<u>CPA Policy</u>

Multiplication - Y1

Objective and Strategy	Concrete	Pictorial	Abstract
Doubling	Use practical activities using manipulatives including cubes and Numicon to demonstrate doubling $\begin{array}{c} & & \\ & & $	Draw pictures to show how to double numbers Double 4 is 8	Partition a number and then double each part before recombining it back together. 16 10 10 10 10 10 10 20 + 12 = 32
Counting in multiples	Count the groups as children are skip counting, children may use their fingers as they are skip counting.	Children make representations to show counting in multiples.	Count in multiples of a number aloud. Write sequences with multiples of numbers. 2, 4, 6, 8, 10 5, 10, 15, 20, 25 , 30
Making equal groups and counting the total	Use manipulatives to create equal groups.	Draw, show and make representations x = 8 Draw $x = 8$	2 x 4 = 8

Repeated addition	Use different objects to add equal groups	Use pictorial representations to solve problems	Write addition sentences to describe objects and pictures.
Understanding arrays	Use objects laid out in arrays to find the answers to 2 lots 5, 3 lots of 2 etc.	Draw representations of arrays to show understanding	3 x 2 = 6 2 x 5 = 10

<u>Multiplication – Y2</u>

Objective and	Concrete	Pictorial	Abstract
Doubling	Model doubling using dienes and PV counters. 40 + 12 = 52	Draw dienes and representations to show how to double numbers	As year 1 with numbers beyond 20
Counting in multiples of 2, 3, 5, 10 from 0 (repeated addition)	Count the groups as children are skip counting, children may use their fingers as they are skip counting. Use bar models.	Counting sticks, pictorials and bar models should be used to show representation of counting in multiples. 3 3 3 3 3 ?	Count in multiples of a number aloud. Write sequences with multiples of numbers. 0, 2, 4, 6, 8, 10 0, 3, 6, 9, 12, 15 0, 5, 10, 15, 20, 25, 30 4 × 3 =
Multiplication is commutative	Create arrays using counters and cubes and Numicon.	Use representations of arrays to show different calculations and explore commutativity.	12 = 3 × 4 12 = 4 × 3 Reinforce repeated addition: 3 + 3 + 3 + 3 = 12 4 + 4 + 4 = 12



<u>Multiplication – Y3 and 4</u>					
Objective and	Concrete	Pictorial	Abstract		
Strategy					
Column multiplication	Children can continue to be supported by place	Place value charts are used to support			
	initially done where there is no regrouping.	the understanding.	See Calculation Policy		
Y3 – TO x O	E.g. 34 x 3 =	e.g. 327 x 4 =			
Y4 – HTO x O	34 x 3 10 10 10 1 1 1 1 10 10 10 1 1 1 1 10 10 10 1 1 1 1	Hundreds Tens Ones			
	It is important at this stage that they always multiply the ones first.				
		Children are given visuals or draw the dienes/PV counters into the charts.			