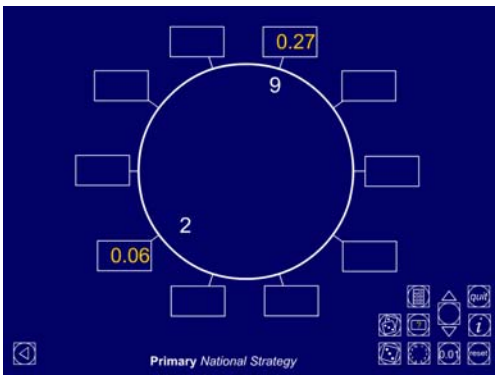
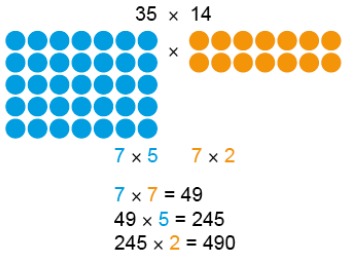
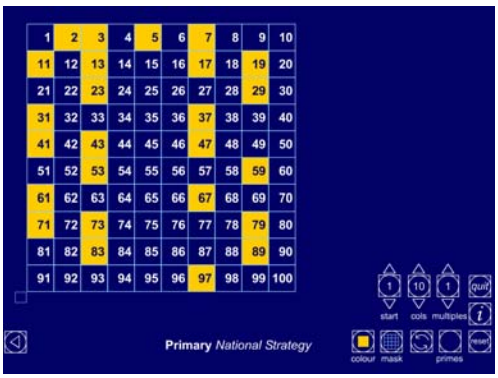
Year 6 Block B

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.

Number dials ITP 	*Children respond quickly to multiplication and division calculations involving decimals. They work out calculations such as 5.6 ÷ ☐ = 0.7 or 3 × 0.6, drawing on their knowledge of **number facts** and understanding of **place value**. They are able to **approximate**, use **inverses** and apply **tests of divisibility** to check their results.* Number dials ITP can be found in the library section of the Primary Framework.
	*Children know the square numbers up to 12 × 12 and derive the corresponding squares of multiples of 10, for example, 80 × 80 = 6400. Children investigate the **factors** of different numbers and establish that numbers with an odd number of factors are square numbers (for example, the factors of 9 are 1, 3 and 9).*
Number grid ITP 	*They recognise that numbers with only two factors are **prime numbers** and can apply their knowledge of multiples and tests of divisibility to identify the prime numbers less than 100. They explain that 73 children can only be organised as 1 group of 73 or 73 groups of 1, whereas 44 children could be organised as 1 group of 44, 2 groups of 22, 4 groups of 11, 11 groups of 4, 22 groups of 2 or 44 groups of 1. They explore the pattern of primes on a 100-square, explaining why there will never be a prime number in the tenth column and the fourth column.* Number grid ITP can be found in the library section of the Primary Framework. Use it alongside different practical number grids.

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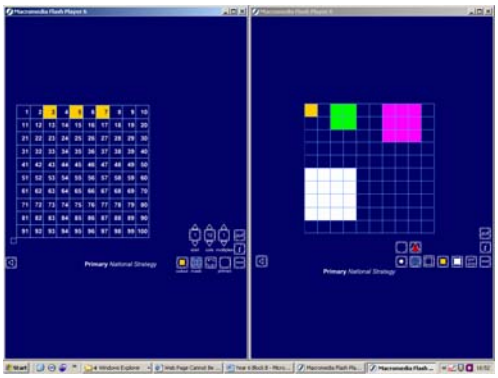
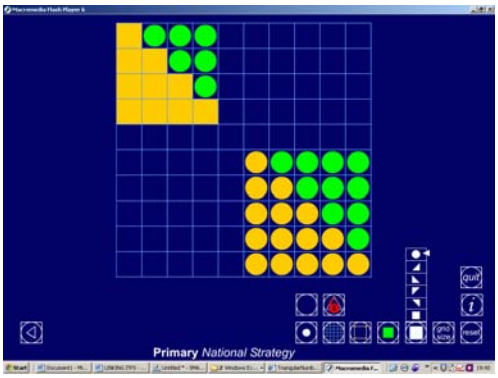
Number grid ITP



Area ITP

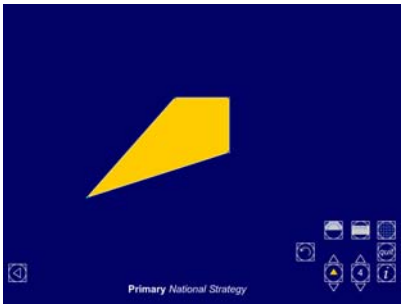


*Children recognise and use **sequences, patterns and relationships** involving numbers and shapes to solve problems such as:*

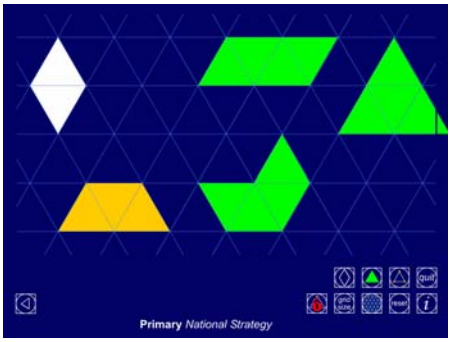
- *How can you use factors to calculate 35 × 14?*
- *Investigate multiples of 25. What do you notice about the last two digits?*
- *How could you test a number to see whether it is divisible by 8?*
- *Investigate the differences between terms of the sequence of square numbers*
  1, 4, 9, 16, …
  Describe the pattern and use it to continue the sequence.
- *Investigate the statement: 'Every square number is the sum of two triangular numbers.'*

Number grid and Area ITPs can be found in the library section of the Primary Framework.

Polygon ITP



Isogrid ITP



*They explore which quadrilaterals have pairs of parallel and/or perpendicular sides. They investigate how many pairs of parallel sides there are in regular polygons, **generalising** and explaining their findings and expressing them in a formula, at first in words then using **symbols**. They classify 2-D shapes using assorted criteria. They use their knowledge of shape properties to solve problems, for example:*

- *How many different shapes can be made by placing two identical equilateral triangles edge to edge? What about 3, 4, 5, … identical equilateral triangles?*

Polygon and Isogrid ITPs can be found in the library section of the Primary Framework. Use them alongside practical equipment to support exploration and recording.

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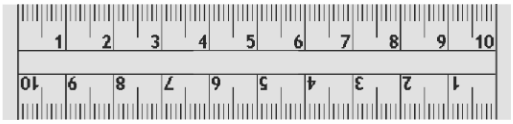	*Children **make** and **draw** shapes and apply their knowledge of the properties; for example, they use art straws to create 'skeleton' shapes. They draw shapes with increasing accuracy, for example, using a set-square and ruler to draw a right-angled triangle with its two shorter sides 7.2 cm and 9.6 cm long. They find the perimeter of the triangle by measuring accurately.*

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