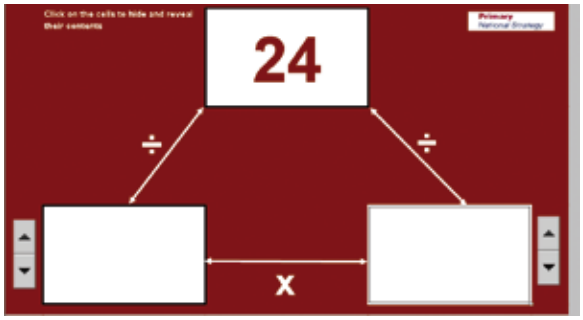
Year 5 – Block B

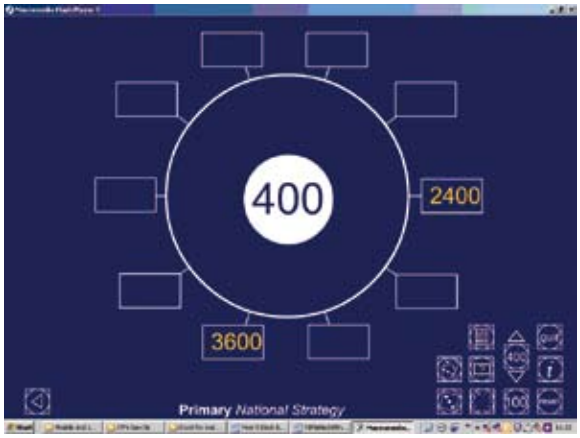
The models, images and practical resources detailed below will support the teaching of this Block. The text in italics relates directly to the learning overview of each Unit in the Block – this is accessed using the planning tab in the Framework. Select Planning–Year group–Block then click on the Unit tabs.

Multiplication/division trios spreadsheet



*Children **rehearse multiplication facts** to 10 × 10 **and the related division facts**. They discuss the facts that they can recall rapidly and strategies to help them derive those they struggle to recall, for example doubling 4 times-table facts to work out 8 times-table facts. They respond to questions such as: The product of two numbers is 24. What could the numbers be?*

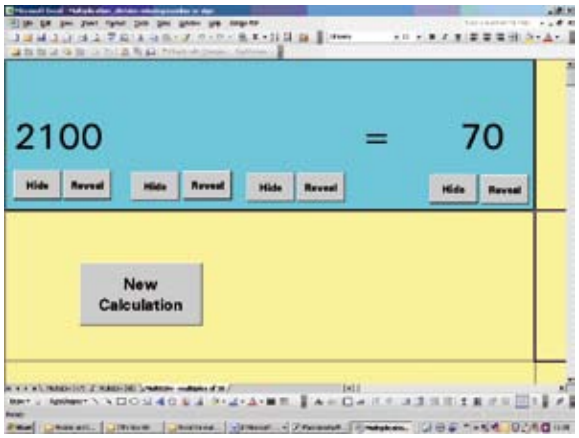
Number dials interactive teaching program



*Children **use known multiplication facts and place value to find related facts**. For example, they use 8 × 4 = 32 to find the answer to 80 × 4, explaining that 80 is ten times as big as 8 so the answer will be ten times 32, or 320. They predict the answer to 80 × 40, explaining how they worked this out, then check their prediction using a calculator. They **find related division facts**, e.g. recognising that 3 200 ÷ 400 = 8 because 8 × 400 = 3 200. Children use similar strategies and their understanding of inverse operations to find the missing numbers in calculations such as:*

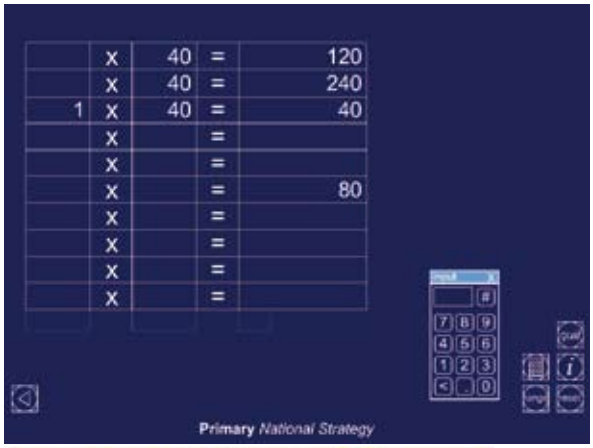
- 20 × ☐ = 600
- 2800 ÷ 70 = ☐
- ☐ ÷ 50 = 300

Missing number calculations spreadsheet

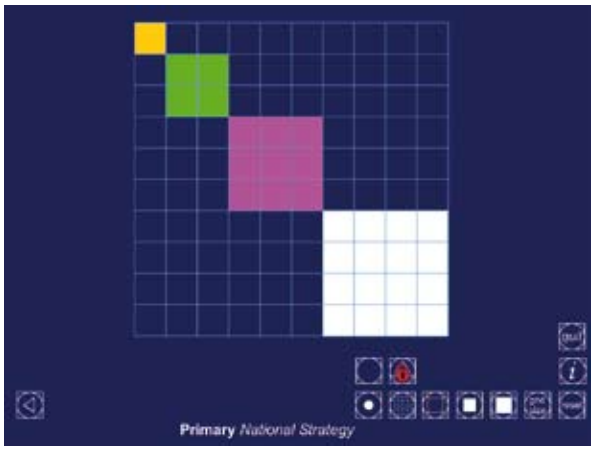


Number dials interactive teaching program, Multiplication facts interactive teaching program, Missing number calculations spreadsheet and Multiplication and division trios spreadsheet – find in the library section of the Framework.

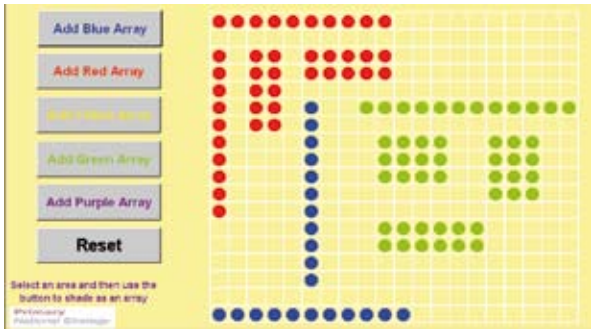
Multiplication facts ITP



Area interactive teaching program



Making arrays spreadsheet



1	2	3	4	5	6	7	8	9	10
2	4	6	8	10	12	14	16	18	20
3	6	9	12	15	18	21	24	27	30
4	8	12	16	20	24	28	32	36	40
5	10	15	20	25	30	35	40	45	50
6	12	18	24	30	36	42	48	54	60
7	14	21	28	35	42	49	56	63	70
8	16	24	32	40	48	56	64	72	80
9	18	27	36	45	54	63	72	81	90
10	20	30	40	50	60	70	80	90	100

They use squared paper or peg boards to create all the different arrays possible using 10, 11, 12, … squares or pegs. They use this to ***list all of the factors*** *of 10, 11, 12, … They investigate which numbers can create a square array and learn that these are called square numbers. For example, 16 is a square number because it is equal to 4 × 4.*

Area interactive teaching program and making arrays spreadsheet – find in the library section of the Framework.

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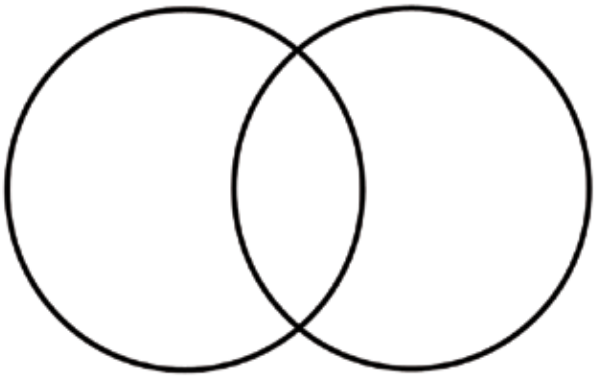
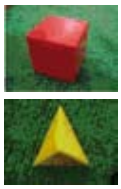
	*Children **classify numbers according to their properties**, recording the classifications in Venn and Carroll diagrams. For example, they place the numbers 1 to 30 on a Venn diagram. They describe patterns in their diagram and respond to questions such as: What do you notice about numbers that are multiples of both 2 and 5?* *They learn the vocabulary common multiple and **suggest general statements** based on similar relationships. For example, all common multiples of 3 and 4 are multiples of 12. They test these statements by finding examples that match them.*
	*Children **visualise and describe 3-D shapes** according to a range of properties including: the shapes of faces, the number of faces, edges and vertices, and whether the number of edges meeting at each vertex is the same (as in a cube) or different (as in a square-based pyramid). They **solve problems** involving 3-D shapes, for example finding all of the possible nets for an open cube or sorting a set of 3-D shapes using an ICT 'binary tree' program.*
	*Children **extend their knowledge of the properties of 2-D shapes**. For example, they investigate the properties of rectangles. They measure the length of the two diagonals, commenting on what they notice. They measure the distance from the point where the diagonals cross each other to each of the four vertices. Children predict and test which other shapes have diagonals of equal length or diagonals that bisect each other.*