

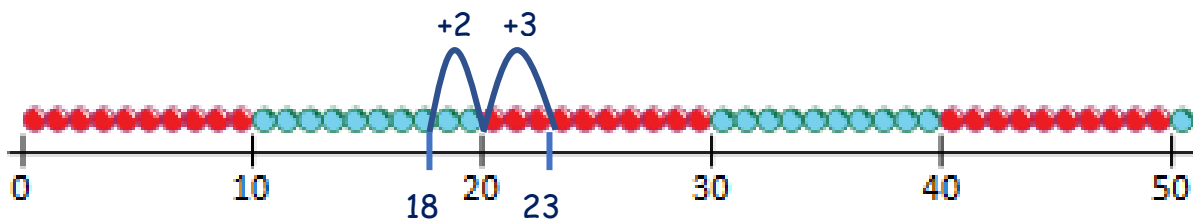
## Hops to fours

### Activity 1

**Focus of activity:** Bridging 10 when adding 1-digit numbers to 2-digit numbers, e.g.  $48 + 5$ .

#### Working together: conceptual understanding

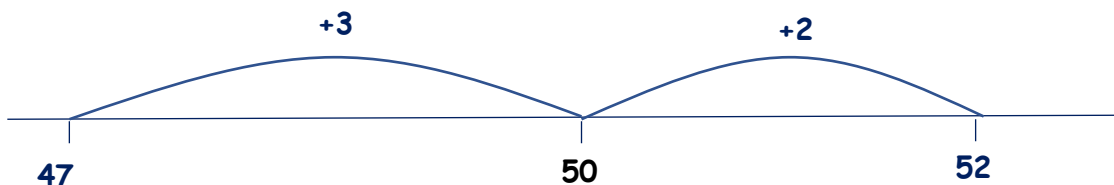
- Show 8 beads on the left of the bead bar as the children see it. Move another 5 beads along as one group to join them to show  $8 + 5$ . Point out how 2 beads makes 10, and 3 more makes 13.
- Repeat to show  $18 + 5$ ,  $28 + 5$ ,  $38 + 5$ ,  $48 + 5$ ...  $88 + 5$ . Point out the pair 8 and 2 each time to make the next 10, and then how we can add 3 using place value to make 'somethingty' three. Also point how the 10s digits change as we cross a multiple of 10.
- Give each child a 0 to 100 beaded line (see child instructions). Ask children to draw a label after the 18<sup>th</sup> bead. *We're going to add 5 like we did on the bead bar, but show the steps on a beaded line. How many more gets us to 20?* Ask children to draw a hop and label it +2. *How many more do we need to add? And what is 20 add 3?* Ask children to draw a hop of 3, labelled +3, and label where it lands.



- On the same line ask children to show jottings for  $38 + 5$ .
- On the next line ask children to work out  $15 + 6$ , drawing a hop to 20 and then a hop to the answer. Share answers and help children to make any corrections. *What pair to 10 did you use this time?*
- On the same line, ask children to work out  $45 + 6$  and  $75 + 6$ . Point out that these additions are really not much harder than  $5 + 6$ .

#### Up for a challenge?

- Give each child a 0 to 100 landmarked line (see child instructions). Remind children that this is like a beaded line but without the beads. Write  $47 + 5$ . Ask children to mark 47 on the landmarked line. Suggest children imagine where the 7 beads would come to between 40 and 50. They then draw a hop to reach 50. *How big is this hop? What pair to 10 can we use? How much more do we need to add on? What is 50 add 2?* Ask children to draw a hop of 2 and label 52 on the line. *The first hop uses a pair to 10, and the second uses place value.*



- Ask children to draw a similar hop on the same line to work out  $67 + 5$ .

### Now it's the children's turn:

- Children practise bridging 10 on beaded lines, aiming to get answers ending in 4 to score higher points.
- Go round the group and mark their additions as they do them, e.g. initially after one set of three examples. Encourage them to use number facts and place value to add rather than counting on in ones.

### **S-t-r-e-t-c-h:**

If children cope well, ask them to use landmarked lines instead of beaded lines.

### Things to remember

*Remember that when we add a number which means we will cross the next 10s number, it's good to add the number on in two steps – first adding to the next 10s number, then adding the rest using place value. Hop, 10, hop!* Write the following additions and ask children which will cross the next 10s number:  $37 + 4$ ,  $23 + 4$ ,  $49 + 4$ ,  $72 + 4$ . Show the first number on the bead bar to help if necessary.

You may want to add something that has emerged from the activity. This may refer to misconceptions or mistakes made.

Resources	Outcomes
<ul style="list-style-type: none"><li>• 100 bead bar</li><li>• 0 to 100 beaded lines (see child instructions), preferably copied onto A3 paper</li><li>• 0 to 100 landmarked lines (see child instructions,) preferably copied onto A3 paper</li></ul>	<ol style="list-style-type: none"><li>1. Children can bridge 10 when adding 1-digit numbers to 2-digit numbers, e.g. <math>48 + 5</math>, using a beaded line to help.</li><li>2. Children begin to bridge 10 when adding 1-digit numbers to 2-digit numbers, e.g. <math>48 + 5</math>, using a landmarked line to help.</li></ol>

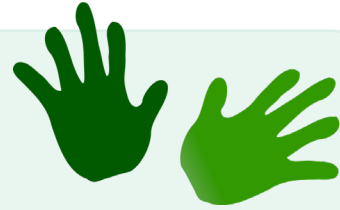
## Hops to fours

### Activity 1

*Work in pairs, but record your work on your own sheet.*

#### Things you will need:

- A sheet of 0 to 100 beaded lines
- A pencil



#### What to do:

- Choose a set of three additions to work out on one beaded line. Score 1 point for each correct answer, but 10 points for any answers ending in 4, e.g. 14, 24, 34... 94!
- Now choose another set to work out on the next beaded line.
- Keep going. Can you score more than 30 points?

$$7 + 5 \quad 27 + 5 \quad 57 + 5$$

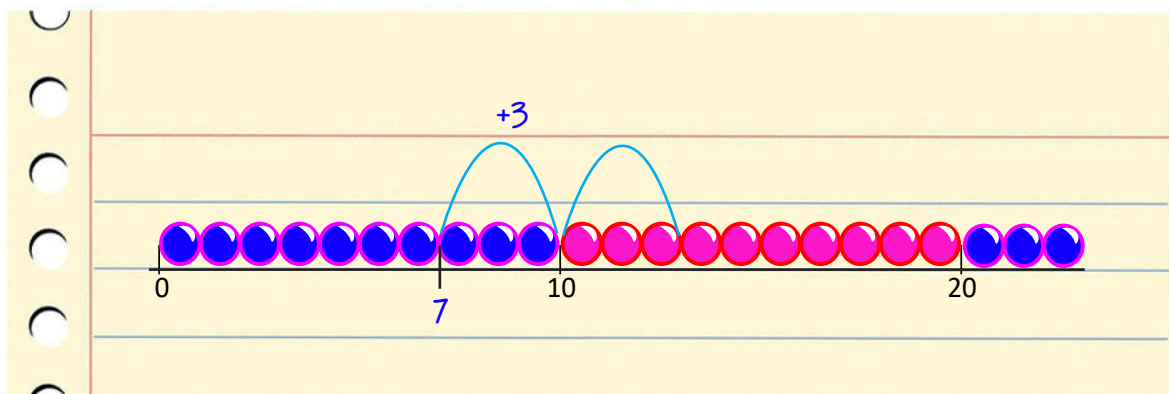
$$18 + 6 \quad 48 + 6 \quad 78 + 6$$

$$9 + 5 \quad 19 + 5 \quad 39 + 5$$

$$37 + 7 \quad 67 + 7 \quad 87 + 7$$

$$26 + 8 \quad 56 + 8 \quad 86 + 8$$

$$8 + 3 \quad 38 + 3 \quad 68 + 3$$



#### ***S-t-r-e-t-c-h:***

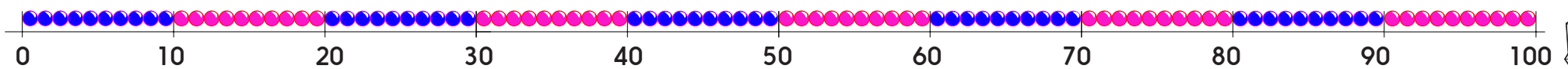
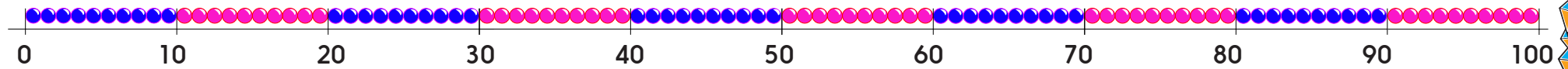
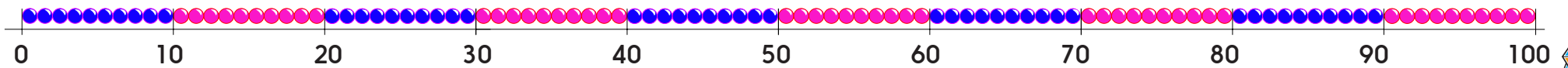
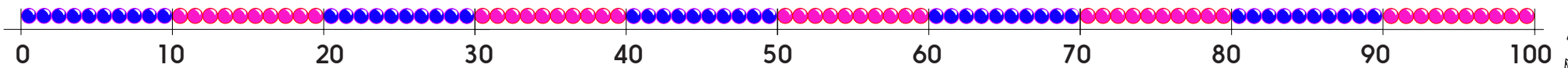
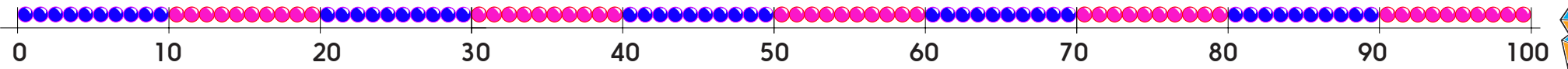
Use landmarked lines instead of beaded lines.

#### Learning outcomes:

- I can bridge 10 when adding 1-digit numbers to 2-digit numbers, e.g.  $48 + 5$ , using a beaded line to help.
- I am beginning to bridge 10 when adding 1-digit numbers to 2-digit numbers, e.g.  $48 + 5$ , using a landmarked line to help.

# Hops to fours

## Activity 1



# Hops to fours

## Activity 1

