Fill the box

Children fill a matchbox with items and count them accurately.

Skills practised:

- Counting accurately to at least 20
- Estimating up to at least 20

Conjecture: It is possible to fit 20 things in a matchbox.

What to do:

Children work individually or in pairs.

Children working on this challenge will need a small matchbox and access to small items, e.g. used matches, paper clips, Lego^{\dagger} 2-brick pieces, sunflower seeds, blades of grass as well as some items which are too big to fit 20 of them into the matchbox, e.g. pennies, dried chickpeas, acorns, leaves, 6-brick Lego^{\dagger} pieces, conkers, marbles.

- 1. Explain that the challenge is to find 20 IDENTICAL things to fit in a matchbox. Ask children to look at the items available and discuss which they think will be possible.
- 2. Children choose an item and carefully count out 20, then see if they will fit in the matchbox. Can they fit any more in?
- Children repeat with a different item.

Which item do they think they will need most of to fill the matchbox? And the least?

After initial experience, can children make a sensible estimate of how many of an item will fill the box?

CHALLENGE: Can children fill their box with 20 DIFFERENT things?

Aims:

- To make and test predictions
- To make estimates based on experience

Minimum number of calculations expected

N/A

© Hamilton Trust investig_pv_1117

