Netherthorpe Primary School (updated December 2021)

**Maths Long Term Plan with Progression of Skills**

**Year 2**

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| **Autumn**  |
| **Knowledge**  | 2NPV–1 Place value in two-digit numbers2NPV–2 Two-digit numbers in the linear number system | 2AS–1 Add and subtract across 102AS–2 Solve comparative addition and difference problems | 2NF-1 Secure fluency in addition and subtraction facts within 10, through continued practice. | 2AS–3 Add and subtract within 100 | 2MD–1 Multiplication as repeated addition |
| **Unit 1****Numbers 10 to 100** | **Unit 2****Calculations within 20** | **Unit 3****Fluently add and subtract within 10** | **Unit 4****Addition and Subtraction of two-digit numbers** | **Unit 5****Introduction to Multiplication** |
| **Progression of Skills** | * Explain that one ten is equivalent to ten ones
* Represent multiples of ten using their numerals
* Represent multiples of ten using their numerals and names
* Represent multiples of ten in an expression or an equation
* Estimate the position of multiples of ten on a 0-100 number line
* Explain what happens when you add and subtract ten to a multiple of ten
* Use knowledge of facts and unitising to add and subtract multiples of ten
* Add and subtract multiples of ten
* Explore the counting sequence for counting to 100 and beyond
* Count a large group of objects by counting groups of tens and the extra ones
* Count a large group of objects by using knowledge of unitising by counting tens and ones
* Represent a number from 20-99 in different ways
* Explain and mark the position of numbers 20-99 on a number line
* Explain that numbers 20-99 can be represented as a length
* Compare two, two-digit numbers
* Partition a two-digit number into tens and ones
* Add two, two-digit numbers by partitioning into tens and ones
 | * Add three addends
* Use a ‘First... Then… Now” story to add 3 addends
* Explain that addends can be added in any order
* Add 3 addends efficiently
* Add 3 addends efficiently by finding two addends that total Add two numbers that bridge through 10
* Subtract two numbers that bridge through 10
* Compare numbers and describe how many more or less there are in each set
* Calculate the difference
* Use knowledge of subtraction to solve problems in a range of contexts
* Explain what the difference is between consecutive numbers
* Calculate difference when information is presented in a pictogram
* Calculate difference when information is presented in a bar chart
 | * Demonstrate their fluency of addition and subtraction within ten
* Practise addition and subtraction strategies as required
 | * Add and subtract one to and from a two-digit number
* Add and subtract one to and from a two-digit number that crosses a tens boundary
* Add and subtract one from any two-digit number
* Use number facts to add a single-digit number to a two-digit number
* Use number facts to subtract a single-digit number from a two-digit number
* Use a part-part-whole model to represent addition and subtraction
* Use number bonds to ten to add a single-digit number to a two-digit number
* Use number bonds to ten to subtract a single-digit number from a two-digit number
* Use knowledge of ‘make ten’ to add a one-digit number to a two-digit number
* Use knowledge of ‘make ten’ to subtract a multiple of ten or a single-digit from a two-digit number
* Solve problems using knowledge of addition and subtraction
* Find ten more or ten less than a two-digit number (1)
* Find ten more or ten less than a two-digit number (2)
* Add and subtract ten to/from a two-digit number
* Explain the patterns when adding and subtracting ten
* Use knowledge of adding and subtracting ten to solve problems
* Use number facts to add a multiple of ten to a two-digit number
* Use number facts to subtract a multiple of ten from a two-digit number
* Partition a two-digit number into parts in different ways (two and three parts)
* Use knowledge of adding and subtracting multiples of ten to solve problems
 | * Explain that objects can be grouped in different ways
* Describe how objects have been grouped
* Represent equal groups as repeated addition
* Represent equal groups as repeated addition and multiplication
* Represent equal groups as multiplication
* Explain and represent multiplication when a group contains zero or one items
* Identify and explain each part of a multiplication equation
* Use knowledge of multiplication to calculate the product
* Represent the two times table in different ways
* Use knowledge of the two times table to solve problems
* Explain the relationship between adjacent multiples of two
* Explain that factor pairs can be written in any order
* Represent counting in tens as the ten times table
* Represent the ten times table in different ways
* Explain the relationship between adjacent multiples of ten
* Represent counting in fives as the five times table
* Represent the five times table in different ways
* Explain the relationship between adjacent multiples of five
* Explain how groups of five and ten are related
* Explain the relationship between multiples of five and ten
* Use knowledge of the relationships between the five and ten times tables to solve problems
* Explain how a factor of zero or one affect the product
* Represent multiplication equations in different ways
* Use knowledge of the two, five and ten times tables to solve problems (1)
* Use knowledge of the two, five and ten times tables to solve problems (2)
* Explain what each factor represents in a multiplication story
* Explain what each factor represents in a multiplication story when one of the factors is one
* Explain how a multiplication equation with two as a factor is related to doubling
* Double two-digit numbers
* Multiply efficiently when one of the factors is two
* Explain how halving and doubling are related
* Explain the relationship between factors and products
* Halve two-digit numbers
* Use knowledge of doubling, halving and the two times table to solve problems
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| **Spring** |
| **Knowledge**  |  | 2MD–2 Grouping problems: missing factors and division. | 2G–1 Describe and compare 2D and 3D shapes | 2AS–4 Add and subtract within 100 (part 2) |
| **Unit 5** **Continued** | **Unit 6****Introduction to division structures** | **Unit 7****Shape** | **Unit 8****Addition and subtraction of two digit numbers** |
| **Progression of Skills** |  | * Explain that objects can be grouped equally
* Identify and explain when objects cannot be grouped equally
* Explain the relationship between division expressions and division stories
* Calculate the number of equal groups in a division story
* Use their knowledge of skip counting and division to solve problems relating to measure
* Skip count using the divisor to find the quotient
* 7 Pupils use their knowledge of division to solve problems
* Explain that objects can be shared equally
* Use skip counting to solve a sharing problem
* Skip count using the divisor to find the quotient
* Solve a variety of division problems, explaining their understanding
 | * Learn that a polygon is a 2D shape with straight sides that meet at vertices
* Describe polygons and find different ways to sort them
* Learn that polygons can be sorted and named according to the number of sides and vertices
* Discuss, and compare by direct comparison, the shape and size of polygons
* Discuss, and compare by direct comparison, the vertices of polygons
* Investigate how polygons can be joined and folded to form 3-dimensional shapes
* Describe 3-dimensional shapes and find different ways to sort them
* Discuss, and compare by direct comparison, the shape and size of 3-dimensional shapes
 | * Explain strategies used to add
* Add a two-digit number to a two-digit number
* Add a two-digit number to a two-digit number when not crossing ten (i)
* Add a two-digit number to a two-digit number when not crossing ten (ii)
* Add a two-digit number to a two-digit number when crossing ten
* Explain strategies used to subtract
* Subtract a two-digit number from a two-digit number
* Partition the subtrahend to help with subtraction
* Subtract a two-digit number from a two-digit number when not crossing ten (i)
* Subtract a two-digit number from a two-digit number when not crossing ten (ii)
* Subtract a two-digit number from a two-digit number when crossing ten
* Subtract efficiently using knowledge of two-digit numbers
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| **Summer**  |
| **Unit 9****Money** | **Unit 10****Fractions** | **Unit 11****Time** | **Unit 12****Position and Direction** | **Unit 13****Multiplication and division – doubling, halving, quotitive and partition division.** | **Unit 14****Sense of measure – capacity, volume, mass.** |
| To be updated soon |