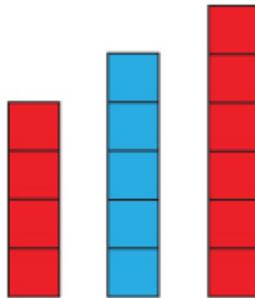# Tower trios

Focus of activity: Finding one more and one less than numbers up to 20.

Working together: conceptual understanding

- Show a set of towers of red cubes, from 1 to 20 cubes. Give several to each child.
- Make a tower of 5 blue cubes and place in the middle of the table. Count the cubes.
- *Who has the tower with <u>one more</u> cube?* If a child thinks they have this tower, they place it on the right of yours. Does it have one more cube? If so leave it there, if not return the tower and ask again, trying other towers.
- *Who has the tower with <u>one less</u> cube?* If a child thinks they have this tower, they place it on the left of yours. Does it have one less cube? If so leave it there, if not return the tower and ask again.
- Look at the three towers, pointing out how the tower with 4 red cubes has one less than the blue tower of 5 cubes and the tower with 6 red cubes has one more cube than the blue tower.

- Return the towers.
- Make a tower of 10 blue cubes and place in the middle of the table.
- *Who has the tower with one more cube?* If a child thinks they have this tower, they place it on the right of yours. Does it have one more cube? If so leave it there, if not return the tower and ask again.
- *Who has the tower with one less cube?* If a child thinks they have this tower, they place it on the left of yours. Does it have one less cube? If so leave it there, if not return the tower and ask again.
- Look at the three towers together, pointing out the steps of one.
- Return the towers.
- Make a tower of 15 cubes and repeat.

Up for a challenge?

Spread out a set of 1 to 20 cards. Pick up the 10 card. Ask children to find the number card which is one more than 10, then one less than 10. Repeat with other starting numbers.

Now it's the children's turn:

- Give each child a set of towers of 1 to 20 cubes and a set of 1 to 20 number cards. They choose a tower and find the matching number card. They then find the tower with one more cube and the tower with one less cube, and matching number cards. Repeat for other towers.
- Go round the group and observe children as they find towers with one more/less cubes. You may wish to take photographs of their trios of towers and number cards as a record of their work.

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

If children cope well, ask them to repeat the activity without the towers. They choose a number card, and find the number that is one more and the number that is one less.

Things to remember

Remember that the number which is one more is the next number. The number that is one less, is the number before. Write 10 in the middle of a piece of paper. Show children a 1-20 number track. *What number is one more?* Write this after 10. *It's the next number on the number track. What number is one less than 10?* Write this before 10. *9 is the number before 10 on the track.* Repeat with 5 and 15. You may want to add something that has emerged from the activity. This may refer to misconceptions or mistakes made.

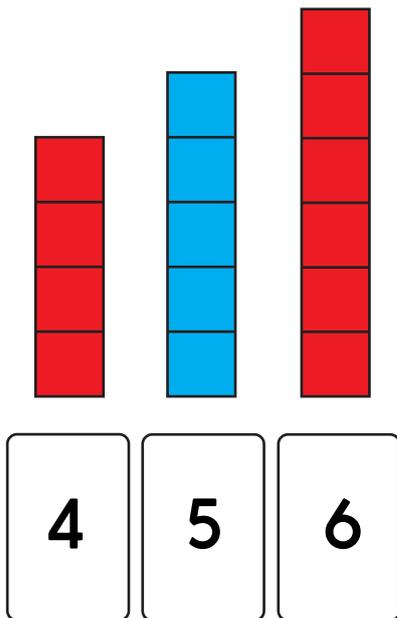| Resources	Outcomes
- Towers of cubes (1 to 20) - 1-20 number cards - 1-20 number track	1. Children can find one more and one less than numbers up to 20 using towers of cubes. 2. Children begin say the number that is one more and one less than numbers up to 20.

Tower trios

Work in pairs

Things you will need:
- A set of towers of 1 to 20 cubes
- 1 to 20 number cards

What to do:

- Choose a tower. Find the matching number card.

- Find the tower with one more cube. Find the matching number card.

- Find the tower with one less cube. Find the matching number card.

- Repeat for other towers.

| 4 | 5 | 6 |

S-t-r-e-t-c-h:
Choose a number card. Find the number that is one more.
Find the number that is one less.

Learning outcomes:
- I can find one more and one less than numbers up to 20 using towers of cubes.
- I am beginning to say the number that is one more and one less than numbers up to 20.