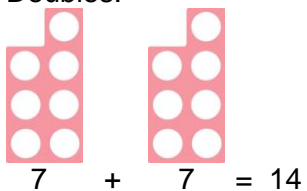


## Key Stage 1 – Multiplication

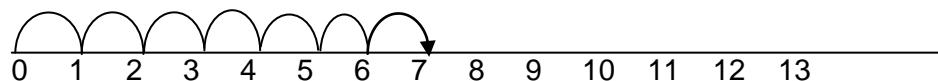
### Y1

Through practical activities and meaningful contexts using concrete objects, pictorial representations and arrays with the support of the teacher.

- Doubles.



- Make connections between arrays, number patterns and counting in 2's, 5's to 50 and 10's to 100.
- Use of number lines.



- "100 Square" to count in 2's, 5's and 10's.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20

- There are 2 sweets in one bag. How many sweets are there in 5 bags?



- Counting multiples of coins: 2p, 5p, 10p.



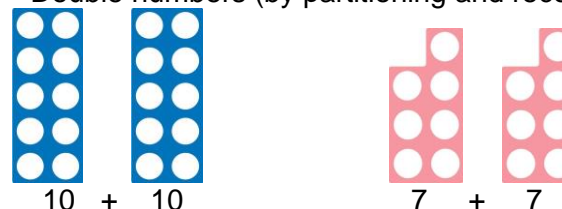
### National Curriculum requirements:

Solve one step problems involving multiplication, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.

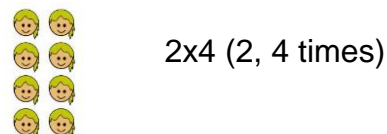
### Y2

Through practical activities and meaningful contexts using concrete objects, pictorial representations and arrays.

- Double numbers (by partitioning and recombining) 17 + 17.

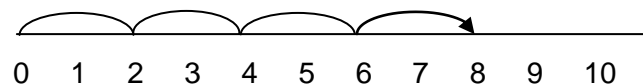


- Understand multiplication as repeated addition/groups/lots.
- Read arrays.

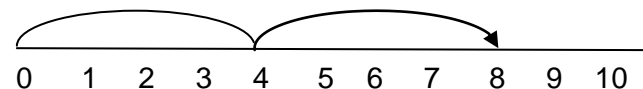


- Repeated addition on a number line.

$$2 + 2 + 2 + 2 \quad (4 \text{ groups of } 2, 2 \text{ four times, } 2 \times 4)$$



$$4 + 4 \quad (2 \text{ groups of } 4, 4 \text{ two times, } 4 \times 2)$$



- Know the multiplication tables for 2, 5 and 10.
- Calculate mathematical statements within the multiplication tables using the multiplication (x) and equals (=) signs.
- Show that the multiplication of two numbers can be done in any order (commutative).

**Video clips:** [Teaching for understanding of multiplication facts](#)  
[Practical multiplication and the commutative law](#)

### National Curriculum requirements:

Solve problems involving multiplication using materials, arrays, mental methods and multiplication facts.

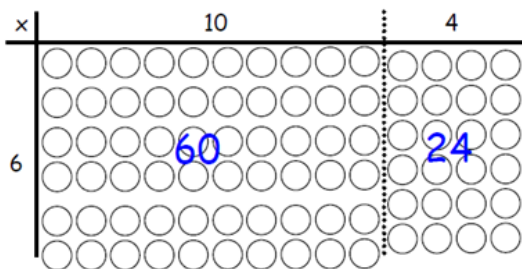
# Key Stage 2 – Multiplication

## Y3

- Recall and use multiplication tables for 3, 4 and 8.
- Continue to use arrays and number lines/Cuisenaire rods for 3, 4 and 8 multiplication tables.
- Write and calculate mathematical statements for multiplication. Statements to include the multiplication tables that they know and 2 digit numbers x 1 digit numbers. Pupils use mental methods and progress to formal written methods.

- Introduce grid model.

$$\begin{array}{r|l} \times & 10 \quad 4 \\ 6 & 60 + 24 = 84 \end{array}$$



- Progressing to expanded method of multiplication.

$$\begin{array}{r} \text{T O} \\ 32 \\ \times \quad 5 \\ \hline 20 \quad (5 \times 4) \\ + 50 \quad (5 \times 10) \\ \hline 70 \end{array}$$

**Video clips:** [Teaching the grid method as an interim step](#)

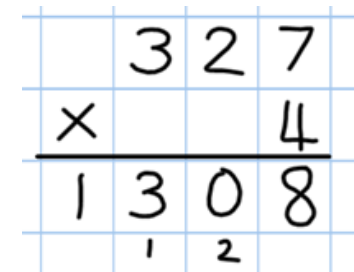
(Partitioning and counters to introduce grid).

**National Curriculum requirements:** Multiply 2 digits by 1 digit, using mental and progressing to formal written methods.

## Y4

- Recall and use multiplication tables up to 12x12 (Including multiplying by 0 and 1).
- Continue using grid method and expanded method as appropriate, progressing to short multiplication.

x	100	30	6
5	500	150	30



- Short Multiplication.

No carrying	Extra digit	Carrying	Zeros	Ext.
$\begin{array}{r} \text{T O} \\ 32 \\ \times \quad 3 \\ \hline 96 \end{array}$	$\begin{array}{r} \text{H T O} \\ 51 \\ \times \quad 2 \\ \hline 102 \end{array}$	$\begin{array}{r} \text{H T O} \\ 38 \\ \times \quad 7 \\ \hline 266 \\ 5 \end{array}$	$\begin{array}{r} \text{H T O} \\ 202 \\ \times \quad 4 \\ \hline 808 \end{array}$	$\begin{array}{r} \text{H T O} \\ \square 5 \square \\ \times \quad 4 \\ \hline 612 \\ 2 \quad 1 \end{array}$

**National Curriculum requirements:**

Multiply 2 digits by 1 digit using formal written layout.

Multiply 3 digits by 1 digit using formal written layout.

## Key Stage 2 – Multiplication

### Y5

- Recall and use multiplication tables up to 12x12 (Including multiplying by 0 and 1).
- Continue to practise short multiplication.
- Use Grid Method to introduce long multiplication.

	10	8
10	100	80
3	30	24



		1	8
x		1	3
		5	4
	1	8	0
	2	3	4

#### Video clips:

[Moving from grid method to a compact method](#)

[Reinforcing rapid times table recall](#)

[Demonstration of long multiplication](#)

#### National Curriculum requirements:

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

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

Multiply whole numbers and those involving decimals by 10, 100, 1000.

### Y6

- Recall and use multiplication tables up to 12x12 (Including multiplying by 0 and 1).
- Continue to practise short multiplication.
- Continue to practise long multiplication.

	3	6	5	2
x				8
	2	9	2	1
	5	4		

	1	2	3	4
x			1	6
	7	4	0	4
	1	2	3	4
	1	9	7	4

- Multiply decimals using the grid method and progressing on to short multiplication.
- Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.

#### Video clips:

[Moving from grid method to a compact method](#)

[Reinforcing rapid times table recall](#)

[Demonstration of long multiplication](#)

#### National Curriculum requirements:

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

Multiply numbers by 10,100, 1000 giving answers up to 3 decimal places.