Can I use my tables to multiply and divide?

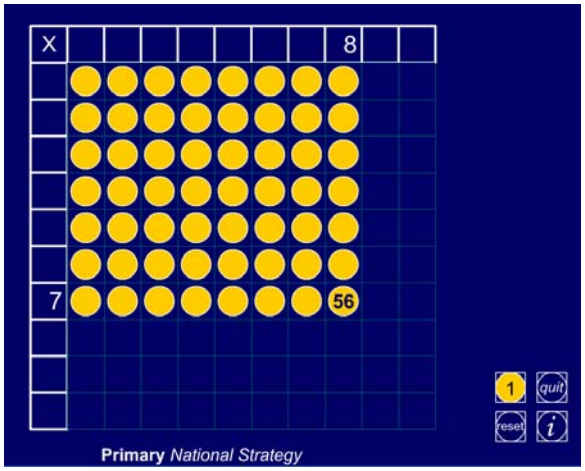
Teaching guidance

Key vocabulary

multiply, multiplied by, multiple of, times, array
divide, divided by, divisible by
factor, product, inverse, quotient

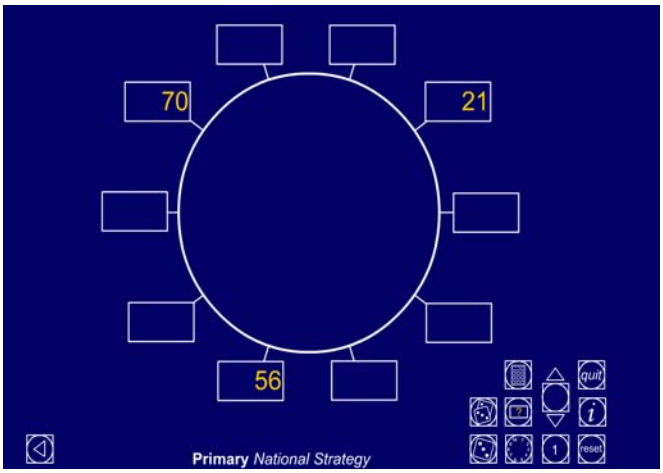
Models and images

Use the *Multiplication facts* ITP to make the link between arrays and multiplication facts.



Multiplication facts ITP

Use the *Number dials* ITP to rehearse the links between multiplication and division facts.



Number dials ITP

Teaching tips

- Plan regular activities for children to *learn*, *rehearse, derive* and *use* multiplication and division facts rather than simply test their recall.
- Reinforce multiplication facts and the corresponding division facts and use these relationships to solve missing number questions:

  $8 \times \square = 56$ $\square \times 8 = 56$ $56 \div \square = 8$ $56 \div 8 = \square$

  When solving a missing number question, it is helpful to write down the other three number sentences and then decide which one to use to find the missing number.
- Regularly use the full range of associated vocabulary, for example, 'What is the product of 7 and 9? What is 72 divided by 9? What is the quotient when 64 is divided by 8? What multiplies of 6 lie between 30 and 50? How many factors of 48 are even?'
- Children need to understand and apply the language of multiples and factors and use it in solving multiplication and division problems, for example, 'All factors of 36 are multiples of 2, true or false? Find me two factors of 48 that are also multiples of 3.'
- Help children develop strategies for quickly deriving related multiplication and division facts. For example, knowing $7 \times 2 = 14$ helps you to work out that $7 \times 4 = 28$ and $7 \times 20 = 140$. This can be extended to include other facts, for example, $7 \times 200 = 1400$, $70 \times 20 = 1400$ and the related division facts.
- Ensure that children meet calculations written in different ways:

  $\blacksquare \times 8 = 56$ $9 = 54 \div \bullet$ $3 \times 8 = 6 \times \bigstar$

  Ask them to explain their answers, using the correct vocabulary.
- Use a multiplication grid as a prompt to discuss the link between multiplication and division bonds, for example the doubling link between 2× and 4× and 4× and 8× or the halving link between them. Discuss how to apply this in order to multiply and divide.

	1	2	3	4	5	6	7	8	9	10
2×	2	4	6	8	10	12	14	16	18	20
4×	4	8	12	16	20	24	28	32	36	40
8×	8	16	24	32	40	48	56	64	72	80