

Adding with a bead string

CAPS

Level 1 [1-20 bead string, number line]

Whole class:

- Write $8 + 5$ on the board and tell the class that you want to work this out on a bead string.
- Stick the bead string on the board and explain the structure of the bead string to the class (5 of each colour).
- Move 8 beads over in one go, saying "I have moved 8 beads over in one go. How did I know that was eight?" Here you want to emphasize $5+3$ is 8.
- Move 5 beads over to the middle of the bead string saying, "I moved 5 beads in one go. How did I know that was five?" Here you emphasize that $2+3$ is 5.
- Say, "I don't want to count in ones. So when I look at the 5 beads I can see that if I move 2 beads over then I will have ten beads because $8+2$ is 10." Move two beads over.
- Say, "How many more must I still add?" whilst pointing at the 3 beads. Once children answer move the three beads over saying, "So, what is ten plus three?" Write your answer in the number sentence.
- Encourage mental working without counting on in 1's.
- Do three more similar tasks with the class. Get learners to do the 3rd task with you on their own bead strings. For example:
 - A. $9 + 6$ and follow the same process as above (Move 9 beads over on a 1-20 bead string. Say: I have 9 beads and I want to add 6 more beads. I am going to start by adding 1 bead to give me 10. I added 1 bead to get to ten, how many more beads do I need to add? Five more, because 1 and 5 make 6. What is ten plus five?)
 - B. $7 + 5$ C. $8 + 6$
- Replay these activities on a number line then record as a number sentence ($8 + 5 = 13$)

What to look for:

- Children can **say** the number of additional beads needed
- Children can **show** the combination on the bead string
- Children can **record** by:
 - replaying their calculation on a number line
 - writing/or completing the number sentence

TERM 3

Level 2 [1-20 bead string, number line]

Pair work:

- Pairs can work on similar tasks given by the teacher.
- Learners have to show and explain to each other how they solve given problems using the bead string (and/or a number line) by first jumping to 10.

- Children **first add to ten** and then add the rest of the second addend.
- Children **do not count in ones** on the bead string to get their answers.