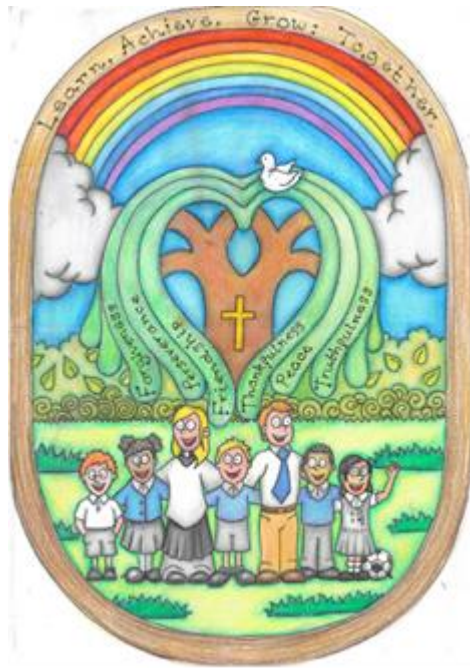
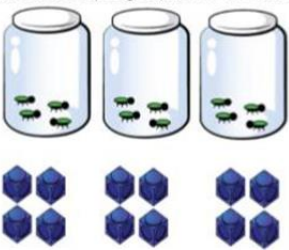
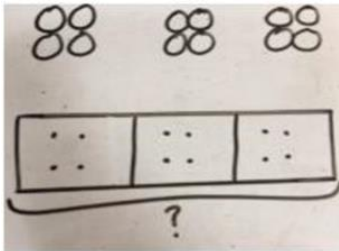

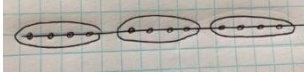
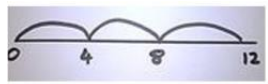
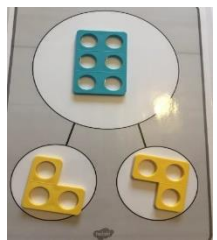
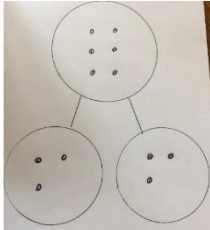
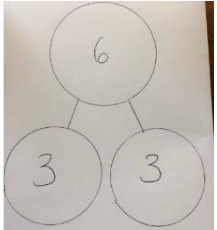


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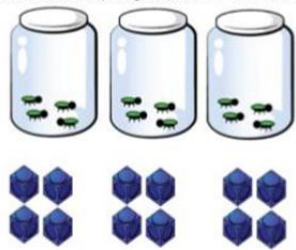
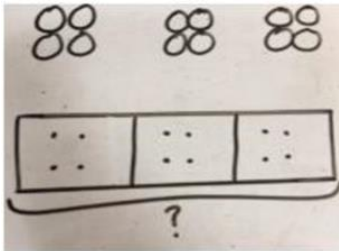

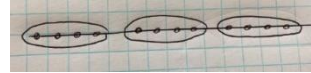
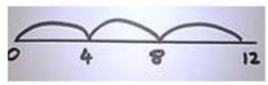
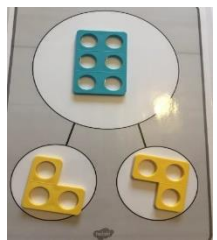
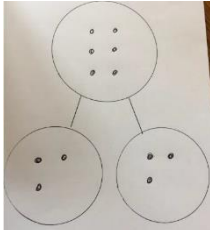
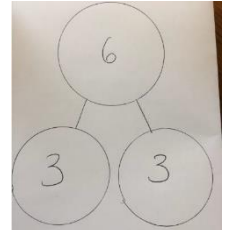
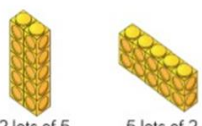
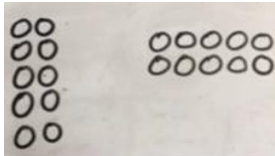


Calculation Progression Policy


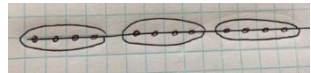

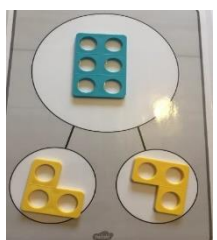
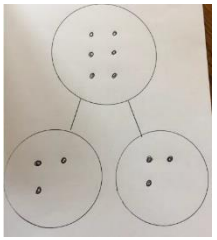
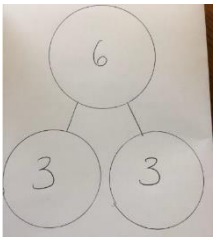
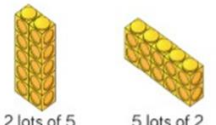
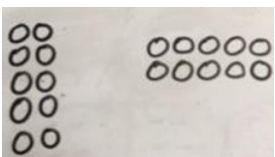
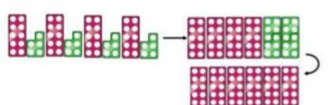
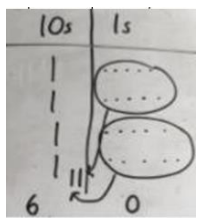
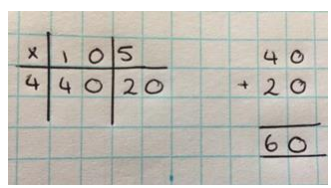
Multiplication

Objective	Concrete	Pictorial	Abstract
<p>Repeated grouping/ repeated addition</p>	<p>3×4 $4 + 4 + 4$ There are 3 equal groups, with 4 in each group.</p> 	<p>Children to represent the practical resources in a picture and use a bar model</p> 	<p>TEACHER MODELLED</p> <p>Alongside concrete/pictorial</p> <p>$3 \times 4 = 12$</p> <p>$4 + 4 + 4 = 12$</p>
<p>Numberlines to show repeated groups</p>	<p>Using a beadstring</p> 	<p>Represent this pictorially alongside a number line</p> 	<p>TEACHER MODELLED</p> <p>Alongside concrete/pictorial</p> <p>Abstract number line showing three jumps of four</p> 
<p>Doubling</p>	<p>Using Numicon with part-whole model</p> 	<p>Using dots with part-whole model</p> 	<p>Using numbers with part-whole model</p> 
<p>Vocabulary</p>		<p>Stem Sentences</p>	
<p>repeated addition grouping equal groups of double multiply times lots of</p>		<p>The whole is ____.</p> <p>There are ____ equal groups with ____ in each group.</p>	

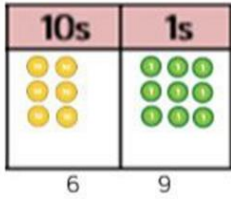
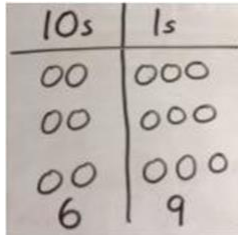
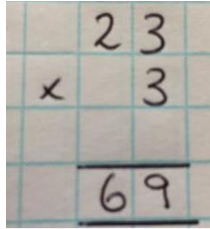
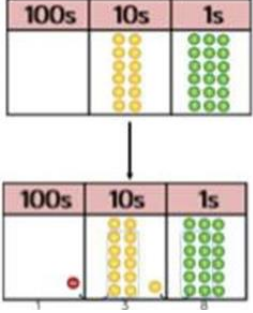
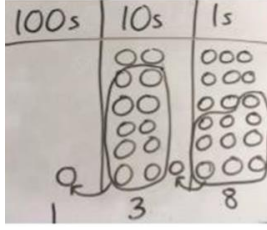
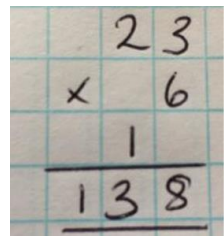
ST NICHOLAS C.E. PRIMARY SCHOOL
MULTIPLICATION → YEAR TWO

Objective	Concrete	Pictorial	Abstract
Repeated grouping/ repeated addition	3×4 $4 + 4 + 4$ There are 3 equal groups, with 4 in each group. 	Children to represent the practical resources in a picture and use a bar model 	TEACHER MODELLED Alongside concrete/pictorial $3 \times 4 = 12$ $4 + 4 + 4 = 12$
Numberlines to show repeated groups	Using a beadstring 	Represent this pictorially alongside a number line 	TEACHER MODELLED Alongside concrete/pictorial Abstract number line showing three jumps of four 
Doubling	Using Numicon with part-whole model 	Using dots with part-whole model 	Using numbers with part-whole model 
Arrays to illustrate commutivity	Counters and other resources $2 \times 5 = 5 \times 2$  2 lots of 5 5 lots of 2	Represent arrays pictorially 	Use arrays to write and interoret a range of calculations $10 = 2 \times 5$ $5 \times 2 = 10$ $2 + 2 + 2 + 2 + 2 = 10$ $10 = 5 + 5$
Vocabulary		Stem Sentences	
repeated addition grouping equal groups of double multiply times lots of array		The whole is ____. There are ____ equal groups with ____ in each group.	

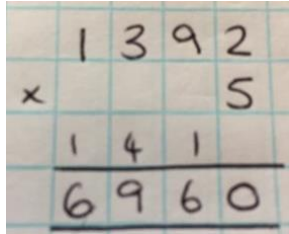
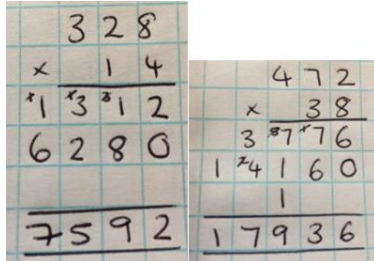
ST NICHOLAS C.E. PRIMARY SCHOOL
MULTIPLICATION → YEAR THREE

Objective	Concrete	Pictorial	Abstract
Numberlines to show repeated groups	Using a beadstring 	Represent this pictorially alongside a number line 	TEACHER MODELLED Alongside concrete/pictorial Abstract number line showing three jumps of four 
Doubling	Using Numicon with part-whole model 	Using dots with part-whole model 	Using numbers with part-whole model 
Arrays to illustrate commutivity	Counters and other resources $2 \times 5 = 5 \times 2$  2 lots of 5 5 lots of 2	Represent arrays pictorially 	Use arrays to write and interoret a range of calculations $10 = 2 \times 5$ $5 \times 2 = 10$ $2 + 2 + 2 + 2 + 2 = 10$ $10 = 5 + 5$
Partition to multiply	Using numicon, base 10, place value counters or Cuisenaire rods 4×15 	Children to represent the concrete pictorially 	Use grid method 
Vocabulary		Stem Sentences	
repeated addition grouping equal groups of double multiply times lots of array partitioning grid method product		The whole is ____. There are ____ equal groups with ____ in each group. The product is ____ There are ____ equal groups of ____	

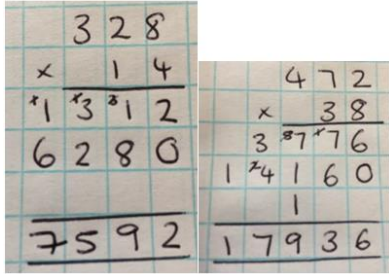
ST NICHOLAS C.E. PRIMARY SCHOOL
MULTIPLICATION → YEAR FOUR

Objective	Concrete	Pictorial	Abstract
Formal Method (no exchanging)	With place value $C 3 \times 23$ 	Represent the counters pictorially 	Use of formal method 
Formal Method (exchanging required) TO X O HTO X O	With place value col 	Represent the counters pictorially 	Use of formal method 
Vocabulary		Stem Sentences	
repeated addition grouping equal groups of double multiply times lots of array partitioning grid method product short multiplication column exchange		The whole is ____. There are ____ equal groups with ____ in each group. The product is ____ There are ____ equal groups of ____	

ST NICHOLAS C.E. PRIMARY SCHOOL
MULTIPLICATION- YEAR FIVE

Objective	Concrete	Pictorial	Abstract
Short multiplication ThHTO X O			Formal method 
Long Multiplication ThHTO X O	When children start to multiply 3d x 3d and 4d x 2d etc., they should be confident with the abstract		Formal method 
Vocabulary		Stem Sentences	
repeated addition grouping equal groups of double multiply time lots of array partitioning grid method product short multiplication column exchange long multiplication		The whole is ____. There are ____ equal groups with ____ in each group. The product is ____ There are ____ equal groups of ____	

ST NICHOLAS C.E. PRIMARY SCHOOL
MULTIPLICATION- YEAR SIX

Objective	Concrete	Pictorial	Abstract
Long Multiplication ThHTO X O			Formal method 
Using known facts			$7 \times 3 = 21$ $0.7 \times 3 = 2.1$ $0.7 \times 0.3 = 0.21$ $70 \times 3 = 210$ $70 \times 30 = 2100$
Vocabulary		Stem Sentences	
repeated addition grouping equal groups of double multiply times lots of array partitioning grid method product short multiplication column exchange long multiplication		The whole is ____. There are ____ equal groups with ____ in each group. The product is ____ There are ____ equal groups of ____	