Kings Hill Primary School

Calculation Policy - EYFS

The following pages show the progression in calculation, (addition, subtraction, multiplication and division) and how this works in line with the National Curriculum. The consistent use of the CPA (concrete, pictorial, abstract) approach across *Power Maths* helps children develop mastery across all the operations in an efficient and reliable way. This section of the policy shows how we use these methods to develop children's confidence in their understanding of both written and mental methods.

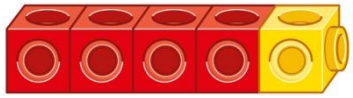
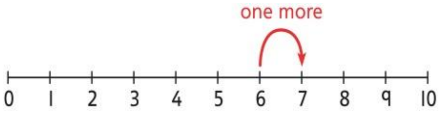
EYFS

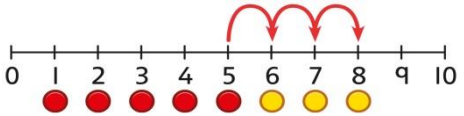
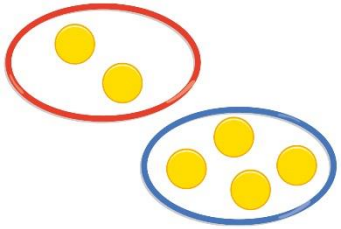
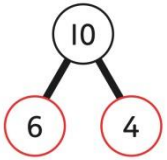
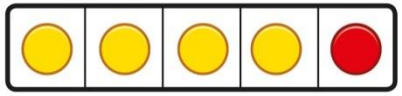
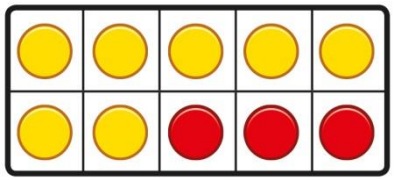
In Early Years Foundation Stage, pupils should be developing their concept of the number system through use of concrete and material representations. They should experience practical calculation using a wide variety of equipment for example small world play, role play, counters, cubes and investigate ways of recording calculations using pictures and different pictorial representations.

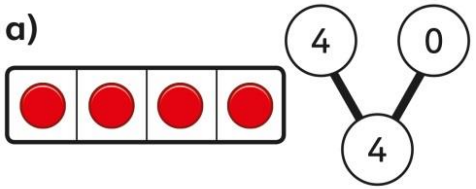
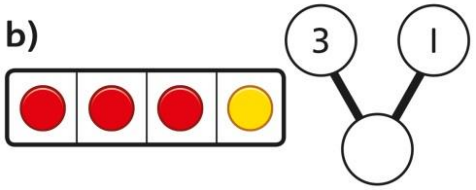
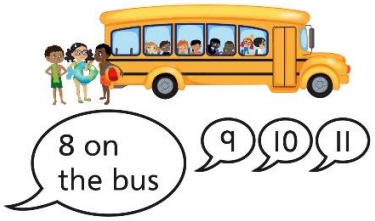
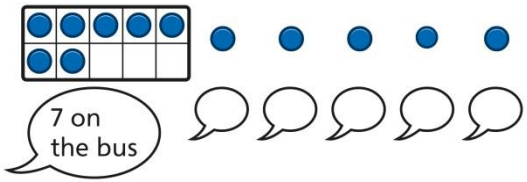
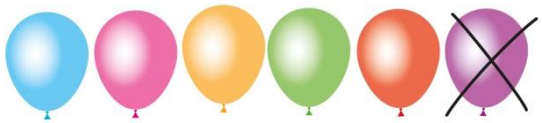
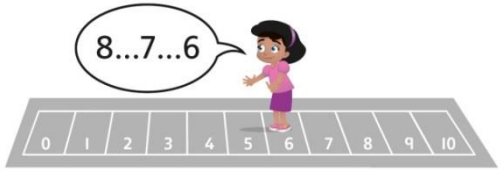
Key language: more, less, fewer, equal, 1 more, 1 less, whole, part, number bond, add, addition, plus, total, altogether, subtract, subtraction, difference, take away, minus, less, more, group, share, equal, equals, is equal to, groups, equal groups, share, shared equally,

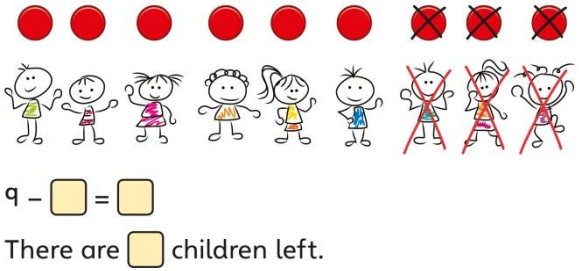
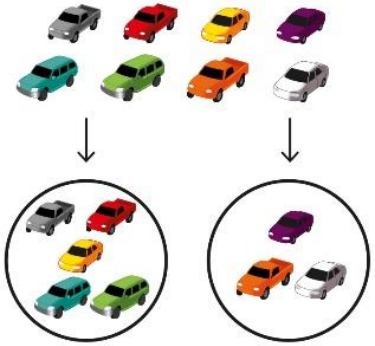
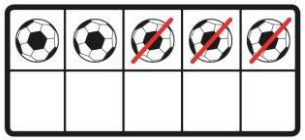
Addition and subtraction:	**Multiplication and division:**	**Fractions:**
Pupils must be provided with opportunities to develop their skills so that they are able to count reliably, including one to one correspondence and count on from a given number. Pupils should be given the opportunity to count out sets of objects and then combine them to make totals for example 6 + 2 = 8 First count out a group of 6. Then count out a group of 2. Finally combine them to find a total.	Children will experience equal groups of objects. They should work on practical problem solving activities.	Solve problems, including halving and sharing. Pupils should have many practical experiences of sharing objects for example sharing between two people or finding a quarter of a group of objects.

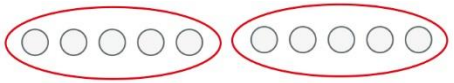
EYFS

	Concrete	**Pictorial**	**Abstract**
EYFS Addition	**Counting and adding more** Children add one more person or object to a group to find one more.	**Counting and adding more** Children add one more cube or counter to a group to represent one more.  *One more than 4 is 5.*	**Counting and adding more** Use a number line to understand how to link counting on with finding one more.  *One more than 6 is 7.* *7 is one more than 6.* Learn to link counting on with adding more than one.

			 *5 + 3 = 8*
	Understanding part-part-whole relationship Sort people and objects into parts and understand the relationship with the whole.  *The parts are 2 and 4. The whole is 6.*	**Understanding part-part-whole relationship** Children draw to represent the parts and understand the relationship with the whole.  *The parts are 1 and 5. The whole is 6.*	**Understanding part-part-whole relationship** Use a part-whole model to represent the numbers.   *6 + 4 = 10*
	Knowing and finding number bonds within 10 Break apart a group and put back together to find and form number bonds.  *3 + 4 = 7*  *6 = 2 + 4*	**Knowing and finding number bonds within 10** Use five and ten frames to represent key number bonds.  *5 = 4 + 1*  *10 = 7 + 3*	**Knowing and finding number bonds within 10** Use a part-whole model alongside other representations to find number bonds. Make sure to include examples where one of the parts is zero.

			a)  b)  *4 + 0 = 4* *3 + 1 = 4*
	Adding by counting on Children use knowledge of counting to 20 to find a total by counting on using people or objects.  	**Adding by counting on** Children use counters to support and represent their counting on strategy.  	
EYFS Subtraction	**Counting back and taking away** Children arrange objects and remove to find how many are left.  *1 less than 6 is 5.* *6 subtract 1 is 5*.	**Counting back and taking away** Children draw and cross out or use counters to represent objects from a problem.	**Counting back and taking away** Children count back to take away and use a number line or number track to support the method. 

			*9 − 3 = 6*
	Finding a missing part, given a whole and a part Children separate a whole into parts and understand how one part can be found by subtraction.  *8 − 5 = ?*		
	Subtraction within 10 Understand when and how to subtract 1s efficiently. Use a bead string to subtract 1s efficiently. 	**Subtraction within 10** Understand when and how to subtract 1s efficiently. 	**Subtraction within 10** Understand how to use knowledge of bonds within 10 to subtract efficiently. *5 − 3 = 2*
EYFS	**Grouping**	**Grouping**	

Division **Double and halving**	Learn to make equal groups from a whole and find how many equal groups of a certain size can be made. Sort a whole set people and objects into equal groups.  *There are 10 children altogether.* *There are 2 in each group.* *There are 5 groups.*	Represent a whole and work out how many equal groups.  *There are 10 in total.* *There are 5 in each group.* *There are 2 groups.*	
	Sharing Share a set of objects into equal parts and work out how many are in each part**.**