

Can I describe an array and write number sentences about it?

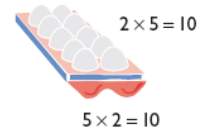
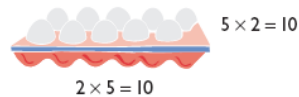
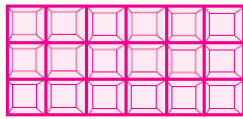
Teaching guidance

Key vocabulary

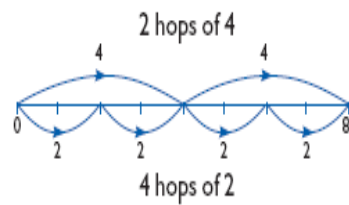
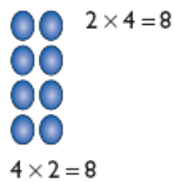
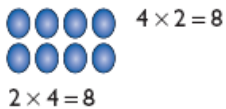
array, repeated addition, multiply, multiplied by, groups of, lots of, times, row, column, pattern

Models and images, resources and equipment

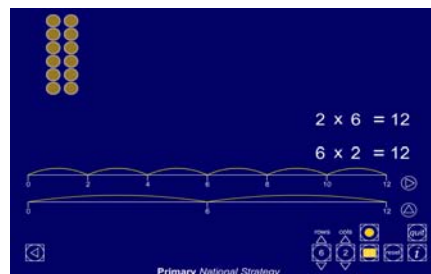
Make use of practical equipment and arrays used in everyday life, e.g. egg boxes, chocolate bars, displays of food in supermarkets, etc.



Link arrays to counting in equal groups along a number line

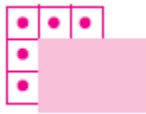


Use the Multiplication facts ITP, alongside practical equipment, to help children link arrays to counting in equal steps

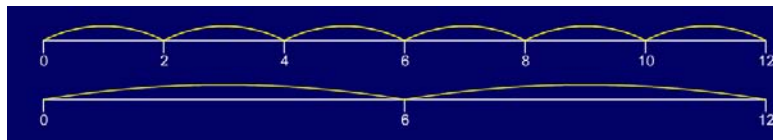
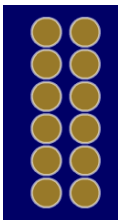


Teaching tips

- Provide opportunities for children to create their own arrays from practical resources, for example ask them to count out 10 counters and then arrange them in rows of 2. Then encourage them to count the counters in twos and in fives.
- Encourage children to describe what they see when you show them an array. Use this opportunity to assess whether they are focusing on the rows and columns or whether they only see an array as a collection of individual objects. Sentence starters could be provided to help model the correct use of mathematical vocabulary. Ask questions such as:
 - What do you see?
 - How many rows are there? How many in each row? How many columns are there?
 - How many can you see altogether?
- As children suggest different ways of describing an array, model how these can be recorded mathematically as number sentences. For example, 'there are five counters in each row, there are three rows and there are 15 counters altogether' could be recorded as $5 \times 3 = 15$ (or $5 + 5 + 5 = 15$).
- To help children move away from counting the number of objects in an array in ones, create an array and then cover everything except the first row and first column. Ask the children to work out how many rows and columns are in the array and how many objects there are altogether.



- After showing children an array in one orientation, rotate it by 90° so that children see the columns and rows in their other orientation.
- Relate arrays to counting in equal steps along a number line, for example show how the following array can be recorded as $2 + 2 + 2 + 2 + 2 + 2$ (2×6) or $6 + 6$ (6×2).



- Give children a multiplication sentence such as $4 \times 2 = 8$ and ask them to draw an array to go with it. Then ask them whether there are any other number sentences they can write to go with it.