

Brampton Village Primary School

Calculation Policy – Reception

Acknowledgements –

This policy is extensively based on the White Rose Calculation Policy as this is the core scheme used at Brampton. We also use Numberblocks as a supplementary tool.

Early years foundation stage statutory framework (2026)

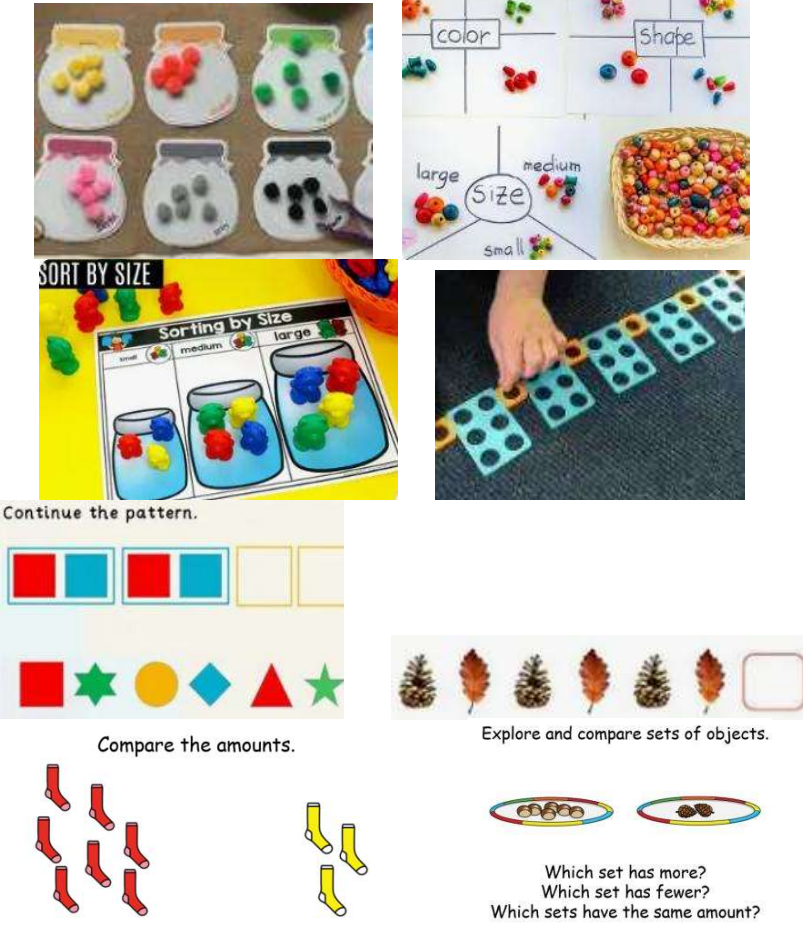
Developing a strong grounding in number is essential so that all children develop the necessary building blocks to excel mathematically. Children should be able to count confidently, develop a deep understanding of the numbers to 10, the relationships between them and the patterns within those numbers. By providing frequent and varied opportunities to build and apply this understanding – such as using manipulatives, including small pebbles and tens frames for organising counting – children will develop a secure base of knowledge and vocabulary from which mastery of mathematics is built. In addition, it is important that the curriculum includes rich opportunities for children to develop their spatial reasoning skills across all areas of mathematics including shape, space and measures. It is important that children develop positive attitudes and interests in mathematics, look for patterns and relationships, spot connections, 'have a go', talk to adults and peers about what they notice and not be afraid to make mistakes.

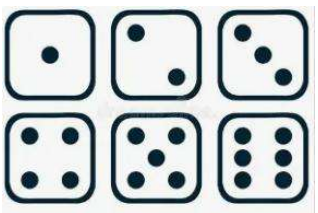
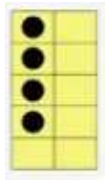
ELG: Number. Children at the expected level of development will:

- Have a deep understanding of numbers 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.

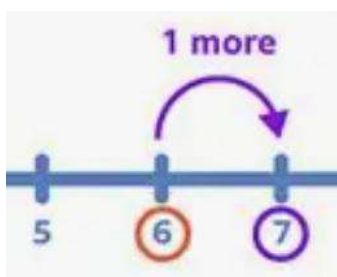
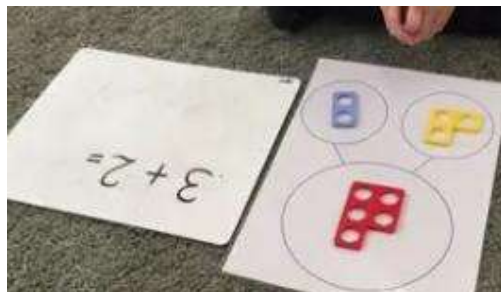
ELG: Numerical Patterns. Children at the expected level of development will:

- 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.

Sorting, grouping, patterns, comparing	Information
 Sorting, grouping, patterns, comparing Sorting by Size Continue the pattern. Compare the amounts. Explore and compare sets of objects. Which set has more? Which set has fewer? Which sets have the same amount?	Information Grouping and sorting helps children develop an understanding of similarities, differences and mathematical relationships. These skills provide an important foundation for later mathematical learning, including counting, comparing and recognising patterns. Comparing helps children recognise which group may have more or less/ Most, fewest, for example which bag has more sweets? Which bus has the fewest people? Repeated pattern making and finding missing parts of a pattern help build a child's understanding and problem solving skills. This might be sorting by toy type, colour, shape, size etc. Asking questions such as what's the same/ different? Do they match? Playing the odd one out game. Why have you put these together? Can you count how many in the group? Which has more and which has less? Most/ fewest? For patterns, say the sequence, repeat – whats next/ missing? Can you do 2 step e.g. ABAB, Red, blue, red, blue or 3 step ABCABC, red, blue, green repeated. How many variants could you add – colour and shape, size and shape? How to help at home By asking your child to sort everyday objects, such as toys, buttons or socks, into groups according to a particular feature, such as colour, size or shape. Encourage them to explain why objects belong in each group and to suggest different ways they could be sorted. Playing games like snap, Guess Who. Can they organise their toys in patterns e.g. doll, car, doll, car or food banana, grapes, etc?
Accurate Counting Counting out objects and counting objects within a group. 	It is important that children can count confidently to 20, but it is equally important that they understand that counting represents the number of objects or quantities in a group. For example, when counting five objects, each object should be counted once, with the final number said representing the total quantity. Strategies such as lining them up, using a pointy finger, count as your finger lands can help accurate counting. This is a different skill to rote counting. Counting accurate is the foundation of developing their maths.

1 The one-to-one principle. This involves children assigning one number name to each object that is being counted. Children need to ensure that they count each object only once, ensuring they have counted every object. 2 The stable-order principle. Children understand that, when counting, the numbers have to be said in a certain order. 3 The cardinal principle. Children understand that the number name assigned to the final object in a group is the total number of objects in that group. 4 The abstraction principle. This involves children understanding that anything can be counted, including things that cannot be touched, such as sounds and movements e.g. jumps. 5 The order-irrelevance principle. This involves children understanding that the order in which we count a group of objects is irrelevant. There will still be the same number.	How to help at home. Counting out toys, counting the number of plates needed for dinner, counting how many leaves they can find, counting moves on a board game, counting how many jumps, hops etc, skittles etc.
Subitising to 5     	Subitising is the ability to recognise how many objects are in a small group without counting each one individually. This helps children develop a strong understanding of number and quantity. This helps the child recognise a number quicker, or group larger random items into groups quicker to add together, making number recognition and counting more efficient. How to help at home Briefly showing your child a small number of objects, such as 3 or 4 buttons, and asking, "How many can you see?" Encourage them to recognise the amount without counting. You can also use fingers, dice or dot patterns to practise. To develop further show these numbers in different configurations.

Addition



Children develop an understanding that adding means putting groups together to find how many there are altogether. They begin by combining small quantities using real objects and develop an understanding of the whole and the parts.

Useful vocabulary includes: add, altogether, total, more, combine, put together, how many, how many more, plus and equals.

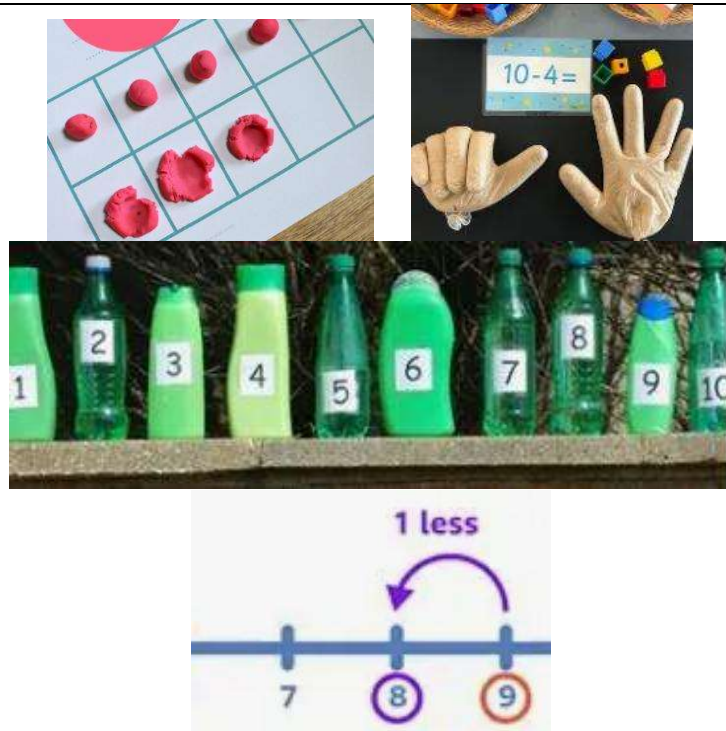
Developing an understanding of addition helps children make connections between quantities, number and calculation. It provides a foundation for later mathematical learning, including solving problems, recalling number facts and understanding the relationship between addition and subtraction.

We use practical experiences and concrete objects to help children understand addition before introducing formal written calculations in year one. We start by focussing on one more and develop their understanding from there. For example, we might ask, "There are 3 apples in the basket. We add 2 more. How many apples are there altogether?" Children are encouraged to physically combine the groups, count the total and explain how they know. We also use stories, songs, fingers, ten frames and other visual representations such as numberlines, part whole models and mark making to support their understanding.

How to help at home

Look for everyday opportunities to practise addition by combining quantities, such as adding toys to a collection, putting fruit into a bowl or counting objects while tidying. Ask questions such as, "How many are there altogether?", "What happens if we add one more?" or "How many more do we need?" Encourage your child to use objects, fingers or drawings to help them work out the answer and explain their thinking. Songs, stories and games involving numbers can also make practising addition fun and meaningful.

Subtraction



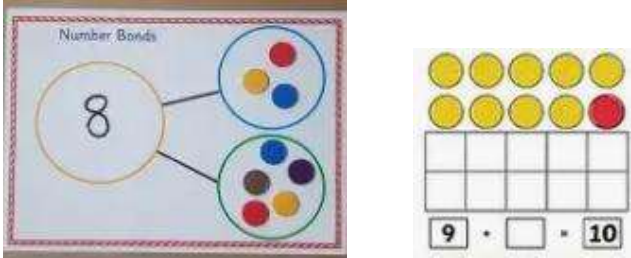
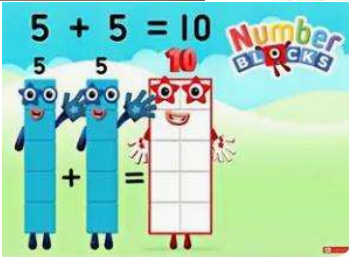
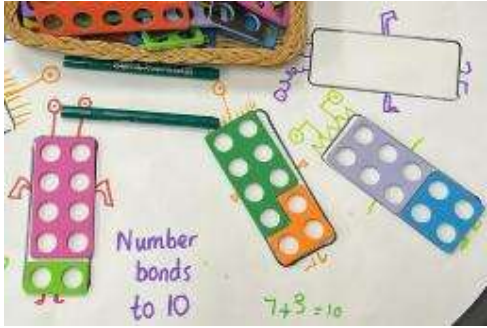
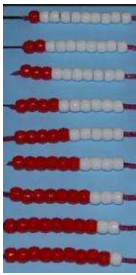
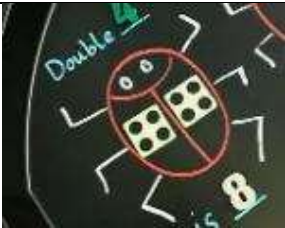
Children develop an understanding that subtraction involves taking objects away from a group, finding how many are left, or finding the difference between two quantities. They begin by exploring subtraction using real objects and practical experiences. Useful vocabulary includes: subtract, take away, left, fewer, less, difference, how many are left, how many fewer, minus and equals.

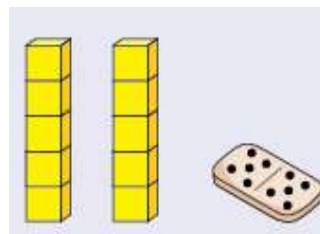
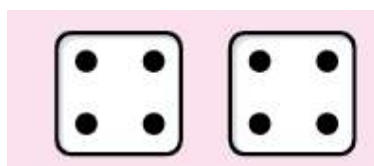
Developing an understanding of subtraction helps children make connections between quantities, number and calculation. It supports later mathematical learning, including solving problems, understanding number relationships and recognising the relationship between addition and subtraction.

We use practical experiences and concrete objects to help children understand subtraction before introducing formal written calculations in year one. We start by focussing on one less and develop their understanding from there. For example, we might ask, "There are 5 apples in the basket. We take 2 away. How many are left?" Children are encouraged to physically remove objects, count what remains and explain how they know. We also explore subtraction through stories, songs such as 10 in a bed, 5 flying saucers, 10 green bottles, fingers, pictures and other visual representations. We use bead strings and tens frames to support this.

How to help at home

Look for natural opportunities to practise subtraction during everyday activities. For example, ask, "You have 5 grapes. If you eat 2, how many are left?" or "There are 6 cars here. If 2 drive away, how many are left?" Encourage your child to use objects, fingers or drawings to work out the answer and, most importantly, to explain how they know.

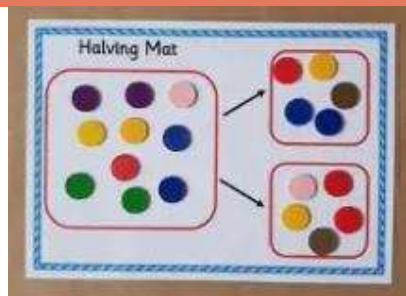
Composition of number: Number bonds    	Children develop an understanding that numbers can be made up of smaller parts. For example, 5 can be composed of 3 and 2, or 4 and 1. Children explore different ways of making a number and begin to recognise that the whole remains the same even when the parts are changed. Useful vocabulary includes: whole, part, altogether, number bond, made of, number, group, more, fewer, same, equal and different. Understanding the composition of number helps children see numbers as quantities that can be broken apart and recombined. This is a key foundation for developing number sense, mental calculation and later understanding of addition and subtraction. : We use practical resources such as counters, cubes, fingers, five-frames and ten-frames to explore how numbers can be made in different ways. For example, we might show 5 counters and split them into 2 and 3, asking, "How many altogether?" and "Can you find another way to make 5?" We encourage children to represent their thinking in different ways and explain what they notice. How to support at home Use everyday objects to explore different ways of making a number. For example, place 5 pieces of fruit on a plate and split them into two groups. Ask, "How many are in each group?", "How many altogether?" and "Can you make 5 in a different way?" Fingers are also a useful resource — for example, "Show me 5 fingers. Can you show 5 in a different way?" Encourage your child to talk about the parts and the whole, rather than simply giving an answer
Doubling  	Children develop an understanding that doubling means adding the same amount again. For example, double 3 is 6 because 3 and 3 make 6. Children explore doubles using practical objects, pictures and familiar contexts. Useful vocabulary includes: double, twice, same, equal, altogether, two groups, same amount, more and total. Understanding doubling helps children recognise equal groups and patterns in number. It supports their developing number sense and provides an important foundation for later work with addition, multiplication and number facts.



We use practical resources such as counters, cubes, fingers and ten-frames to make two equal groups. For example, we might show 3 counters and ask, "What is double 3?" Children can make another group of 3 and find that 3 and 3 make 6. We encourage children to notice the pattern and explain how they know. How to help at home.

Look for opportunities to make two equal groups. For example, if your child has 4 toy cars, ask, "Can you make another group with the same number? How many cars would you have altogether?" You can also use fingers: "Show me 3 fingers. Can you double it? How many fingers altogether?" Encourage your child to use the language "double 3 is 6" and explain that doubling means adding the same amount again.

Halving, sharing and odds and evens



Halving involves splitting a quantity into two equal parts, whereas sharing involves distributing a quantity equally between two or more groups or people.

They explore whether quantities can be shared equally and begin to recognise that even numbers can be split into two equal groups, while odd numbers cannot be shared equally into two whole groups without one left over. Useful vocabulary includes: half, halve, equal, equal groups, share, fairly, altogether, odd, even, left over, same and equal parts.

Understanding sharing and halving helps children develop their understanding of equal groups, and the relationship between numbers. Exploring odd and even numbers supports children's ability to recognise patterns and notice that some numbers can be split into two equal groups while others have one left over. These ideas provide an important foundation for later learning about fractions, division and multiplication.

We use practical resources such as counters, cubes, objects and shapes to explore sharing quantities equally between two groups. For example, we might give a child 6 counters and ask, "Can you share these equally between two people? How many

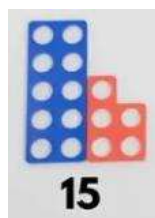


does each person get?" We then explore numbers that cannot be shared equally, such as 5, and discuss what happens to the one left over. Children are encouraged to identify and explore odd and even numbers through practical experiences and patterns.

How to help at home

Use everyday opportunities to practise sharing equally. For example, if you have 8 pieces of fruit, ask, "Can we share these equally between two people? How many will we each have?" Try different quantities and ask, "Can we share these equally? Is this number odd or even?" Encourage your child to use objects to find out rather than relying on memorisation. You can also look for patterns together, such as noticing that even numbers can be arranged into pairs with none left over, while odd numbers have one left over.

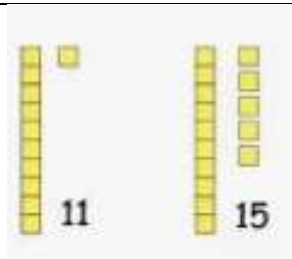
Counting beyond 20 and Numerical patterns



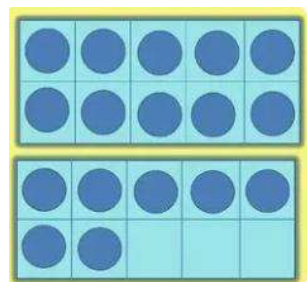
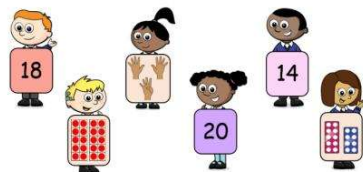
14



14 has 10 and 4



The children are playing a matching game.



Children develop an understanding that the teen numbers are made up of one ten and some more ones. They begin to recognise the pattern in the number names and numerals, for example, that 14 is one ten and four more. Children also develop confidence in counting beyond 20 and recognising the repeating structure of the number system. It is also important to practise counting from a variety of starting points rather than just starting from one to become more efficient. Useful vocabulary includes: ten, ones, teen numbers, more, less, before, after, next, number, count, number line, numeral, tens and ones.

Understanding the structure and patterns within our number system helps children move beyond simply reciting numbers. Recognising that numbers are composed of tens and ones provides an important foundation for place value and later calculation. Counting beyond 20 also helps children recognise that the number sequence continues and follows predictable patterns.

We use practical resources such as ten-frames, counters, cubes and number tracks to show that teen numbers are made from one group of ten and additional ones. For example, we might show 17 as one ten and seven ones and ask, "What do you notice about 17?" We practise counting forwards and

	backwards beyond 20 and explore questions such as “What number comes after 19?” and “What happens when we add one more to 20?” We also draw attention to patterns in the number names and numerals. How to support at home. Practise counting forwards and backwards during everyday activities, such as walking, climbing stairs or tidying toys, and using different starting points. Use objects to make teen numbers and ask, “Can you make 13? How many tens and how many ones?” Encourage your child to notice what happens when one more is added, particularly around 19 and 20.
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