

Who has more?



Griffiths, Back & Gifford (2016) *Making numbers* Oxford University Press

The voting station

Nrich



4 more people to vote: what might happen?

The Estimation Station

<https://nrich.maths.org/content/id/13339/Estimation%20Station.pdf>

Opportunities for estimating?



A handful: how many have you got?

- Estimate
- Count and label
- Order



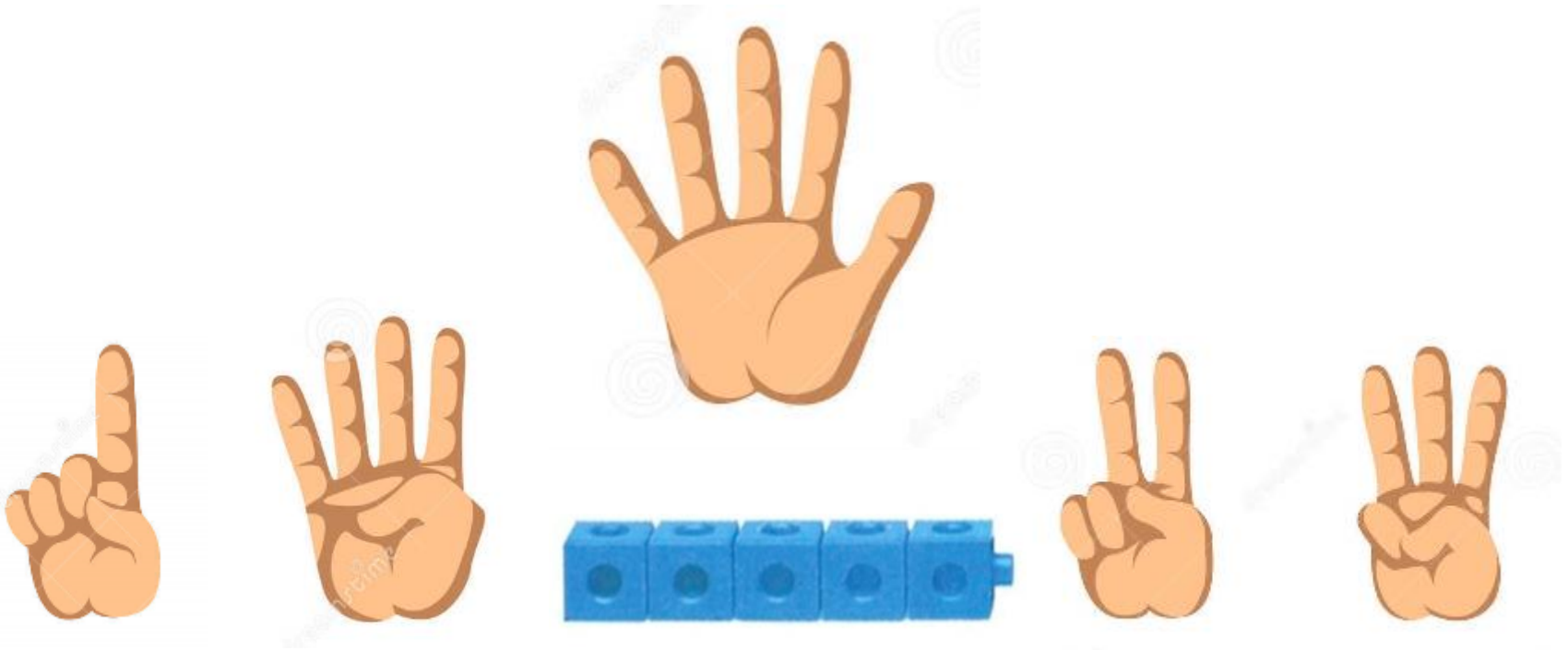
Estimating herbs

You can pick 2 out of every 100

I picked 4 because I thought there were about 200!

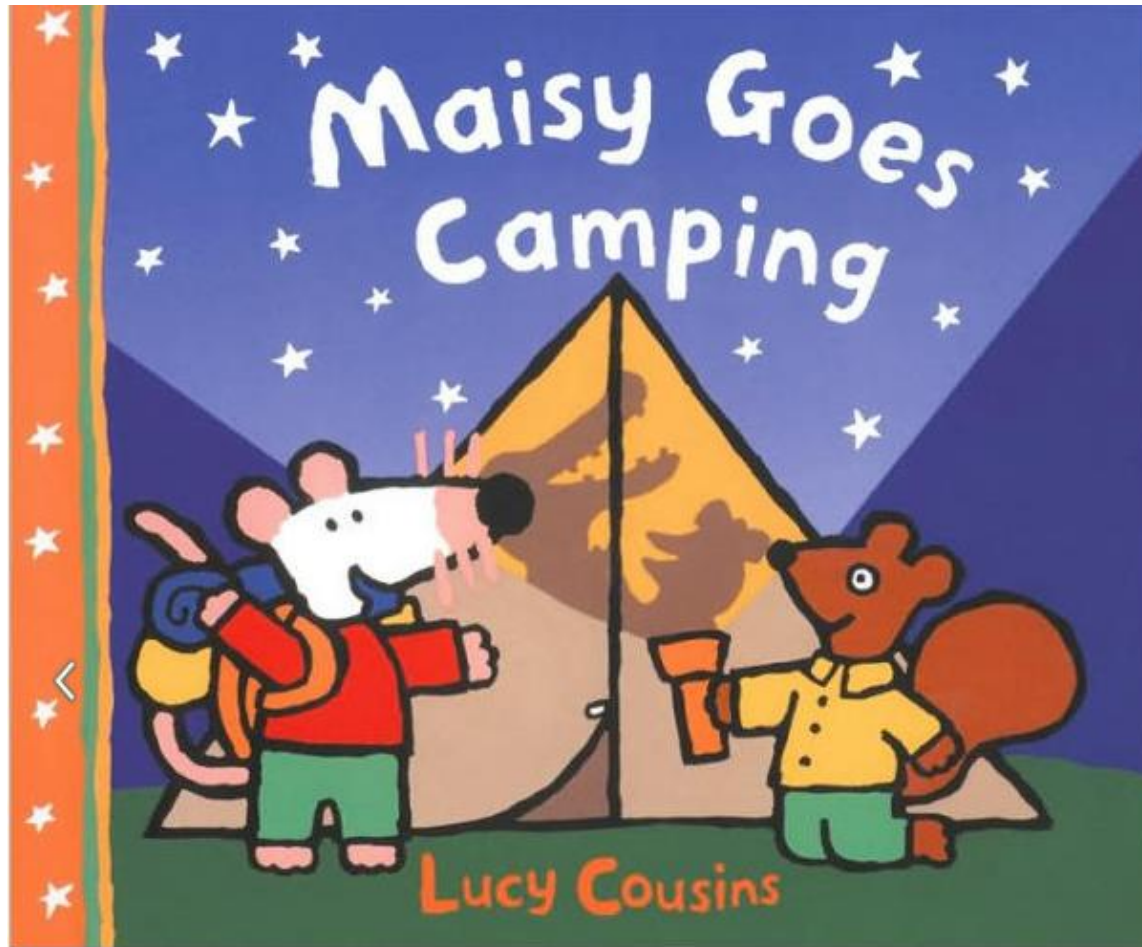


Composition



Bunny ears

Maisie goes camping





*How many are in
the tent?*

Holly Shepherd, Riverside Primary

Number Talks

How many are there?

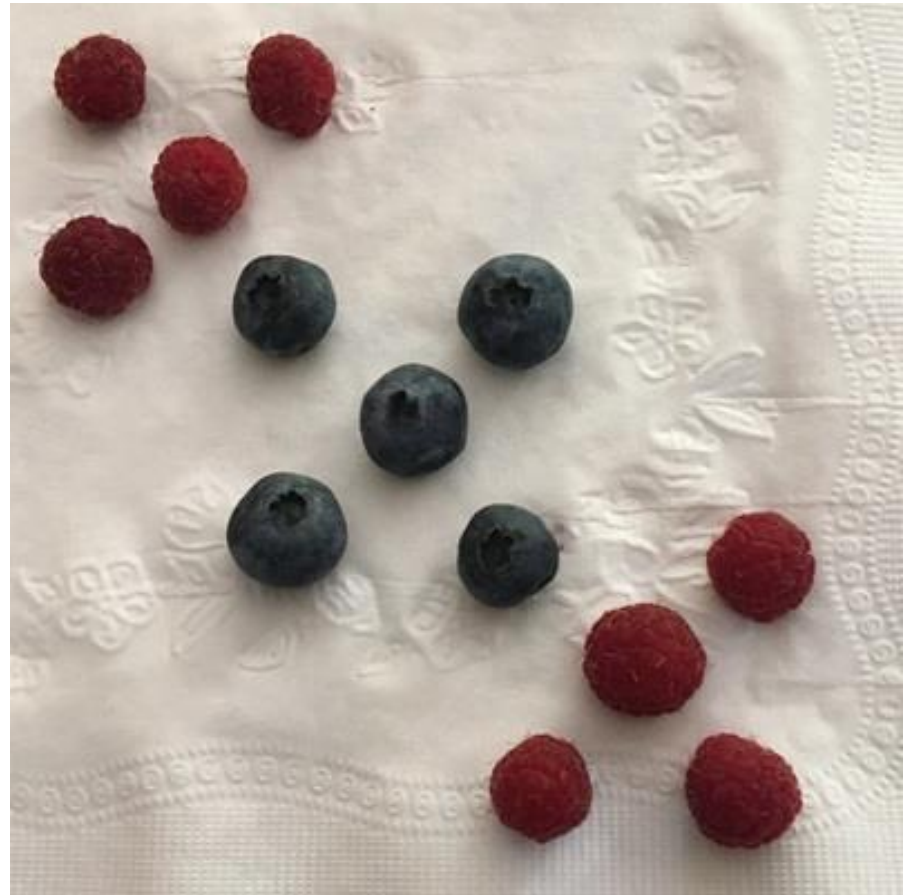
How did you see them?

<http://ntimages.weebly.com/photos.html>



Say what you see

ntimages.weebly.com



How many ways?

Throwing beans, small world play, stories



Number composition in 3D



Patterns for 10



A pedagogy for number sense

- routines –snack time, tidying up
- games –collecting, tracks, targets, hiding
- number rhymes and picture books
- problem solving eg sharing, stories
- playfulness- eg making mistakes, puppets
- ‘sustained shared thinking’ with adults:
 - goal-oriented activities
 - ‘cuddly’ maths times?



Tidy up time

NRICH Early years

Davenall, J. (2015)

<http://nrich.maths.org/11528>



Snack time



Register 10 frames: using children's photos



Meadowcroft Infants

Julie Mason & Karen Henderson

Number games

collecting games



track games



target games



hiding games

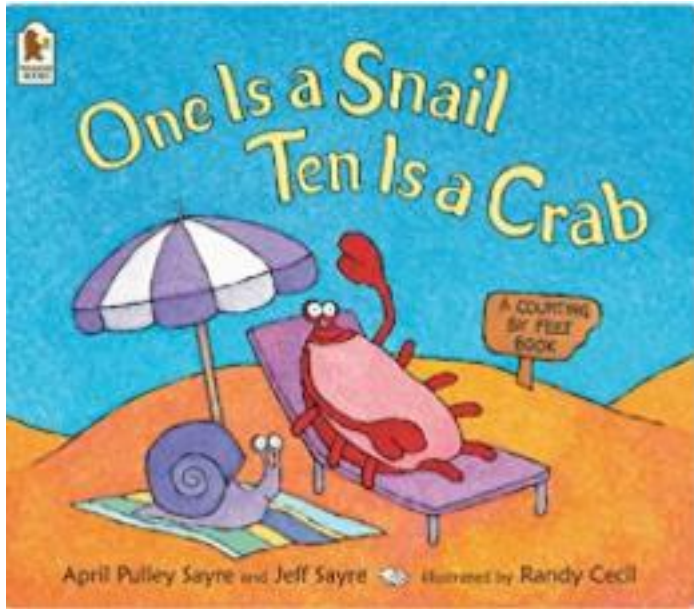


Number rhymes



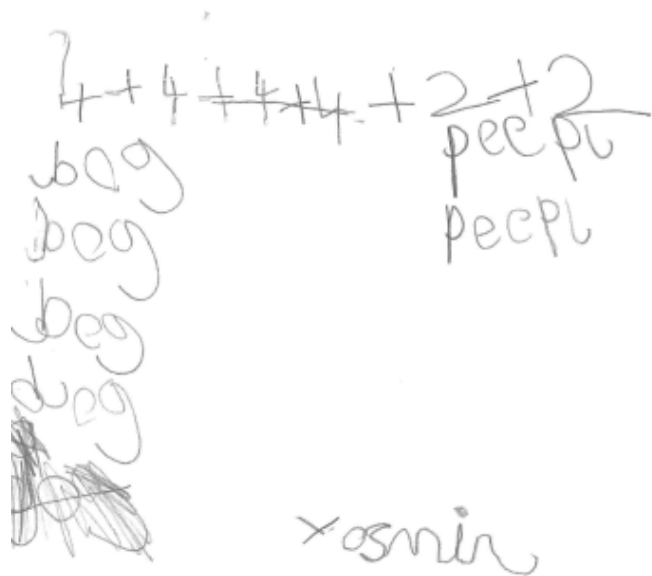
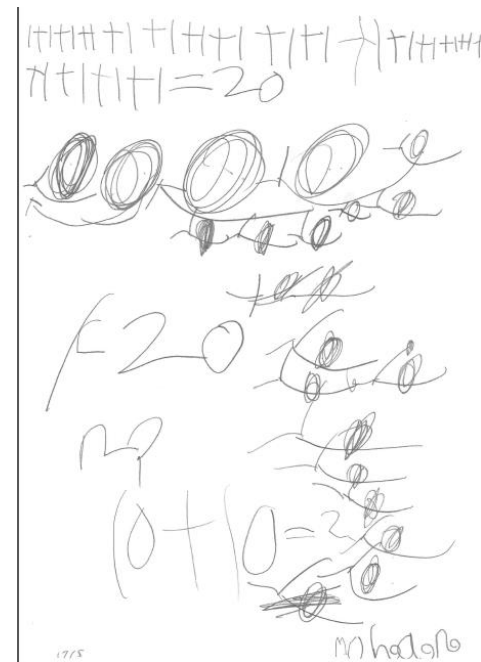
How do you link with:

- fingers
- number symbols
- adding and subtracting, predicting
- number composition
- outdoors?



20 legs

snails,
people
and dogs



Charlaine



(knew that if she had
18 she needed 2 more
to make 20).

The Doorbell Rang

by Pat Hutchins



Predictors of later achievement

- counting out a number from a group
- subitising
- numeral meanings
- relative number size
- predicting adding one / taking one
- number combinations
- spontaneous focusing on numerosity
- finger gnosis!
- pattern awareness
- spatial reasoning