halve any 4 digit number (mentally or partitioning)
- Order numbers with 1 decimal place
- Understand what tenths are
- Understand what hundredths are
- Partition a number with 1 decimal place
- Write numbers with decimals (up to 2 decimal places)
- *Read Roman numerals to 1000 (M)*
- *Recognise years written in Roman numerals*

Year 6

- Read numbers up to 10,000,000 in figures
- Read numbers up to 10,000,000 in words
- Write numbers up to 10,000,000 in figures
- Write numbers up to 10,000,000 in words
- Order a set of numbers up to 10,000,000
- Order a set of numbers with 2 decimal places
- Compare a set of numbers up to 10,000,000 using correct mathematical vocabulary
- Compare a set of numbers up to 10,000,000 using $<$ $>$ and $=$
- Find the n th term when given a sequence
- Create a sequence when given a term
- Determine the value of each digit in any number up to 10,000,000
- Partition numbers in the simplest way (up to 10,000,000)
- Partition numbers in different ways (up to 1,000,000)
- Partition a number with 2 decimal places
- Round any whole number to the nearest multiple of 10
- Round any whole number to the nearest multiple of 100
- Round any whole number to the nearest multiple of 1000
- Round any whole number to the nearest multiple of 10,000
- Round any whole number to the nearest multiple of 100,000
- Round any whole number to the nearest multiple of 1,000,000
- Round a decimal to a whole number
- Use negative numbers in context
- Calculate intervals across zero
- Know square numbers to 10^2
- Find square roots of numbers
- Find numbers to the power of 3
- Find numbers to the power of 4
- Find numbers to the power of 5
- Know the first 10 prime numbers
- Recognise and describe number patterns, and relationships, including multiple, factor and square
- Double any 5 digit number
- Halve any 5 digit number