Slindon C.E. Primary School
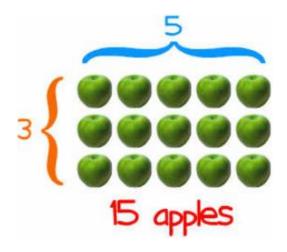
Progression in Mathematical Calculations - Multiplication
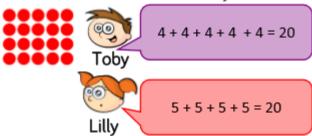
Guidance for Parents

In **year 1** the expectation is that children will:
Solve one step problems involving multiplication by calculating the answer using concrete objects, pictorial representations and arrays with the support of a teacher.

 For example:

15 apples

Toby and Lilly are writing number sentences to describe the array.

Toby: $4 + 4 + 4 + 4 + 4 = 20$

Lilly: $5 + 5 + 5 + 5 = 20$

How many wheels altogether?

$2 + 2 + 2 + 2 + 2 =$

How many fingers altogether?

$5 + 5 + 5 =$

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Progression in Mathematical Calculations - Multiplication

Guidance for Parents

In **year 2** the expectation is that children will:
Solve problems involving multiplication, using materials, arrays, repeated addition, mental methods and multiplication facts.
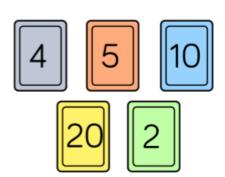
The children will need to recall multiplication facts for the 2, 5 and 10 multiplication tables.

For example: Fill in the missing boxes:

Picture	Multiplication	Sentence
	$4 \times 10 = 40$	4 lots of 10 is equal to 40
	$35 = 7 \times 5$	
		6 lots of 3 is equal to 18

Use the number cards to make multiplication sentences.

How many can you make?

4 5 10

20 2

Useful vocabulary:
lots of, groups of, times, multiply, multiplied by, multiple of, once, twice, three times... ten times...
times as big / long/wide...
repeated addition,
array, row, column,

At the end of Key Stage 1 (year 2) the children will be expected to answer questions such as these in their SATs tests:
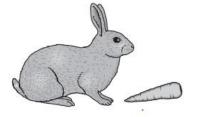
Amy plants **4** rows of carrots.

There are **3** carrots in each row.

Complete the number sentence below.

$3 \times 8 = 2 \times \boxed{}$

A rabbit eats **2** of the carrots.

How many carrots are left?

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Progression in Mathematical Calculations - Multiplication
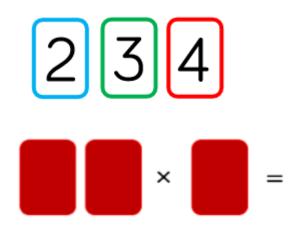
Guidance for Parents

In **year 3** the expectation is that children will:
Write and calculate mathematical statements for multiplication for two-digit numbers times one-digit numbers using mental methods and formal written methods.

The children will need to recall multiplication facts for the 2, 3, 4, 5, 8 and 10 multiplication tables.
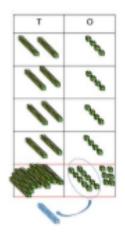
For example:

Using the digit cards in the multiplication below how close can you get to 100?
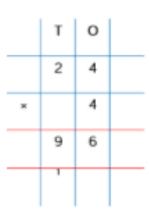
This calculation shows 24 x 4:

T	O
2	4
x	4
9	6

Use this method to work out 28 x 3

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Progression in Mathematical Calculations - Multiplication

Guidance for Parents

In **year 4** the expectation is that children will:
Multiply two-digit and three-digit numbers by a one-digit number using formal written layout.

The children will need to recall multiplication facts for the multiplication tables up to 12 x 12.

For example:

Here are three multiplications.

	6	1			7	4			2	6
x		5		x		7		x		4
	3	5		4	9	8		8	2	4

Correct the multiplications.

A school has 245 packets of sweets.
Each packet contains 4 sweets.
How many sweets are there altogether?

H	T	O
2	4	5
x		4

Use the place value counters to solve the problem.
Remember, if there are ten or more counters in a column, to make an exchange.
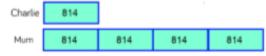
Charlie and his mum were having a reading competition.
In one month, Charlie read 814 pages.

His mum read 4 times as many pages as Charlie.
- How many pages did they read altogether?
- How many less pages than his Mum did Charlie read?

Use a bar model to help.

Charlie	814			
Mum	814	814	814	814

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Progression in Mathematical Calculations - Multiplication

Guidance for Parents

In **year 5** the expectation is that children will:
Multiply numbers up to 4 digits by a one or two-digit number using a formal written method, including long multiplication for two-digit numbers.

The children will need to recall multiplication facts for the multiplication tables up to 12 x 12.

For example:

Sam earns £1,325 per week.
How much would he earn in 4 weeks?

TH	H	T	O
1	3	2	5
×			4

Use the place value counters to solve the problem.

Tiffany has spilt paint on her maths homework. Can you work out the digits that have been covered by paint?

$$9 \; \bullet \; 9$$
$$\times \; 95$$
$$+ \; 4,845$$
$$8,7 \bullet 1 \bullet$$
$$9,2055$$

Answer:

$$969$$
$$\times \; 95$$
$$+ \; 4,845$$
$$8,7210$$
$$9,2055$$

Put <, > or = in each circle to make the statements correct.

4,458 × 56 ◯ 4,523 × 54

4,458 × 55 ◯ 4,523 × 54

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Progression in Mathematical Calculations - Multiplication

Guidance for Parents

In **year 6** the expectation is that children will:
Multiply multi digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication.

The children will need to recall multiplication facts for the multiplication tables up to 12 x 12.

For example:

29 x 3,425 =

		3	4	2	5
x				2	9
	3	0	8	2	5
		3	2	4	
	6	8	5	0	0
			1		
	9	9	3	2	5
		1			

Useful vocabulary:
lots of, groups of, times, multiply, multiplication, multiplied by, multiple of,
product,
once, twice, three times… ten times…
times as big / long/wide…
repeated addition,
array, row, column,
factor

At the end of Key Stage 2 (year 6) the children will be expected to answer questions such as these in their SATs tests:

Write the two missing digits to make this **long multiplication** correct.


```
        4  □
    ×  □  6
    -------
       2  4  6
       8  2  0
    -------
    1  0  6  6
```



```
        6  7  8
    ×      5  4
```

1.52 × 6 =