Castle Batch Primary School Academy Progression in written calculation strategies for multiplication

Foundation Stage

Statutory Guidance

Count in groups of twos and tens

Counting Games and Songs
Playing games and singing number songs.

Grouping
Counting pairs of wellies and socks, lining up in pairs, putting toys into pairs.

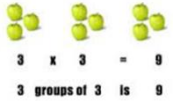
Adults modelling mathematical language

Year 1

Statutory Guidance

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

Concrete Objects



Arrays
Using everyday objects to make arrays
3 x 2 = 6

Problem Solving
Using concrete objects to solve problems

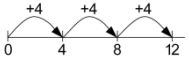
There are four bowls with two apples in each. How many apples are there altogether?

Year 2

Statutory Guidance

Solve problems involving multiplication using materials, arrays, repeated addition, mental methods, and multiplication facts, including problems in contexts.

Repeated Addition
Using a number line
3 x 4 = 12



Arrays
3 x 3 = 9

Problem Solving
Using arrays to solve problems

In the classroom there are 5 tables. Each table has 5 children sat on it. How many children are there altogether?

Multiplication facts include: 2,5 and 10

Year 3

Statutory Guidance

Write and calculate Mathematical statements for multiplication using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods.

Grid Method

2 x 12 = 24

x	10	2
2	20	4

12 x 14

x	10	4
10	100	40
2	20	8

= 168

Multiplication facts include: 2,3,4,5,8 and 10

Year 4

Statutory Guidance

Multiply two-digit and three-digit numbers by a one-digit number using a formal written layout.

Expanded Method

3 4
X 2
8
6 0
6 8

Short Multiplication

2 3
X 4
9 2
1

2 4 5
X 3
7 3 5
1 1

Multiplication facts up to 12 x 12

Year 5

Statutory Guidance

Multiply numbers up to 4 digits by a one – or two-digit number using the formal written method,

2 7 4 1
X 6
16446
4 2

Including long multiplication for two digit numbers

2 4
X 1 6
144
2
240
384

Year 6

Statutory Guidance

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

2 7 4 1
X 5 6
16446
4 2
137050
3 2
153496
1

From Fraction Section:
Multiply one digit numbers with up to two decimal places by whole numbers

2.41
X 6
14.46
2