Studfall Infant Academy KS1 Multiplication Calculation Policy.

Year 1

Multiply with concrete objects, arrays and pictorial representations.

Multiplication is linked to doubling and counting in groups of the same size.

Multiplication and division symbols to be introduced in Year 2

Year 2

Multiply using arrays and repeated addition on a number line within the 2s, 5s and 10s times tables.

Skills	Concrete	Pictorial	Abstract
Repeated grouping/repeated addition	Looking at columns 2 + 2 + 2 There are 3 equal groups, with 2 in each group.	Children to represent the practical resource in a picture / bar model. Sentence stem: There are 3 groups. There	3 x 2 = 6 2 + 2 + 2 = 6
Grouping, equal groups * Years 1 and 2	with 2 in each group.	are 2 in each group. Altogether there are 6 circles.	We are adding 2 three times

Number lines to show repeated addition

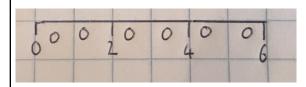
Groups, groups of, lots of, multiply, multiplied by, times equal.

* Year 2

We can represent the groups using numicon/counters.

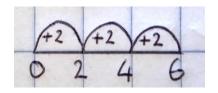


Pictorial number line representing the three groups of two



Abstract numbers lines showing the three jumps of two.

Leading to mentally jumping $3 \times 2 = 6$

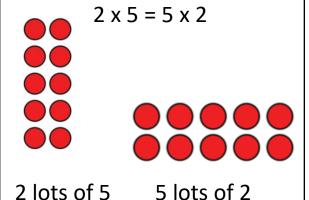


Use arrays to illustrate commutativity

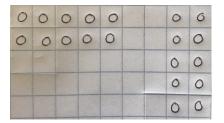
Array, lots of, groups of, repeated addition row, column

* Year 2

Counters, objects etc. can be used



Children to represent arrays pictorially



What is the same? What is different?

Children to be able to use an array to write a range of calculations e.g.

$$10 = 2 \times 5$$

 $5 \times 2 = 10$
 $2 + 2 + 2 + 2 + 2 = 10$
 $10 = 5 + 5$