
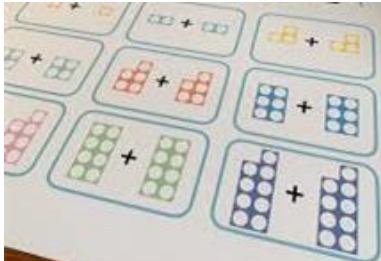




Multiplication

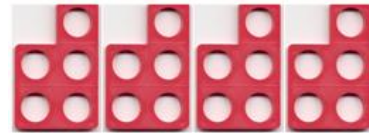
Reception			
Early Learning Goals Solve problems involving doubling.			
Strategy Count objects of the same number and add together	Examples/representations		
	Concrete 	Pictorial 	Abstract Double 2 is 4 $2 + 2 = 4$

Year 1			
National Curriculum Objectives Solve one step problems involving multiplication, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.			
Strategy Doubling	Examples/representations		
	Concrete 	Pictorial 	Abstract Double 8 is 16 $8 + 8 = 16$

Counting in multiples



Repeated addition



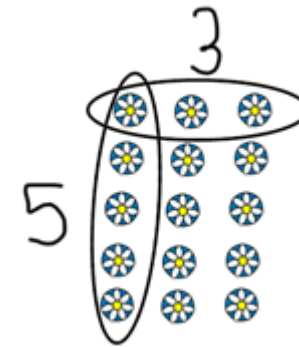
Arrays



2,4,6,8




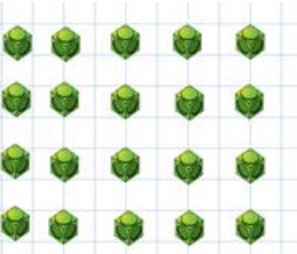
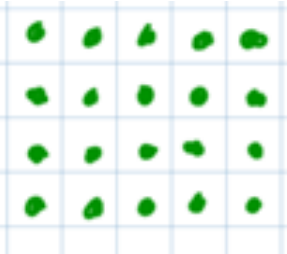
5+5+5+5=20



5x3=15
3x5=15

National Curriculum Objectives

Solve problems involving multiplication using materials, arrays, repeated addition and multiplication facts.

Strategy	Examples/representations		
	Concrete	Pictorial	Abstract
Repeated addition		$\dots + \dots + \dots + \dots = 20$	$5+5+5+5 = 20$
Arrays			$5 \times 4 = 20$

National Curriculum Objectives

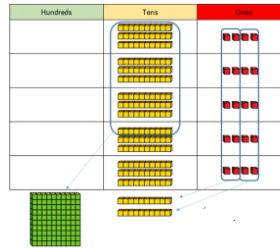
Multiply 2 digits by 1 digit, using mental and progressing to formal written methods, for the multiplication tables that they know.

Strategy

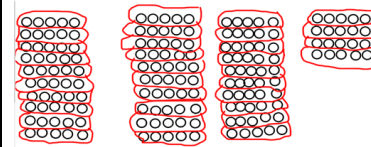
Short multiplication - formal written method
(base ten and place value counters)

Examples/representations

Concrete



Pictorial



Abstract

$$34 \times 5 = 170$$

	H	T	O	
		3	4	
x			5	
		2	0	(5 × 4)
+	1	5	0	(5 × 30)
	1	7	0	

	H	T	O	
		3	4	
x			5	
	1	7	0	
	1	2		

National Curriculum Objectives

Multiply 2 digits by 1 digit using formal written layout.

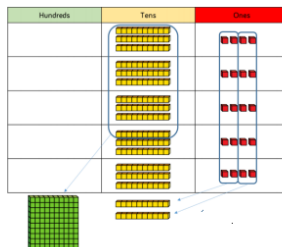
Multiply 3 digits by 1 digit using formal written layout.

Strategy

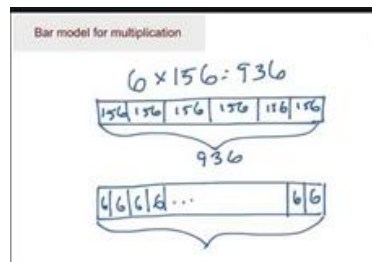
Short multiplication - formal written method

Examples/representations

Concrete



Pictorial



Abstract

	H	T	O	
		3	4	
x			5	
		2	0	(5 × 4)
+	1	5	0	(5 × 30)
	1	7	0	

	H	T	O
		3	4
x			5
	1	7	0
	1	2	

Year 5

National Curriculum Objectives

Multiply numbers up to 4 digits by a 1 digit number using a formal written method.

Multiply numbers up to 4 digits by a 2 digit number using the formal written method of long multiplication.

Strategy

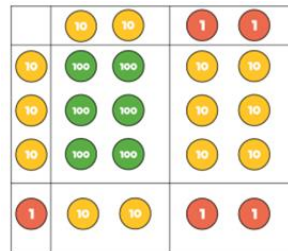
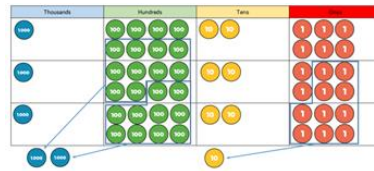
Short multiplication - formal written method
- 4 digit by 1 digit

Long Multiplication - formal written method -
2 digit by 2 digit

Long Multiplication - formal written method -
2 digit by 2 digit

Examples/representations

Concrete



Pictorial

×	20	2
30	600	60
1	20	2

Abstract

	Th	H	T	O
	1	8	2	6
×				3
	5	4	7	8
	2		1	

	H	T	O
		2	2
×		3	1
		2	2
	6	6	0
	6	8	2

	TTh	Th	H	T	O
		2	7	3	9
×				2	8
	2	1	9	1	2
	2	5	3	7	
	5	4	7	8	0
	7	6	6	9	2

Year 6

National Curriculum Objectives

Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication.

Strategy

Column multiplication

Examples/representations

Concrete

Pictorial

Abstract

A handwritten column multiplication problem on a grid background. The numbers are 1234 and 16. The multiplication is shown as follows:

$$\begin{array}{r} 1234 \\ \times 16 \\ \hline 7404 \\ 12340 \\ \hline 19744 \end{array}$$