

ADDITION RECEPTION

Statutory requirements

- Count reliably with numbers to 20.
- Order numbers to 20.
- Say one more than a number.
- Using quantities and objects, add 2 single digit numbers counting on.
- To solve addition and doubling problems.

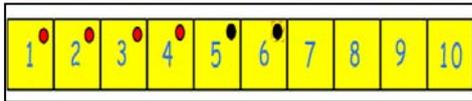
Representations

Initially an empty 'number' track will help children learn to jump along a track, but without numbers distracting them

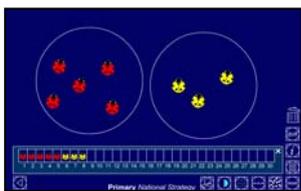
Using a number track.



4 red counters add 2 black counters



Use a variety of contexts for number tracks, bead strings and number lines:



Counting ITP

Numicon images



$$6 + 4 = 10$$

Number facts



People number line

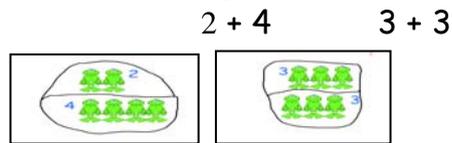
Vocabulary

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... ?
how many
is the same as

How pupils work mentally

Child's mental maths will be evident through conversations and daily observations of their play.

What children might record



I have 2 red buttons and 4 yellow buttons so altogether I have 6 buttons

$$2 + 4 = 6$$

Begin to start counting on from the biggest number

Children need opportunities to **mark make** in a variety of contexts – e.g. recording their score in a game, writing prices on labels for the shop... Provide a range of different sized papers and card, white boards, post-its, self-adhesive labels and clipboards etc. to encourage mark making.

Ask questions like, 'Can you put something on paper to show me your score...?'

SUBTRACTION RECEPTION

Statutory requirements

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.

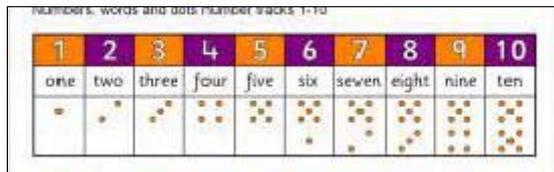
Vocabulary

take (away), subtract, leave
how many are left/left over?
how many have gone?
one less, two less...
how many fewer is... than...?
difference between
is the same as

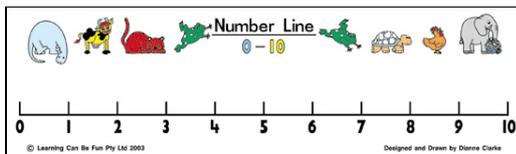
Representations



Sliding items along a giant bead



Count along number tracks and then number lines in jumps.



Counting opportunities at all times around the learning environment—then ‘take away’ items from group. How many left?

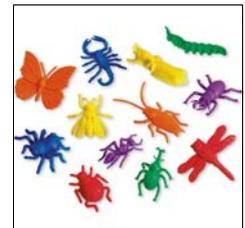


Numicon used to help understand subtraction. Counter pieces placed in holes used to subtract or other Numicon pieces overlaid, to represent the difference.

How pupils work—mentally

Children show their mental strategies through talk when on independent learning tasks in play and discussion in whole class sessions.

Children use number tracks and number lines to count on and back.



Children use concrete objects to remove from a pile—either counting back as they go or counting the remaining items in the set.

Children try and hold the starting number in their heads and count back the designated amount—for ELG expected only needs to be two single digit numbers.

What children might record

Children will share answers orally but need opportunities for mark making, such as writing in sand and other media. Children may by the end of the year choose to record in written numerals.

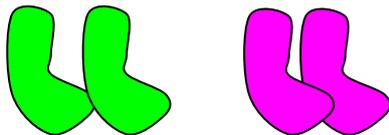
Children begin to try to write number sentences that match their calculations. E.g. $8-2=6$

Statutory requirements

ELG- Using quantities and objects they solve problems, including doubling, halving and sharing.

Representations

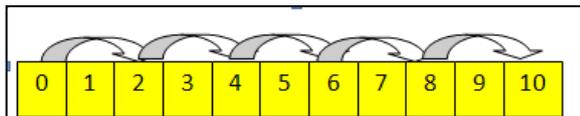
I have three pairs of socks in the bag. How many socks are there?



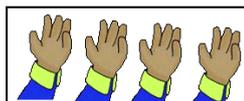
Check the answer by counting the socks in ones and then in twos.

Hopping in 2s along a number track or number line when ready

I jump 2, jump 2, jump 2, jump 2, jump 2. I land on 10.



Number tracks could be used to consolidate Counting fingers in 5s or 10's with flashing hands.

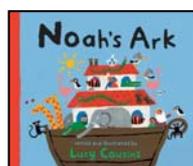
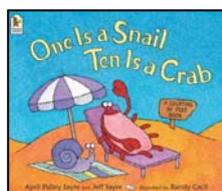


5, 10, 15, 20.
20 fingers altogether.

Counting beads in 10s.



10, 20, 30, 40, 50, 60, 70, 80, 90, 100
Use story contexts to support the understanding of counting in groups:



Vocabulary

+, add, more, plus, sum, total, altogether, score, one more, two more... ten more number zero, one, two, three... to twenty and beyond zero, ten, twenty... one hundred how many...? count, count (up) to count on (from, to) count back (from, to), count in ones, twos... tens... more, less, many, few, odd, even, double, half, halve, pair, count out, share out, left, left over, count, sort, group and set.

Mental Methods

I collected 2 big bears, 2 medium bears and 2 baby bears. I have got 6 bears altogether.'



'My beanbag landed in the 2 bucket 4 times. I scored 8 points.'

Children count in 2s, 5s, and 10s to count the total number using a variety of resources such as Numicon



Pupils Written Jottings

Children need opportunities to **mark make** in a variety of contexts – e.g. recording their score in a game, writing prices on labels for the shop...

Provide a range of different sized papers and card, white boards, post-its, self-adhesive labels and clip-boards etc. to encourage mark making.

Ask questions like, 'Can you put something on paper to show me your score...?'

Can you write a number sequence counting in 2s, 5s or 10s?

Can you circle the even numbers? Can you circle the odd numbers?

Division Reception

Statutory requirements

Using quantities and objects they solve problems, including doubling, halving and sharing.

In the context of everyday problems (half a cake etc.) In the context of calculating number (half of 8 is 4) this would equate to exceeding.

Representations

Children need opportunities through play to understand and experience division in terms of

Sharing - 'one cake for me, one cake for you...'

Grouping - 'let's put three cakes on each plate'

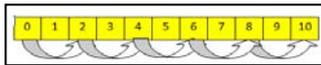
Both terms are to be used from the beginning

I have 6 socks in the bag. How many pairs of socks are there?



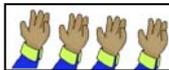
Check the answer by counting the socks in ones and then in twos.

Hopping in 2s along a number track



I landed on 10. How many jumps of 2?

Counting fingers in 5s.



We have got 4 cartons of milk, so 2 cats can have 2 cartons each.



Talk about 'half' in a context - 'You can have half...', 'We'll do that in half an hour'

NUMICON IMAGES



Vocabulary

compare
double
half, halve
pair
count out, share out
left, left over
count, sort
group, set

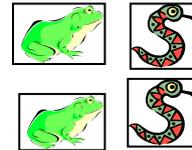
What pupils record

Children's mental maths will be evident through conversations and daily observation of their play.

Jottings

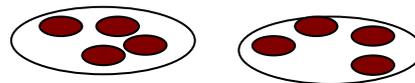
Explaining what they are doing

I am counting the animals in two's



Modelling from a story focus - 'The Doorbell Rang'

I am sharing the 8 cookies between my friend and me



'I have got 6 bears, that's 2 big ones, 2 medium ones and 2 small ones.'



'I scored 8 points. I threw my beanbag into the bucket 4 times.'

Children should be supported in mark making as part of independent play and games. They should have access to paper, card and clipboards and pens. Adults can discuss with children how they might show what they have found out.