St Joseph's Roman Catholic Academy

Maths calculation policy, EYFS

The following pages show the *Maths* 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 *Maths* helps children develop mastery across all the operations in an efficient and reliable way. This policy shows how these methods develop children's confidence in their understanding of both written and mental methods.

<table>
<tr><th colspan="2">EYFS</th></tr>
<tr><td colspan="2">In EYFS pupils should be developing their concept of the number system using concrete materials and pictorial representations. They should experience practical calculation opportunities using a wide variety of equipment, e.g. small world play, role play, counters, cubes etc. They develop ways of recording calculations using pictures, etc</td></tr>
<tr><td colspan="2">Key language: whole, part, ones, ten, tens, number bond, add, addition, plus, total, altogether, subtract, subtraction, find the difference, take away, minus, less, more, group, share, equal, equals, is equal to, groups, equal groups, times, multiply, multiplied by, divide, share, shared equally,</td></tr>
<tr><td>Addition and subtraction: Children 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 a total e.g. 6 + 2 = 8

Pupils should count out a group of objects, move some away and recount the total. 8 – 3 = 5</td><td>Multiplication and division: Children develop an awareness of equal groups and link this with counting in equal steps, starting with 1s and 2s.
In this key stage, it is vital that children explore and experience a variety of strong images and manipulative representations of equal groups, including concrete experiences as well as abstract calculations. In year 1 they learn how multiplication and division can be related to repeated addition and repeated subtraction to find the answer to the calculation.</td></tr>
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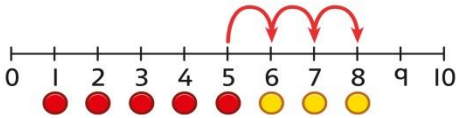
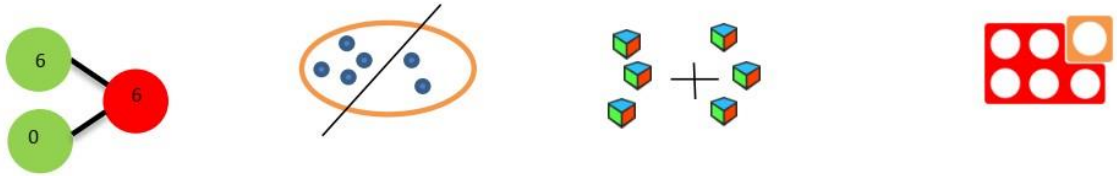
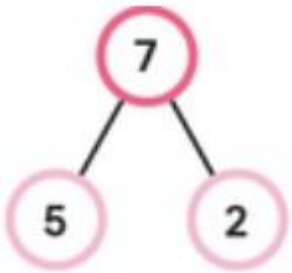
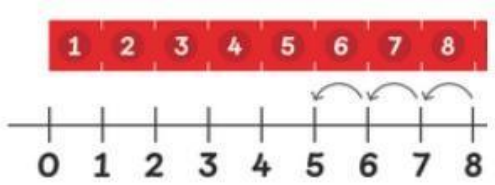
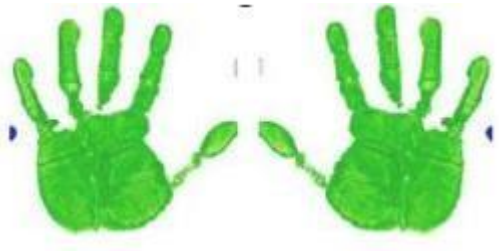
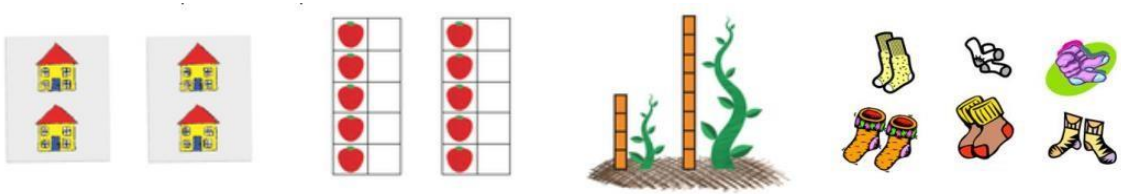
EYFS			
	Concrete	**Pictorial**	**Abstract**
EYFS Addition	**Counting and adding more** Pupils should be given the opportunity to count out sets of objects and then combine them to make a total e.g. 6 + 2 = 8	**Counting and adding more** First count out a group of 6. Then count out a group of 2. Finally combine them to find a total. 	**Counting and adding more** Use a number line to understand how to link counting on with finding two more. Learn to link counting on with adding more than one on a number line.  *6 + 2 = 8*
	Understanding part-part-whole relationship Sort people and objects into parts and understand the relationship with the whole.  *The parts are 6 and 2. The whole is 8.*	Pupils should recognise different ways of making numbers. E.g 6 can be made as: 	

EYFS Subtraction	**Counting back and taking away** Pupils should count out a group of objects, move some away and recount the total. 	**Counting back and taking away** After pupils have recognised different ways of making numbers, they should use this number bond knowledge to help with subtraction facts. 	**Counting back and taking away** Children count back to take away and use a number line or number track to support them.  Children should use concrete materials to start counting back to solve subtraction problems. 8 – 3 =
EYFS Multiplication	**Recognising and making equal groups** Children will experience equal groups of objects. They should work on practical problem-solving activities.  How may hands? There are two groups of 1. How many fingers? There are two groups of 5.	**Recognising and making equal groups** Use a range of concrete materials to show a number and then repeat the number to show doubling. Then move onto pictorial -presentations. 	

EYFS **Division**	**Grouping** Pupils should have many practical experiences of sharing objects e.g. sharing between 2 people or finding ½ of a group of objects.  Use a range of concrete materials to show a number and then share them equally. Then move onto pictorial representations.