ADDITION

EYFS

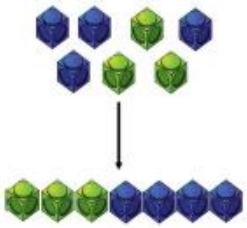
Young children first learn about adding in the context of games, rhymes and stories. When children begin to solve number problems in practical contexts, they come across different kinds of addition situations. For example, add ing can involve putting two different groups together, or adding more on to one group. Recognising a group of objects has a 'sense of five' or a 'threeness' about it enables a pupil to use this as a known fact when combining or counting on.

Key Vocab:
Add, more, and, make, sum, total, altogether, score, double, one more, two more, ten more…how many more to make…? How many more is…than…? is the same as

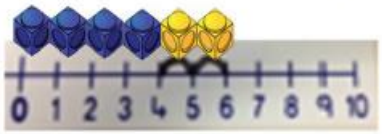
Early Learning Goal: Children count reliably with numbers from one to 20, place them in order and say which number is one more or one less than a given number. Using quantities and objects, they add and subtract two single-digit numbers and count on or back to find the answer. They solve problems, including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

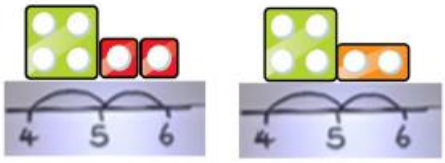
Addition

Combining two parts to make a whole (use other resources too e.g. eggs, shells, teddy bears, cars).

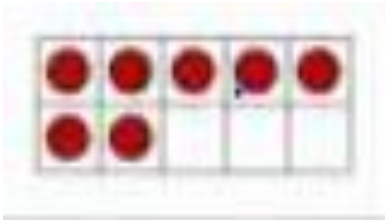


Counting on using number lines using cubes or Numicon.



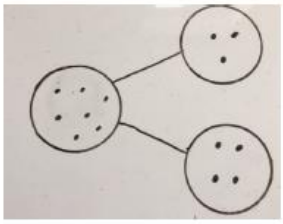


Counting on using fingers



Regrouping to make single digit numbers and 10

Children to represent the cubes using dots or crosses. They could put each part on a part whole model too.



Children should:

- understand addition as combining two or more groups of objects
- understand addition as counting on
- begin to understand the concept of doubles
- have an awareness of mathematical statements involving addition (+) and equals (=) signs

SUBTRACTION

EYFS

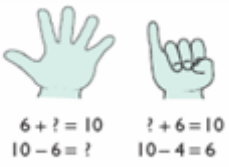
Young children first learn about subtracting in the context of games, rhymes and stories. When children begin to solve number problems in practical contexts, they come across different kinds of subtraction situations. For example, subtraction can involve take some away from a group, or comparing two groups to find the difference.

Key Vocab:
Take (away), leave, how many are left/left over? How many have gone? One less, two less...ten less....how many fewer is....than? difference between , is the same as

Early Learning Goal: Children count reliably with numbers from one 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

Subtraction

Begin to count backwards in familiar contexts such as number rhymes or stories



Cross out drawn objects to represent what has been taken away:

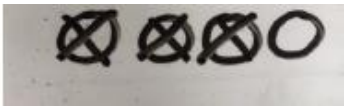
3 take away 2 is 1

Start with 3 ... 2, 1.

Coins

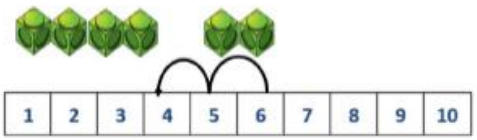
I had 10 pennies. I spent 4 pence. How much do I have left? Start with 10... 9, 8, 7, 6.

Children to draw the concrete resources they are using and cross out the correct amount.



Counting back (using number lines or number tracks) children start with 6 and count back 2.

6 - 2 = 4



Children should:

- understand subtraction as 'taking away' (counting back)
- subtract one-digit up to 10
- have an awareness of mathematical statements involving subtraction (–) and equals (=) signs
- Pupils physically taking away from groups
- Pupils counting objects – subtracting each object 'in time' to their verbal counting
- Moving objects from a numbered number line.

MULTIPLICATION

EYFS

Key Vocab:
Cout on (from..to) count back (from ..to) count in ones, twos, tens...
Is the same as

Children need a firm grounding in counting before they can count in groups. Counting two or more objects as a unit is an important mathematical skill, and experience of pairs will help. For example, count pairs of socks, gloves, shoes, eyes, and so on. Card games help children count the pairs they have made, or the number of tricks of three, for example. Children can count hands in fives and tens, although they may not have a clear idea of the final quantity (except that it is 'lots'). Grouping done in a practical, problem solving context will provide a solid basis for later learning

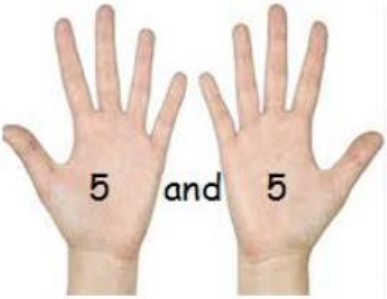
Early Learning Goal: Children count reliably with numbers from one to 20, place them in order and say which number is one more or one less than a given number. Using quantities and objects, they add and subtract two single-digit numbers and count on or back to find the answer. They solve problems, including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

Multiplication

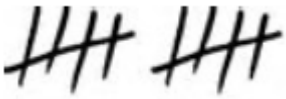
(more able)

Practically double a group of objects to find double of a number by combining then counting the two groups:

Double 4 is 8.



is 10



concrete objects/pictorial representations

Children should:

- understand multiplication through grouping small quantities
- Pupils need to use and apply their understanding of, and fluency in, multiplication to:
- solve simple grouping problems

DIVISION

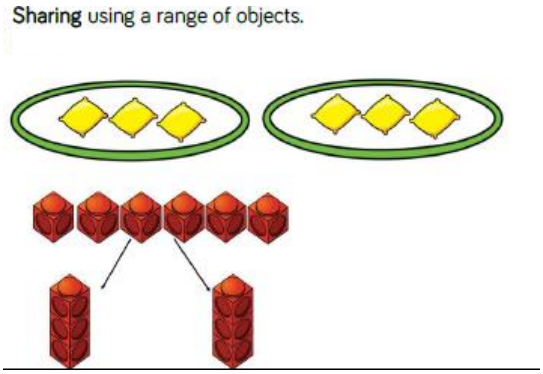
EYFS

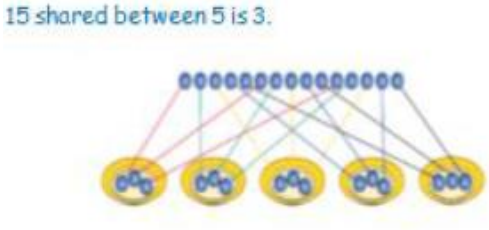
Children share out one at a time, 'one for you, one for you', which is counting out, but the beginnings of sharing. When dealing out large quantities children sometimes share out two at a time to make the sharing out quicker. When sharing out they will also have to decide what to do with a problem of a remainder to make it fair. Sharing done in a practical, problem solving context will provide a solid basis for later learning

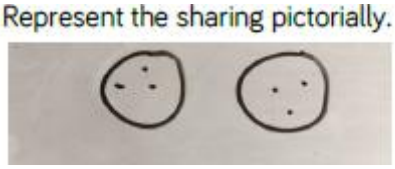
Key Vocab:
Half, halving, share, sharing, share out, left, left over, is the same as

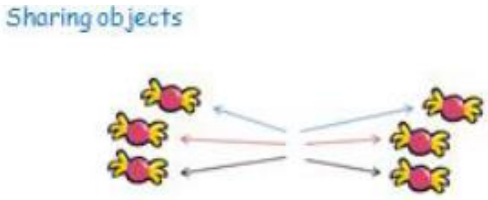
Early Learning Goal: Children count reliably with numbers from one to 20, place them in order and say which number is one more or one less than a given number. Using quantities and objects, they add and subtract two single-digit numbers and count on or back to find the answer. They solve problems, including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

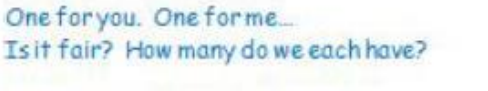
Division

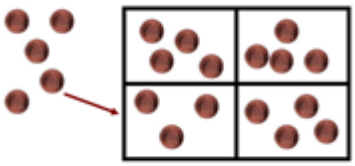












Division is done through practical contexts, relating to real objects such as food.

Children should:

- understand division through sharing small quantities between 2, 5 and 10. (exceeding)
- solve simple sharing problems, by calculating the answer using concrete objects
- be able to find half of small amounts in practical contexts