The Oaks CE Learning Federation
Calculation Policy
Addition Progression - using a CPA Approach

CONCRETE | PICTORIAL | 2 + 1 = 3 ABSTRACT
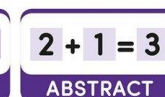
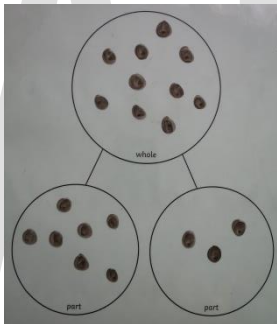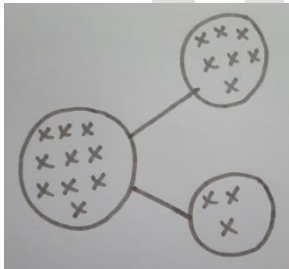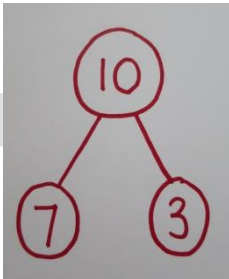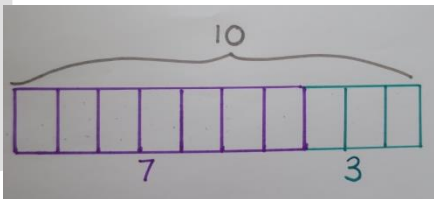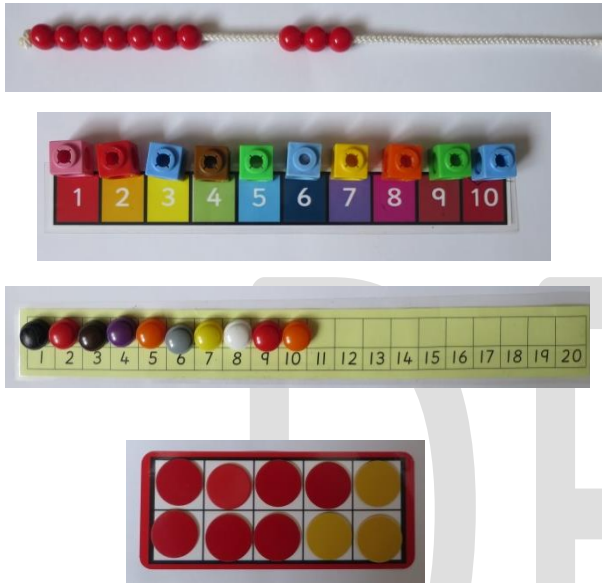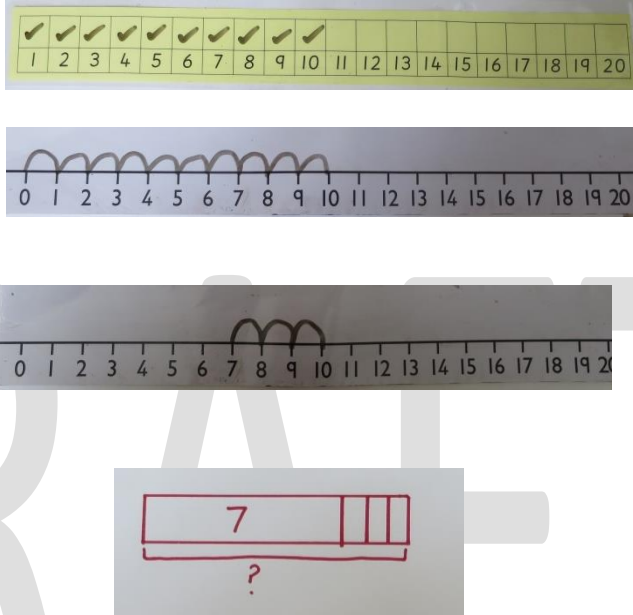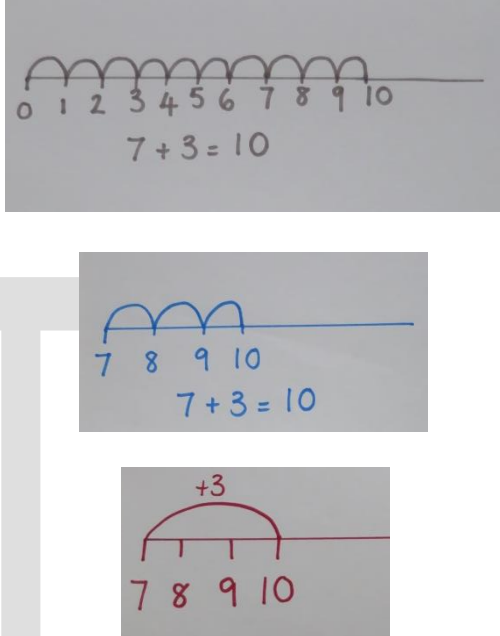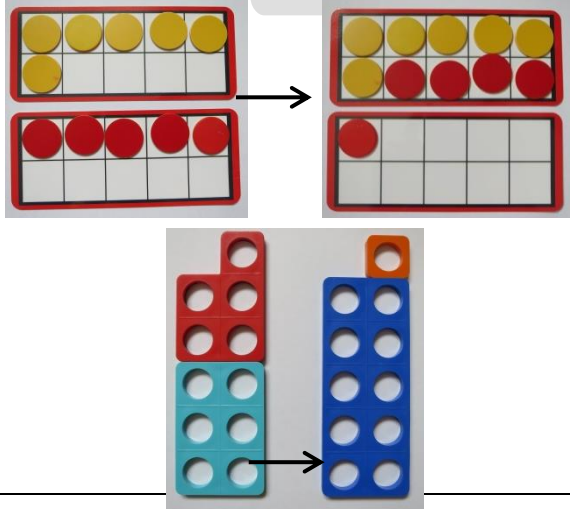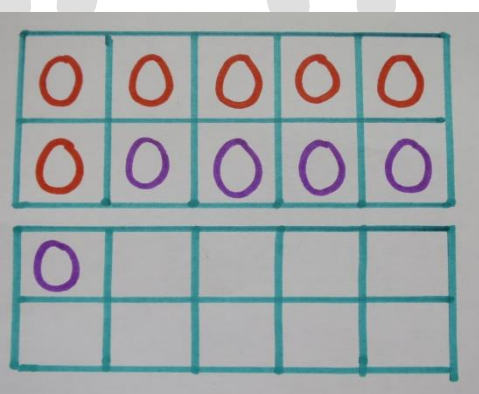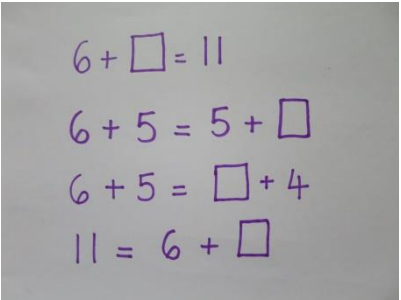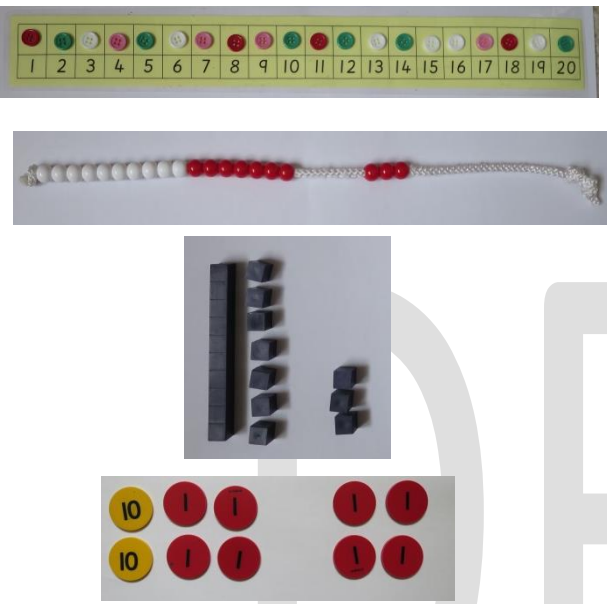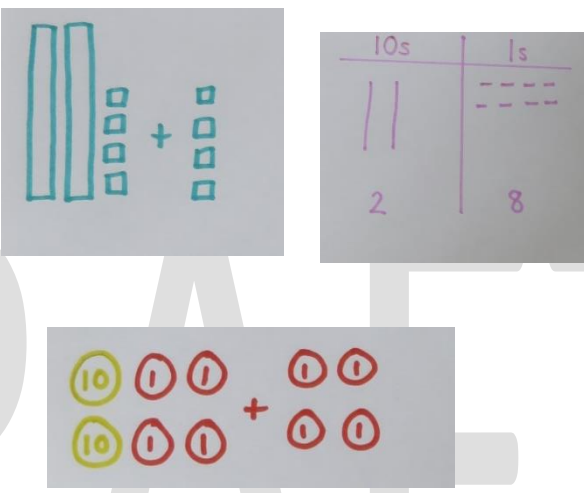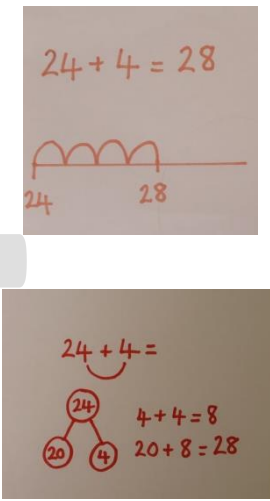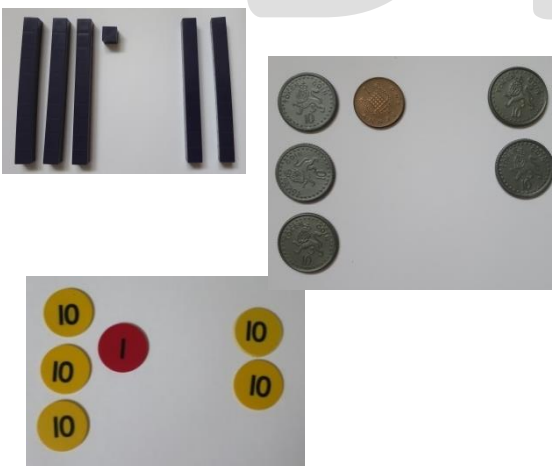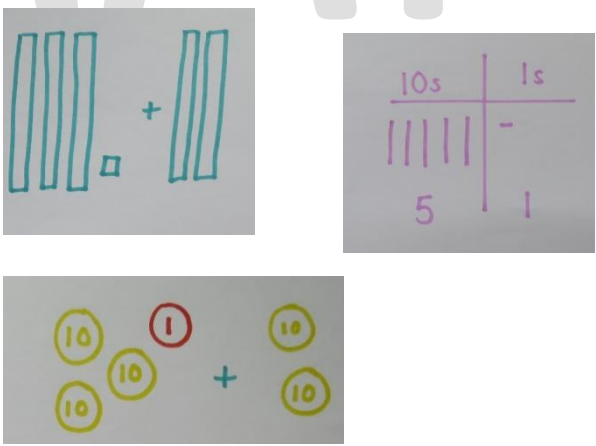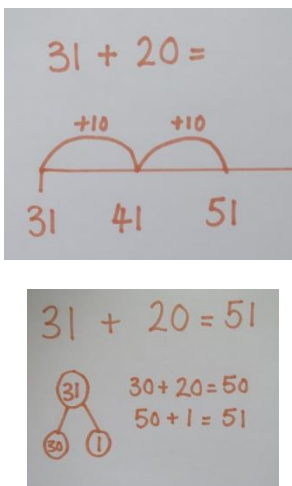| Development Matters	National Curriculum	
EYFS	Year 1	Year 2
40-60+m • Finds the **total** number of items in two groups by counting them all • Finds **one more** or less from a group of 5 objects, then ten objects. • In practical activities and discussion, beginning to use the vocabulary involved in **adding** and subtracting **ELG** • Says which number is **one more** or one less than a given number • Using quantities and objects, they **add** and subtract two single digit numbers and **count on** or back to find the answer.	Pupils should be taught to: • Given a number, identify **one more** and one less • Read, write and interpret mathematical statements involving **addition (+),** subtraction (–) and equals (=) signs • Represent and use **number bonds** and related subtraction facts within 20 • **Add** and subtract one-digit and two-digit numbers to 20, including zero • Solve one-step problems that involve **addition** and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = – 9.	Pupils should be taught to: • Solve problems with **addition** and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures • Applying their increasing knowledge of mental and written methods • Recall and use **addition** and subtraction facts to 20 fluently, and derive and use related facts up to 100 • **Add** and subtract numbers using concrete objects, pictorial representations, and mentally, including: a two-digit number and ones, a two-digit number and tens, two two-digit numbers, adding three one-digit numbers • Show that **addition** of two numbers can be done in any order (commutative) and subtraction of one number from another cannot • Recognise and use the inverse relationship between **addition** and subtraction and use this to check calculations and solve missing number problems.

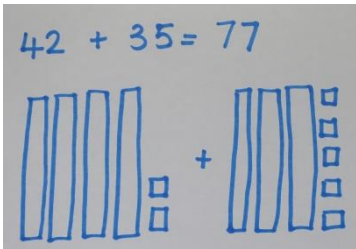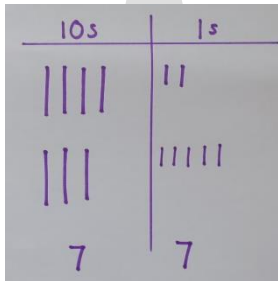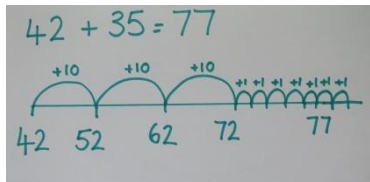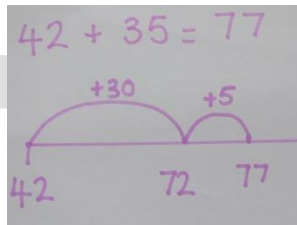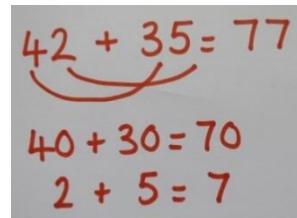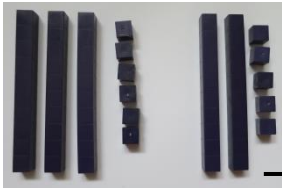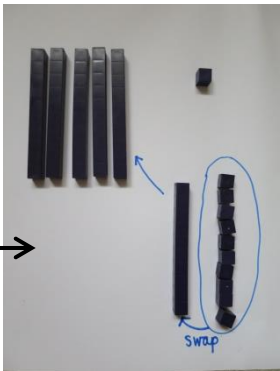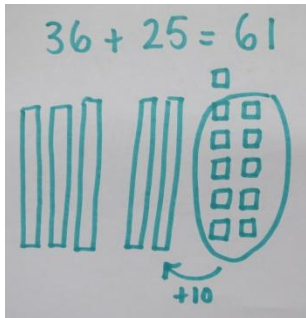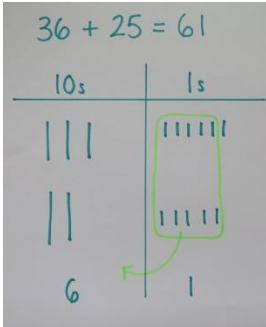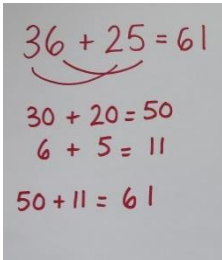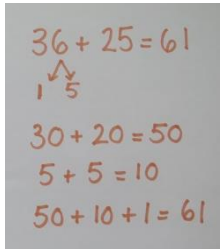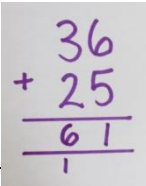**Key Language:** sum, total, parts and wholes, plus, add, altogether, more, is equal to, is the same as.

Key Apparatus: Numicon, cubes, objects, counters, coins, bead strings, tens frames, number tracks, number lines, part-part whole diagrams, bar model diagrams

	Concrete	Pictorial	Abstract
		(Most applicable to EYFS / Y1)	
Step 1- Combining 2 parts to make a whole **7 + 3 = 10**			

	Concrete	**Pictorial**	**Abstract**
		(Most applicable to EYFS / Y1)	
Step 2- Counting on… from the first number, then from the biggest number **"1,2,3,4,5, 6,7,8,9,10"** then **"7, 8, 9, 10"**			
		(Most applicable to Y1)	
Step 3- Regrouping to make 10 **6 + 5 = 11** 5 + 5 = 10 10 + 1 = 11			$6 + \square = 11$ $6 + 5 = 5 + \square$ $6 + 5 = \square + 4$ $11 = 6 + \square$

	Concrete	**Pictorial**	**Abstract**
	(Most applicable to Y1/ Y2)		
Step 4- Adding a 2-digit number and ones **17 + 3 = 20** **24 + 4 = 28**			
	(Most applicable to Y2)		
Step 5- Adding a 2 digit number and tens **31+20 = 51**			

	Concrete	Pictorial	Abstract
		(Most applicable to Y2)	
Step 6- Adding two, 2-digit numbers. (no re-grouping) **42+35 = 77**			
		(Most applicable to Y2)	
Step 7- Adding two, 2-digit numbers with regrouping required **36+25=61**			

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