



NORTH CAVE C of E PRIMARY SCHOOL

EYFS Calculations Strategy

School vision:

A Christian school at the heart of the community that we serve.

Achieving our goals as we are guided by God's light.

Believing in ourselves, in each other and in God.

Caring and nurturing all of God's children in our school family.

Sharing our aspirations through our exciting, enriched and inclusive curriculum.

'Therefore encourage one another and build each other up, just as in fact you are doing.' 1 Thessalonians 5 Verse 11

I can do all things through him who strengthens me.

Philippians 4:13



Main Principals

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 ELG relevant to calculations is Number.

Early Learning Goal - Number

Children count reliably with numbers from 1 to 20, place them in order and say which number is one more or one less than a given number. Using quantities and objects, they add and subtract two single-digit numbers and count on or back to find the answer. They solve problems, including doubling, halving and sharing.

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 and 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 EYFS to support the development of mathematical concepts and an understanding of number that lead to embedding the skills and increasing confidence to perform calculations.

NUMBER

Counting principles

1

The one-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.

Children will sometimes count objects more than once or miss an object out that needs to be counted. Encourage children to line up objects and touch each one as they count saying one number name per object. This will also help to avoid children counting more quickly than they touch the objects which again shows they have not grasped one-one correspondence.



2

The stable-order principle. Children understand when counting, the numbers have to be said in a certain order.

Children need to know all the number names for the amount in the group they are counting. Teachers can therefore encourage children to count aloud to larger numbers without expecting them to count that number of objects immediately.

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.

In order to grasp this principle, children need to understand the one-one and stable-order principle. From a larger group, children select a given number and count them out. When asked 'how many?', children should be able to recall the final number they said. Children who have not grasped this principle will recount the whole group again.

4

The abstraction principle. This involves children understanding that anything can be counted including things that cannot be touched including sounds and movements e.g. jumps.

When starting to count, many children rely on touching the objects in order to count accurately. Teachers can encourage abstraction on a daily basis by counting claps or clicks. They can also count imaginary objects in their head to encourage counting on, this involves the children visualising objects.

5

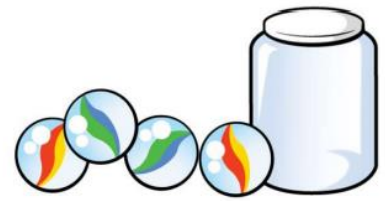
The order-irrelevance principle. This involves children understanding that the order we count a group of objects is irrelevant. There will still be the same number.

Encourage children to count objects, left to right, right to left, top to bottom and bottom to top. Once children have counted a group, move the objects and ask children how many there are, if they count them all again they have not fully grasped this principle.

COUNTING

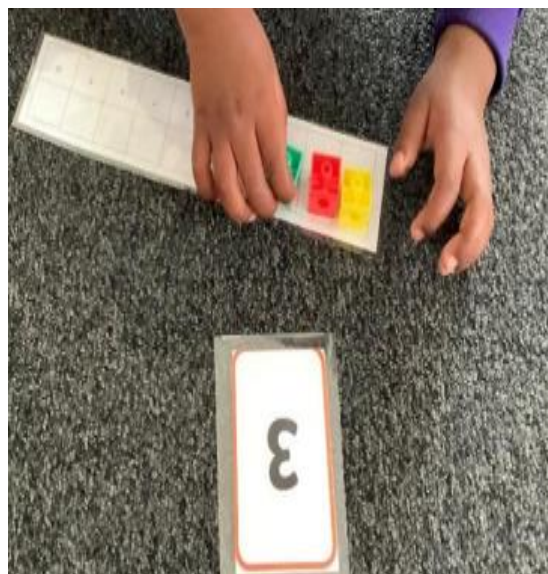
Ten frames

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



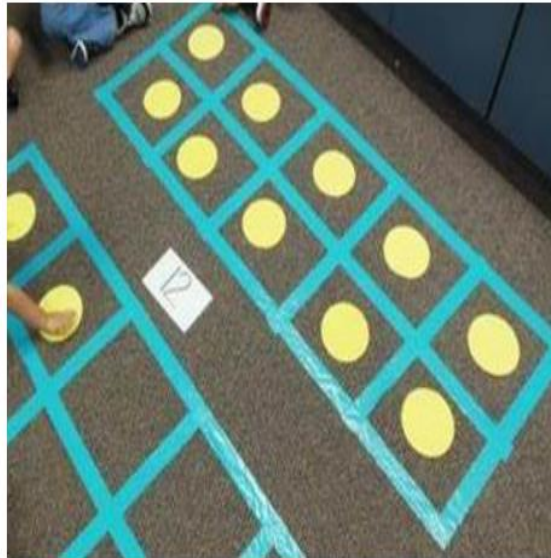
Number lines and tracks

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



Ten frames for adding, subtracting and number bonds

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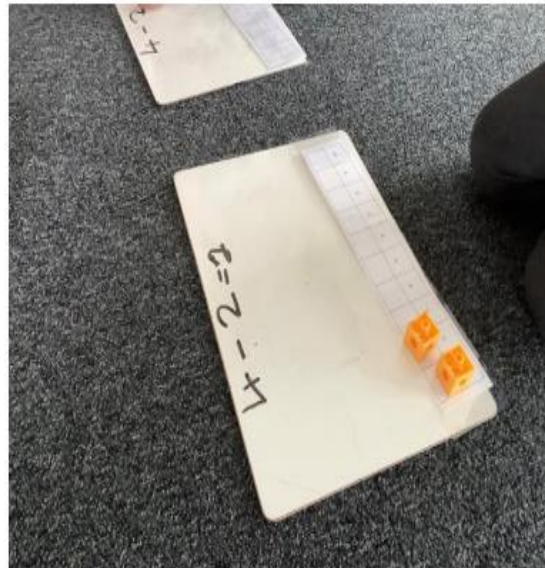
Numicon for counting and ordering numbers

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



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 Models for adding, subtracting and number bonds.

Part, part, whole Part, part, whole models 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.



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



DOUBLING AND HALVING CONTINUED

