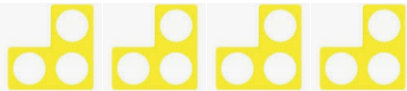
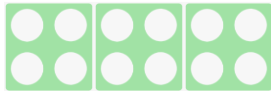
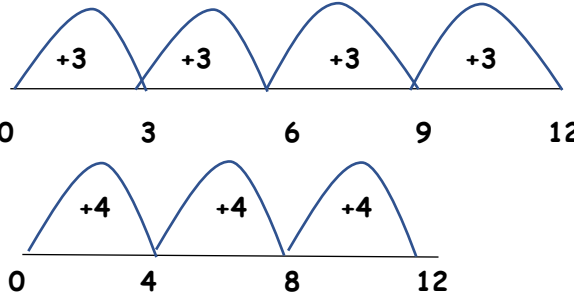


YEAR 3		Multiplication (2, 5, 10, 3, 4, 8)																			
Vocabulary: partition, inverse, product, scaling, equal groups of; lots of, array, multiply, multiplied by, times (see previous year groups)																					
Concrete		Pictorial	Abstract																		
Multiplication tables: (2, 5, 10, 3, 4, 8) 4 x 3  3 x 4 		Multiplication tables: 	Multiplication tables: (instant mental recall)																		
X10 and X100 10 x 3 <table><tr><th>H</th><th>T</th><th>O</th></tr><tr><td></td><td></td><td>  </td></tr><tr><td></td><td>  </td><td></td></tr></table> (Move 2 places when x 100) Also show 2 digit number x 10 e.g. 34 x 10.		H	T	O							X10 and X100 10 x 4 <table><tr><th>H</th><th>T</th><th>O</th></tr><tr><td></td><td></td><td>4</td></tr><tr><td></td><td>4</td><td>0</td></tr></table> (Move 2 places when x 100)	H	T	O			4		4	0	No written method - leads to a mental method.
H	T	O																			
																					
																					
H	T	O																			
		4																			
	4	0																			

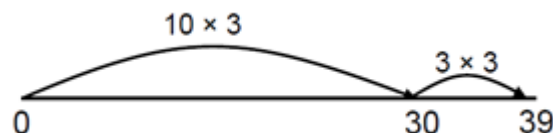
Counting on:
(or diennes/numicon/place value counters)

13×3



$30p \quad 3p \quad 3p \quad 3p = 39p$

Counting on:
 13×3



May count on in 1×3 instead of 3×3 to start.

Counting on:

2 digit $\times$ 1 digit no exchanging:

$34 \times 2 = 68$

Using diennes or place value counters

Tens	Ones
10 10 10	1 1 1 1
10 10 10	1 1 1 1

2 digit $\times$ 1 digit no exchanging:

$34 \times 2 = 68$

Tens	Ones
	○○ ○○
	○○ ○○

2 digit $\times$ 1 digit no exchanging:

Written - leading to a mental method.

$34 \times 2 = 68$

$30 \times 2 = 60$

$4 \times 2 = 8$

$60 + 8 = 68$

2 digit $\times$ 1 digit exchanging:

16×4

Tens	Ones
10	1 1 1 1 1 1
10	1 1 1 1 1 1
10	1 1 1 1 1 1
10	1 1 1 1 1 1

2 digit $\times$ 1 digit exchanging:

16×4

Tens	Ones
	○○○○
	○○○○
	○○○○
	○○○○

2 digit $\times$ 1 digit exchanging:

(Expanded method)

$$\begin{array}{r} 16 \\ \times 4 \\ \hline 24 \quad (4 \times 6) \\ 40 \quad (4 \times 10) \\ \hline 64 \end{array}$$

Alternative grid method (if needed)

26×5

	5
20	100
6	30
	130

Mental methods

Instantly recall the multiplication tables for the 2, 5, 10, 3, 4 and 8 times table by the end of year 3.

X10 and x 100:

$$10 \times 5 = 50$$

$$10 \times 34 = 340$$

$$100 \times 3 = 300$$

Using known facts and place value:

$$\text{If } 2 \times 3 = 6$$

$$\text{Then } 20 \times 3 = 60; 2 \times 30 = 60; 20 \times 30 = 600$$

Doubling:

Recall doubles of all numbers to 20, doubles of multiples of 5 to 100 and doubles of multiples of 100 to 500

$$24 \times 2 = 48$$

$$20 \times 2 = 40$$

$$4 \times 2 = 8$$

$$40 + 8 = 48$$

Doubling again (x4 and x8)

Use doubling to connect 2, 4 and 8 multiplication tables

$$7 \times 4 = 28$$

$$7 \times 2 = 14$$

$$14 \times 2 = 28$$

$$7 \times 8 = 56$$

$$7 \times 2 = 14$$

$$14 \times 2 = 28$$

$$28 \times 2 = 56$$

Partitioning:

No exchanging

$$32 \times 3$$

$$30 \times 3 = 90$$

$$2 \times 3 = 6$$

$$90 + 6 = 96$$

Continue to understand the inverse relationship between multiplication and division

Write the related number sentences

$$6 \times 3 = 18 \quad 3 \times 6 = 18$$

$$18 \div 3 = 6 \quad 18 \div 6 = 3$$

Use this knowledge to solve missing number problems involving multiplication.

$$3 \times \underline{\quad} = 15$$

$$24 \div \underline{\quad} = 8$$

$$\underline{\quad} \div 4 = 5$$