

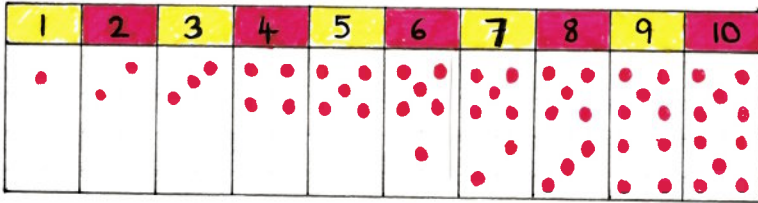


# Bernie Westacott

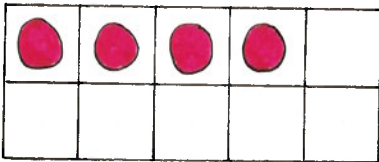
TEACHING MATHS WITH VISUALS AND MANIPULATIVES

## Early Number

Number track first → number line much later

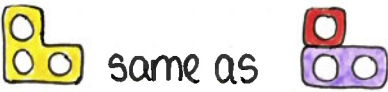


## Ten Frame



subitising 4  
... because it's one less than a full row (5)

## Numicon



same as

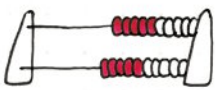
## Two-colour counters



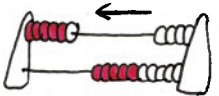
shown as

3 has 2 in it  
↑  
Hierarchical Inclusion

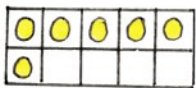
## Rekenrek



Starting WHITE on Right

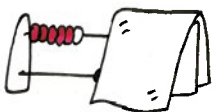


"Show me 6"  
we want children to do this in one movement...  
...and in



multiple ways →

## Hidden Things



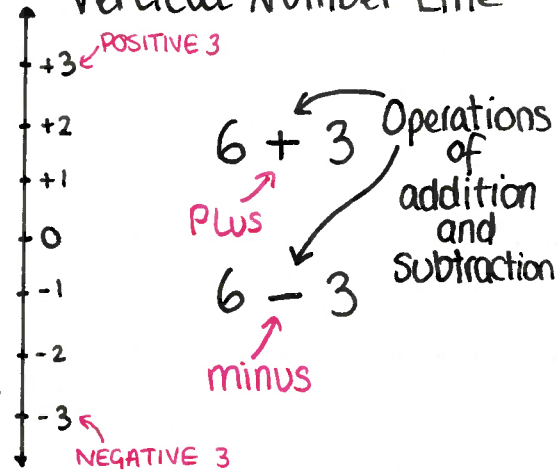
e.g. How many are 'hiding' on the top row?

Sketchnote summary by Charlotte Hawthorne @mrshawthorne 7

## Negative Numbers

"Spend a lot of time building the basic concept of positive and negative numbers and how you operate with them"

## Vertical Number Line



## Using Discs or Two-colour Counters



make the number one more than that

... bring in a +1

Now...



make the number one more than that



! makes you think!

The writing down... this isn't the maths... when we're DOING with the manipulatives, that's the maths!