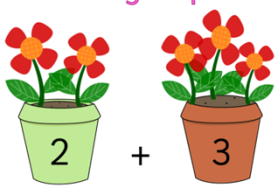
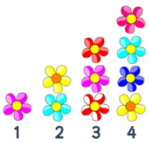
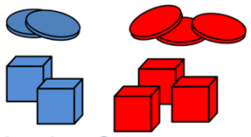
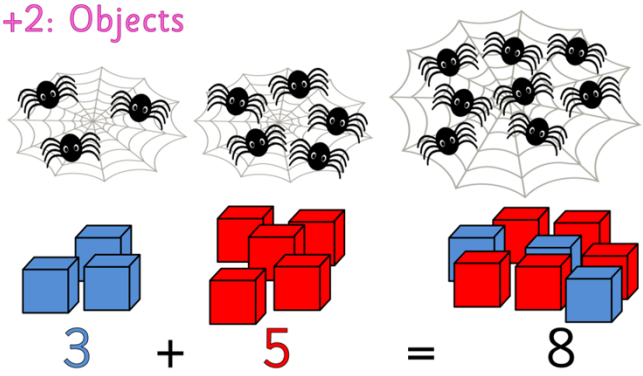
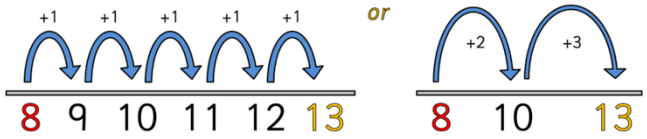
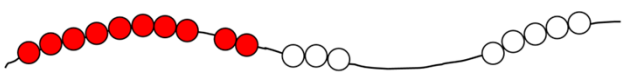
Providenciales Primary School

Calculation Policy
Addition

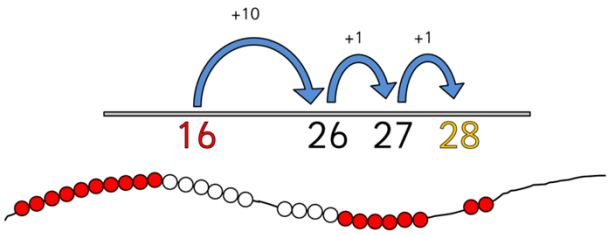
This policy accounts for only one path of progression through addition. Children will move through these calculation methods and experiences at different rates. Consequently, the stages do not relate to an age range or year group – rather, they should be seen as a continuum that all children will progress along. They may incorporate other approaches in their work and this should be encouraged so long as they are developing sound understanding. The concepts outlined here will enable the school to deliver a set of skills that allow for continuity and progression.

Stage	Examples	At each stage children develop and refine different skills. Children secure their understanding by…
+1: Early Experiences	**+1: Early experiences**  Real life objects  Staircase models Games and songs  Blocks & counters One more in numbers to 10	✓ Counting orally, in order. ✓ Counting while pointing to one object at a time. ✓ Using a variety of real-life resources for counting, often linked to stories, songs and games. ✓ Number and counting songs. ***Key language to be aware of:*** Number names, one more, one less, total, altogether.
+2: Objects	**+2: Objects**  Combine two groups of objects to give a total.	✓ Counting larger collections of objects accurately (up to 10 objects, then to 20). ✓ Manipulating numbers to 10 – ordering, matching, counting up and down. ✓ Using a variety of resources for counting, including counters, bead strings, cubes, Cuisenaire, abacus, etc. ✓ Rearranging objects for counting. ✓ Counting on from a number in jumps of 1. ***Key language to be aware of:*** Awareness of number symbols and their correlation to objects. Plus, add, sum, equals, total, altogether.
+3: Counting on	**+3: Counting on** 5 + 8 = 13   Count on from the largest number using a numberline or beadstring	✓ Counting on and back from any number jumps of 1. ✓ Comparing the relative size of 2 numbers, mentally or with the use of resources. ✓ Recalling 'number bonds' to 10 (8+2, 6+4, etc.) and, subsequently, 20. ✓ Recording written numerals legibly with increasing consistency. Extension & refinement: ✓ Jumping on to nearest 10 and continuing to count on (bridging through 10). ***Key language to be aware of:*** *All of the above! Plus…* Number lines, bead strings, counting on, jumps of …, number bonds, equals, total, altogether,

+4: Jumping on

+4: Jumping on

12 + 16 = 28



Jump on from the largest number in jumps of 10 and 1, using a numberline or beadstring

- ✓ Counting on in 10s from any given number
- ✓ Adding multiples of 10 to any number by repeated addition of 10
- ✓ Partitioning all 2-digit numbers into 10s and 1s
- ✓ Using a range of apparatus to model partitioning in 2-digit numbers (Cuisenaire, Diennes, blocks, bead strings, etc.)

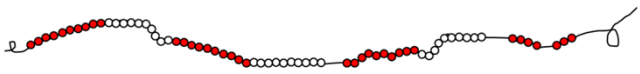
Key language to be aware of:
All of the above! Plus…
Partitioning, place value, hundreds, tens, units, recombine, sum, total, plus, addition, increase.

+5: Partitioning

+5: Partitioning

43 + 24 = (40 + 3) + (20 + 4) = 60 + 7 = 67

	T	U
	40	3
+	20	4
	60	7



Add the tens, followed by the units

- ✓ Recognising place value in all numbers (TH,) H, T, U.
- ✓ Adding multiples of 10 and 100 mentally, including jumping over 100 or 1000 boundaries (90+50, etc.).
- ✓ Understanding zero as a 'place holder' in 3- and 4-digit numbers.
- ✓ Modelling written calculations using apparatus and visa-versa.
- ✓ Recording legibly to arrange calculations in columns.
- ✓ Using rounding, estimating and number sense to check for accuracy in work.

Key language to be aware of:
All of the above! Plus…
Partitioning, recombine, place value, 'true' value, columns, zero as a 'place holder'.

+6: Expanded Column

+6: Expanded Column

	T	U
	78	
+	45	
	13	
	110	
	123	

	H	T	U
	486		
+	357		
	13		
	130		
	700		
	843		

Each place value column is added with its true value recorded. The values are recombined at the end.

- ✓ Demonstrating a secure understanding of place value in TTH, TH, H, T, U numbers and to 1 decimal place.
- ✓ Adding multiples of 10, 100 and 1000, including jumping over 100, 1000 and 10,000 boundaries (e.g. 800 + 600).
- ✓ Recording legibly to arrange calculations in columns.
- ✓ Use rounding, estimating and number sense to check for accuracy in work

Extension and refinement:

- ✓ Understand place value in decimal numbers to 1 and 2 decimal places (in context of money and measures)
- ✓ Count on reliably in tenths over unit boundaries

Key language to be aware of: *All of the above!*
But now with particular emphasis on partitioning & recombining and introducing language of decimals.

+7: Column

+7: Column

	H	T	U
	1	1	
	1	6	3
+	4	8	7
	6	5	0

	H	T	U	.	Th
	1	1	2		
	4	4	.	8	
		4	2	.	6
+		8	5	.	7
	1	7	3	.	1

Add from the lowest value column. Carry tens, hundreds, thousands, etc. as needed.

- ✓ Recognising place value in numbers to millions.
- ✓ Recognising place value in numbers to 2 and 3 decimal places in context (measures, money, etc.).
- ✓ Multiplying and dividing numbers by 10, 100 and 1000 to convert measures (so that numbers can be calculated in the same unit of measure).
- ✓ Speaking about the 'true' value of any number within a calculation
- ✓ Recording legibly to arrange calculations in columns
- ✓ Using rounding, estimating and number sense to check for accuracy in work

Key language to be aware of:
All of the above! Plus… 'Carry over', 'true' value, secure language of decimals and conversion of measures.