

BEGINNING COUNTING PROBE

When to use?

Students show counting strategies for small collections.



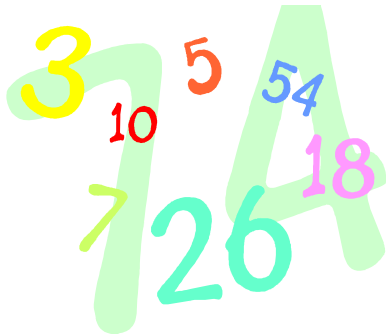
What it shows?

Students' abilities to use sophisticated counting strategies and the ability to deal with unseen collections.



Why use it?

Assesses whether teaching should begin or consolidate 'trusting the count' and part-part whole concepts or consolidate and establish mental strategies for larger collections

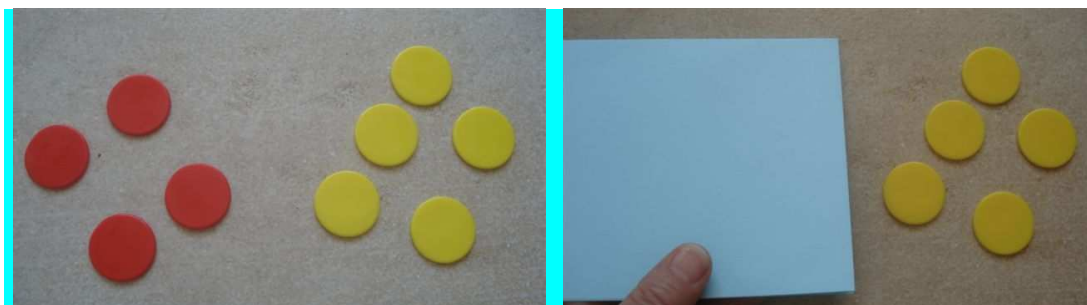


Materials:

- 9 counters and a card to cover counters
- Card attached

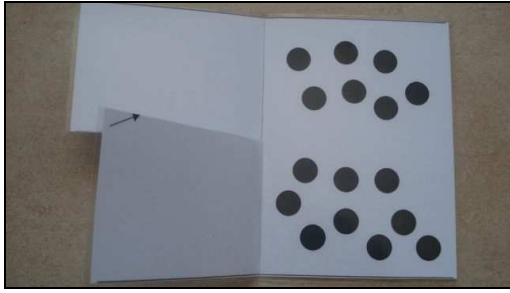
How:

- Put 5 counters in front of student and 4 counters under the card (so student cannot see them). [Video example - control and click here to view](#)

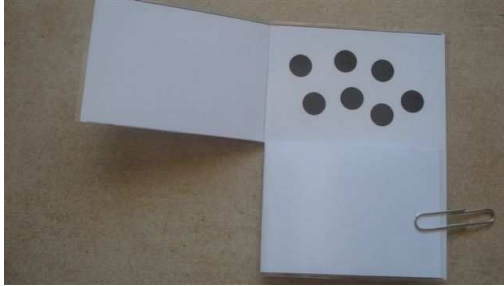


- Say to student : There are 5 counters here and 4 under the card, without moving the card, tell me how many counters altogether
- Write down the students answer
- Say to student : How did you work that out?
- Write down the student's answer
- If student does the above tasks easily continue with the following

- Either using counters or the card attached



- Cover 9 counters or the 9 dots on the card leaving 7 visible



- Say to student : There are 7 dots here and 9 under the card, without moving the card, tell me how many counters altogether .

[Video example - control and click here to view](#)

- Write down the student's answer
- Say to student : How did you work that out?
- Write down the student's answer

Adapted from: Steffe, L. P., Von Glasersfeld, E., Richards, J., & Cobb, P. (1983). *Children's counting types: Philosophy, theory, and application*. New York: Praeger.

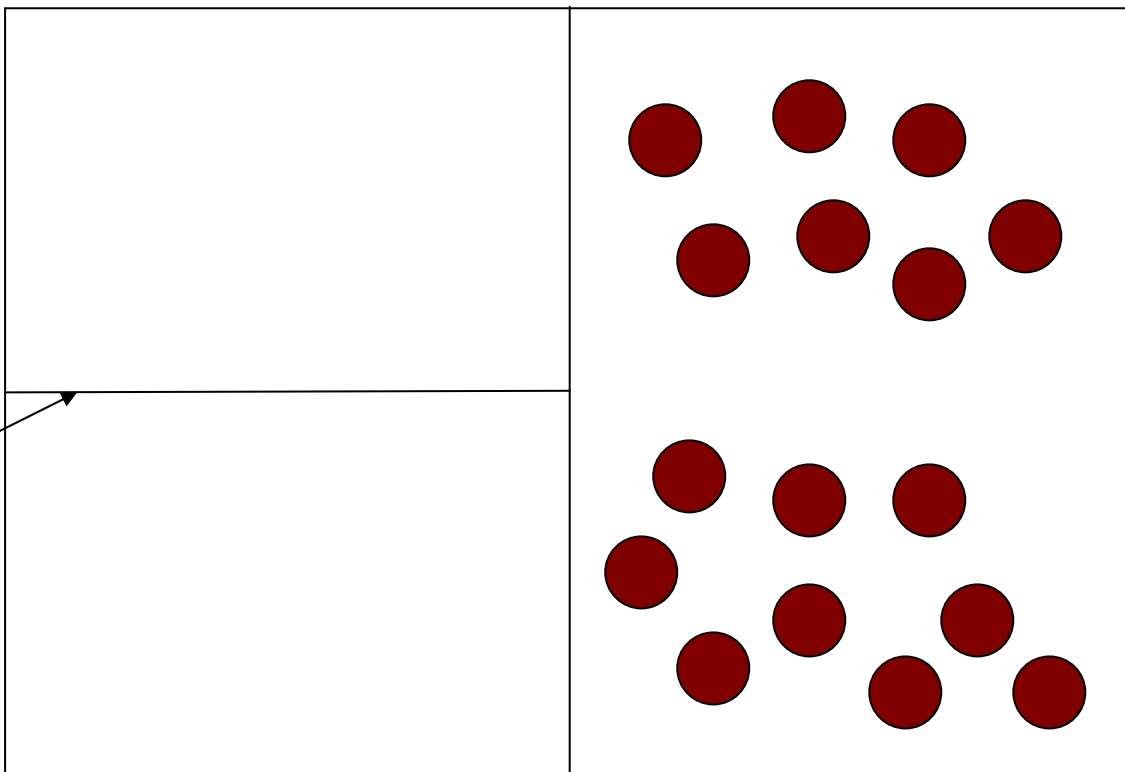
What to do next: Teaching Activities

IF	THEN
<p>If Student makes little or no response, may count what they see (5)</p>	<p>Then</p> <ul style="list-style-type: none"> Practice counting collections and oral counting to establish the number naming sequence Check and consolidate the link between collections, number words and numerals (<i>make, name and record numbers to 10</i>) Practice <i>counting on from 1, 2, or 3</i> using a conventional 6 –sided dot dice and another dice with 1-3 in dots and 1-3 as numerals. Toss dice, ask students to read numbers, cover 1, 2 or 3, then count on the dots on the other dice
<p>If Student counts the 5 counters and attempts to count the hidden collection by <i>counting on or counting all</i></p>	<p>Then</p> <ul style="list-style-type: none"> Use subitising cards to develop recognition of small numbers without counting and build <i>part-part-whole ideas</i> for numbers 1-5 (eg, 4 is 1 and 3, 2 and 2, 1 less than 5 etc). Practice <i>counting on from given number</i>, eg, use a set of numeral cards and a 6- or 10-sided dice, say the number and count on dots displayed on dice Model counting on 2, 3 or 4 by starting from given number and clapping as you count, eg, 5 ...6 (clap), 7 (clap), 8 (clap), 9 (clap). Repeat with different starting numbers and fingers or taps instead of clapping. Taps can mirror familiar pattern, eg, if counting on 5, taps could be spatially located to represent 5 pattern on a dice
<p>If Student correctly counts on to 9 using fingers etc. but unable to deal with 7 dots task.</p>	<p>Then</p> <ul style="list-style-type: none"> Use ten-frames and subitising cards to consolidate and develop <i>part-whole ideas</i> for the numbers 5-10 (that is, that 7 is 1 more than 6, a 5 and 2, or a 3 and 4 Practice by asking students to say what they know about a given number, eg, “6 is double 3”, “it’s 2 more than 4, 1 less than 7, 4 less than 10” and so on. Record on posters and display, review regularly
<p>If Student responds immediately saying “I just know” or by using number fact knowledge, eg, “I thought of 5 and 5 and 1 less made 9”. Student attempts task with 7 dots but unable to complete or incorrect or counts on all by ones</p>	<p>Then</p> <ul style="list-style-type: none"> Consolidate mental strategies for addition (see Subitising Probe Task Advice) commencing with <i>count on from larger</i> (eg, 2 and 7, think: 7 ... 8, 9) Proceed to the <i>doubles and near doubles</i> mental strategy (eg, 6 and 7, think: double 6 is 12 and 1 more, 13) Use Ten-frames and Open number Lines to scaffold the <i>make-to-ten</i> mental strategy (eg, for 6 and 8, think: 8 ... 2 more to 10 and 4 more ... 14)
<p>If Student answers both tasks correctly on the basis of number fact knowledge or the</p>	<p>Then</p> <ul style="list-style-type: none"> Consolidate mental strategies through practice and making strategies explicit

use of an appropriate strategy such as *make-to ten*

- Extend strategies to solve basic subtraction problems mentally, eg, for 7 take-away 3, use part-part-whole knowledge or count back 3, for 12 take-away 5 use make-back-to-ten and part-part-whole knowledge for 5 and 10, and for 16 take-away 9 use place-value knowledge and/or halving.

Card with dots:



The card is a large rectangle divided into two horizontal sections by a line. The top section is empty. The bottom section contains two groups of red dots. The top group has 7 dots arranged in two rows: the first row has 3 dots and the second row has 4 dots. The bottom group has 9 dots arranged in two rows: the first row has 3 dots and the second row has 6 dots.



Cut along this line and fold bottom portion over to hide nine dots