

# Pitmaston Primary School and Pre-School Nursery



## Early Years Calculation Policy

Based on the White Rose Scheme

# Main Principles

In the statutory framework for EYFS, an Early Learning Goal is the standard children are expected to achieve by the end of their Reception year. The Early Learning Goals relevant to calculations are Number and Numerical Patterns. We follow the White Rose Scheme in line with the rest of school in Early Years at Pitmaston to ensure we teach a progressive and carefully sequenced Maths curriculum that allows our pupils to reach their Early Learning Goals:

**Number Early Learning Goal** - Children at the expected level of development will:

- Have a deep understanding of number to 10, including the composition of each number
- Subitise (recognise quantities without counting) up to 5
- Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts.

**Numerical Patterns Early Learning Goal** - Children at the expected level of development will:

- Verbally count beyond 20, recognising the pattern of the counting system
- Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity
- Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.

Calculations are taught in a purposeful, practical way and children will use play and exploration to acquire the relevant mathematical skills to solve them, beginning in Nursery. A large majority of mathematical work is practical, and learning will happen in many different contexts around the classroom and outside through effective, open ended continuous provision. Some mathematical concepts relating to calculations will be teacher led. However, children can also freely explore these concepts through a variety of different activities during daily Maths lessons and continuous provision. Learning is repeated using different resources and representations to embed understanding. This calculation policy illustrates the resources used in Reception to support the development of mathematical concepts and an understanding of number that lead to embedding the skills and increasing confidence to perform calculations.



# COUNTING

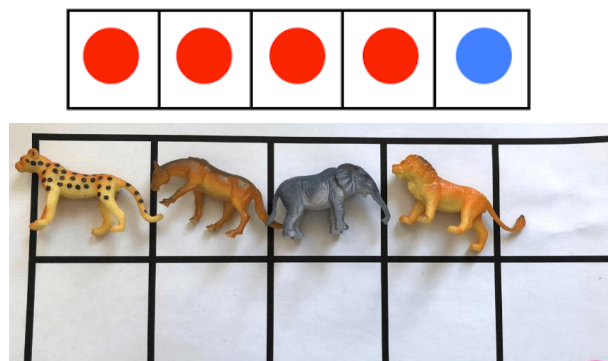
## Numicon

Numicon for counting and ordering numbers Numicon is a multisensory resource that helps children to visualise and manipulate abstract numbers. Each piece represents a number from 1 – 10.



## Ten and Five frames

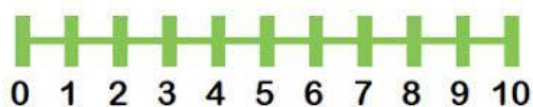
Ten frames help children develop basic number sense. They can compose and decompose numbers within 10.



## Number lines and tracks



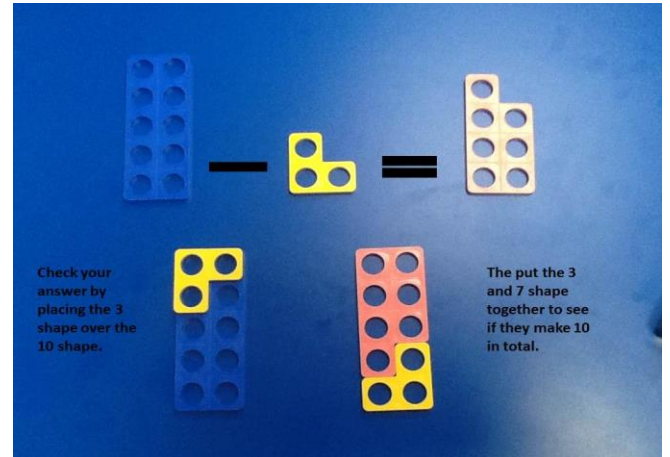
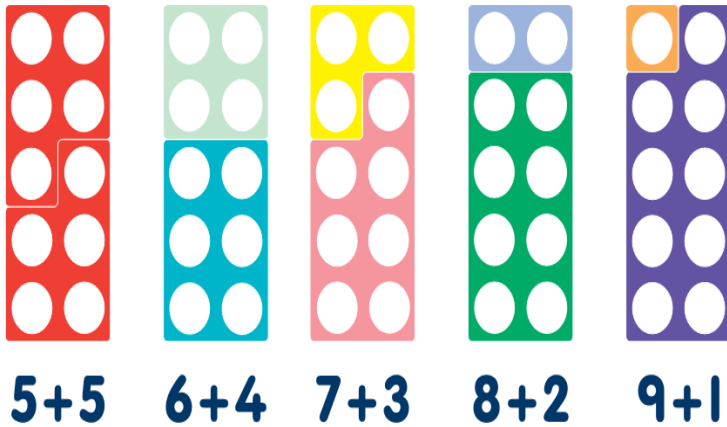
Number lines help children to order numbers and match objects to the corresponding number.



# ADDITION AND SUBTRACTION

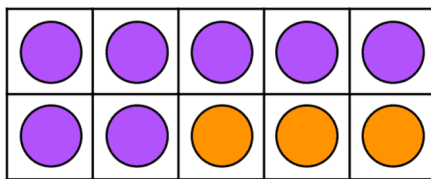
## Numicon for Adding, Subtracting and Number bonds

Numicon fits together to show children the relationships between numbers (for example, the 6 and 4 pieces fit together to make 10). Numicon is the main resource we use to teach children basic calculations such as addition and subtraction during whole class input and independent activities.

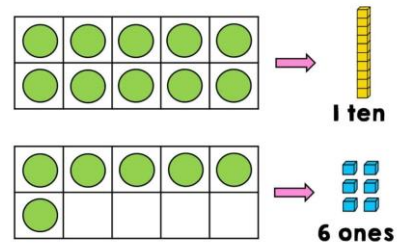


## Ten frames for Adding, Subtracting and Number Bonds

Ten frames help children to visualize the relationships between addition and subtraction and to understand place value.



$$7 + 3 = 10$$



## Number lines and number tracks

Number lines are a valuable visual aid when teaching children to count backwards and forwards. They can also help children break addition problems down into easier steps.

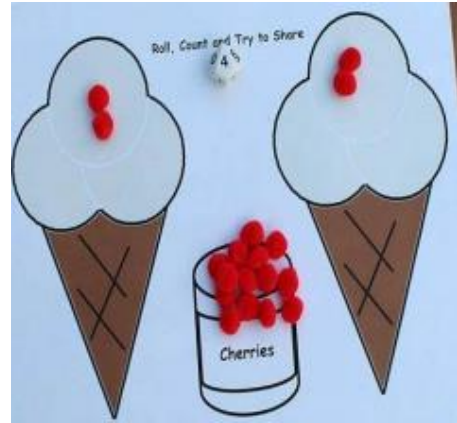


$$1 + 2 = 3$$

# MULTIPLICATION AND DIVISION

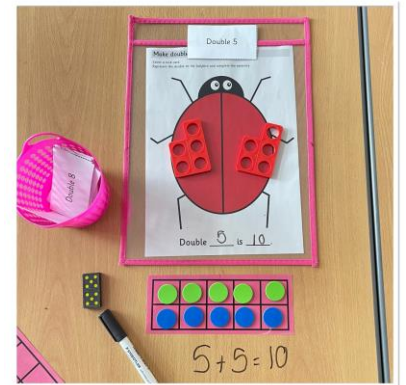
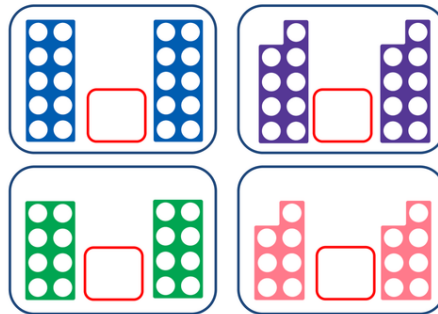
## Making Equal Groups and Sharing Equally

Children learn that sharing, doubling and halving must be fair and equal. Each group must be the same. Practical resources help children to explore and manipulate numbers and learning is reinforced with our mathematical resources. We also support teaching concepts such as sharing and halving through our Concept Cat to ensure children have a deep understanding of how to use these concepts in different contexts and scenarios.



## Doubling

We use Numicon as a practical and visual resource to help children learn doubles and doubling facts.



## Odds and Evens

We use Numicon as a practical and visual resource to help children learn odd and even numbers.

