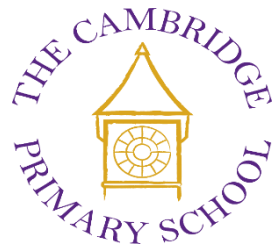


The Cambridge Primary School



Reception Calculations Policy



Reception

MAIN PRINCIPLES

Early Learning Goals

The latest framework has the following early learning goals for mathematics:

Number

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 five
- Automatically recall (without reference to rhymes, counting or other aids) number bonds up to five (including subtraction facts) and some number bonds to 10, including double facts

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

Calculations will be taught in a purposeful, practical way and children will use play and exploration to acquire the relevant mathematical skills to solve them. A large majority of mathematical work is practical, and learning will happen in many different contexts around the classroom and outside.

Some mathematical concepts relating to calculations will be teacher led, children can also freely explore these concepts through a variety of different activities, and resources set up each day. 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.

RECEPTION

COUNTING

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.



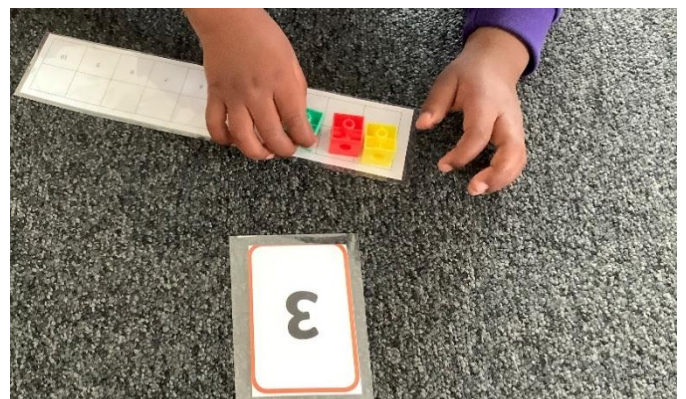
Ten frames

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.



RECEPTION

ADDITION AND SUBTRACTION

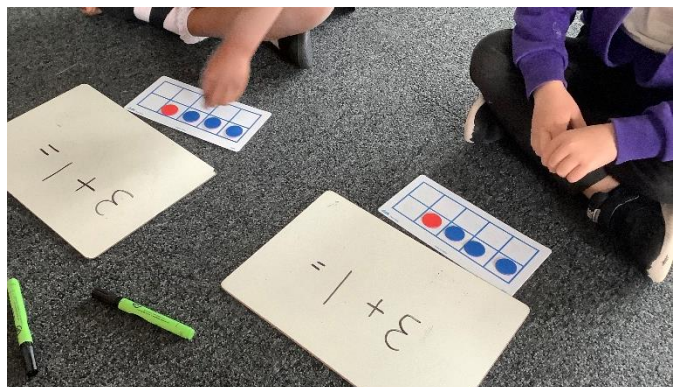


Numicon for adding, subtracting and number bonds

Numicon fits together to show children the relationships between numbers (i.e. the 6 and 4 pieces fit together to make 10)

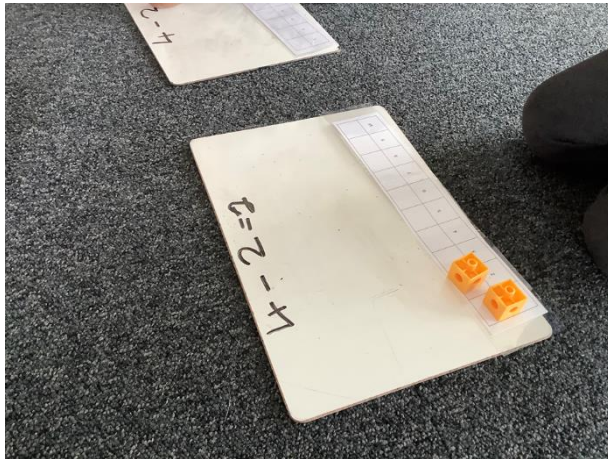
Ten frames for adding, subtracting and number bonds

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



RECEPTION

ADDITION AND SUBTRACTION



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

Part, part, whole diagrams for adding, subtracting and number bonds



Part, part, whole diagrams help children see how numbers can be split into parts. Children can see the relationship between the whole number and the component parts, which enables them to begin to understand addition and subtraction.



RECEPTION

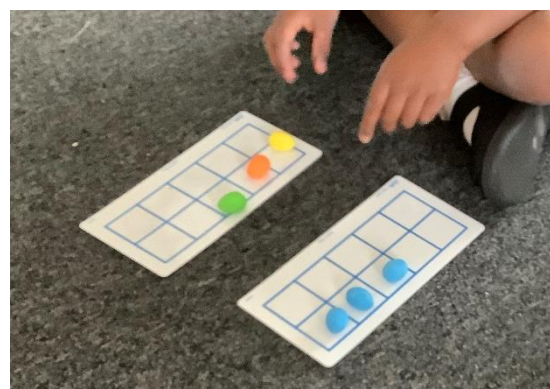
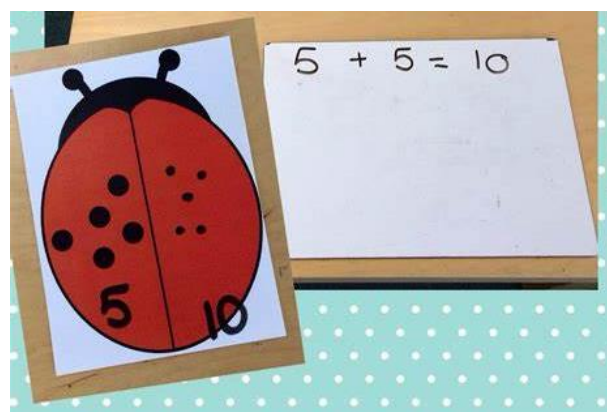
MULTIPLICATION AND DIVISION

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.



Doubling and halving



Activities to boost number sense in Reception Year

Children need lots of opportunities to develop number sense and deepen their conceptual understanding. Here are some simple activities we use to get our Reception Year learners counting:

Everyday questions to develop number sense

These questions are used for children aged five to six help develop their number sense and let them practice using mathematical terms.

When prepping lunch or a snack, count out the different types of food with our children as we lay the table we would count out the different items. We would ask questions like:

- How many grapes are there?
- How many tomatoes are there?
- How many plates are there?

We practice using the terms more than, fewer than and as many as by asking:

- Are there more grapes than tomatoes?
- Are there fewer tomatoes than grapes?
- Are there as many plates as people eating?

We also remember to practice each sentence:

- There are more grapes than tomatoes
- There are fewer tomatoes than grapes
- There are as many plates as family members eating

When counting, we make sure that we count one number for one item to strengthen the child's sense of one-to-one correspondence.

Number Rhymes

We also carefully select number rhymes to include those that children are familiar with from home. Some rhymes include:

- Counting back and counting forward
- "No" or "none" (Five little ducks went swimming one day)
- Counting in pairs (two, four, six, eight, Mary at the cottage gate)
- Counting to five, 10 and beyond