Bullion Lane Primary School

EYFS Calculation Policy

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This policy supports the White Rose maths scheme used throughout the school.

Progression within each area of calculation is in line with the programme of study in the 2014 National Curriculum and the EYFS Statutory Framework.

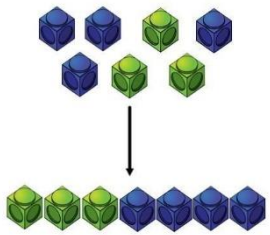
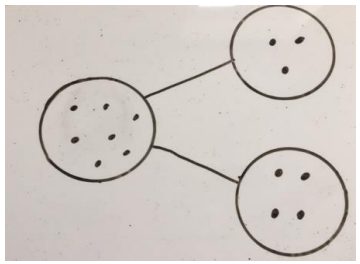
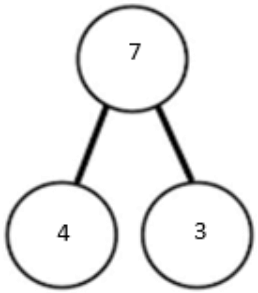
This calculation policy should be used to support children to develop a deep understanding of number and calculation. This policy has been designed to teach children through the use of concrete, pictorial and abstract representations.

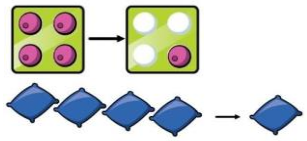
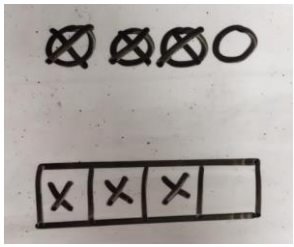
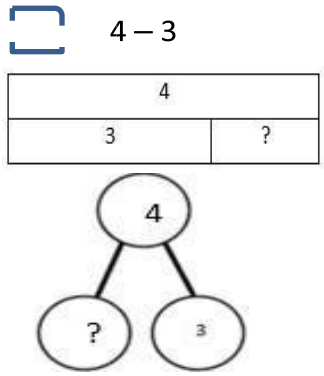
Concrete representation – a pupil is first introduced to an idea or skill by acting it out with real objects. This is a 'hands on' component using real objects (manipulatives) and is a foundation for conceptual understanding.

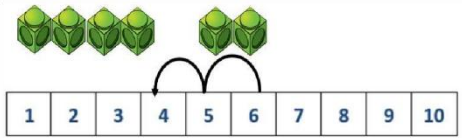
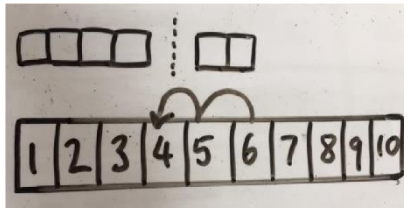
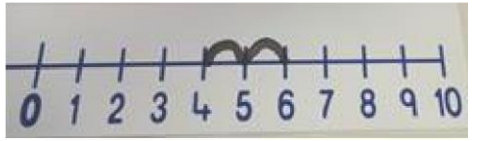
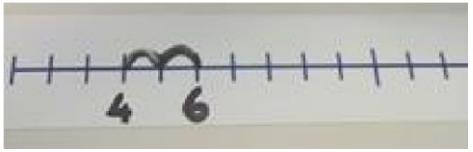
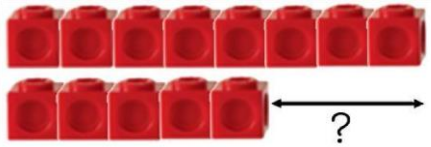
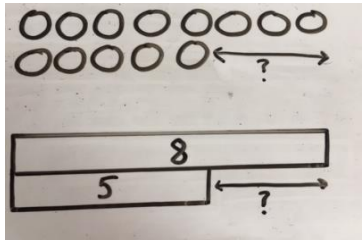
Pictorial representation – a pupil has sufficiently understood the 'hands on' experiences performed and can now relate them to representations, such as a diagram or picture of the problem.

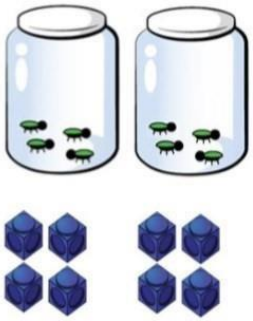
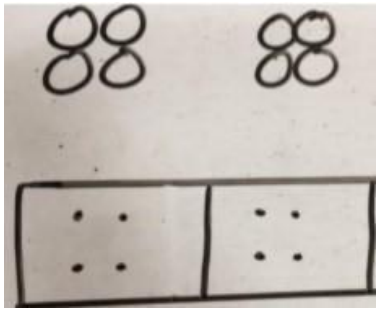
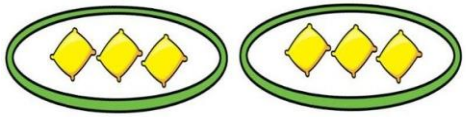
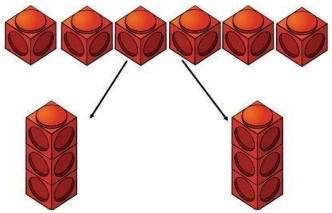
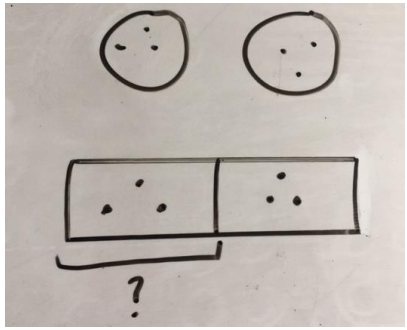
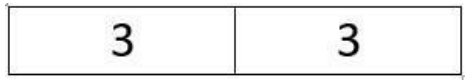
Abstract representation – a pupil is now capable of representing problems and calculations by using mathematical notation, for example 4 – 1 = 3, 12 x 2 = 24.

It is important that conceptual understanding, supported by the use of representation, is secure for all procedures. Reinforcement is achieved by going back and forth between these representations.

Addition	Concrete	Pictorial	Abstract
Key language: sum, total, parts and wholes, plus, add, altogether, more, 'is equal to', 'is the same as'.			
EYFS – Addition Adds and subtracts, using quantities and objects, 2 single-digit numbers, and counts on or back to find the answer (ELG). **Finds the total number of items in two groups by counting all of them.**	Combining two parts to make a whole (use other resources too e.g. eggs, shells, teddy bears, cars). 	Children to represent the cubes using dots or crosses. They could put each part on a part whole model too. 	4 + 3 = 7 Four is a part, 3 is a part and the whole is seven. 

Subtraction	Concrete	Pictorial	Abstract
Key language: take away, less than, the difference, subtract, minus, fewer.			
EYFS – Subtraction **Adds and subtracts, using quantities and objects, 2 single-digit numbers, and counts on or back to find the answer (ELG)**	Physically taking away and removing objects from a whole (ten frames, Numicon, cubes and other items such as beanbags could be used). 4 – 3 = 1 	Children to draw the concrete resources they are using and cross out the correct amount. The bar model can also be used. 	4- 3 = 

	Counting back (using number lines or number tracks) children start with 6 and count back 2.  6– 2 = 4	Children to represent what they see pictorially e.g.  	Children to represent the calculation on a number line or number track and show their jumps. Encourage children to use an empty number line.  
	Finding the difference (using cubes, Numicon or Cuisenaire rods, other objects can also be used).  Calculate the difference between 8 and 5.	Children to draw the cubes/other concrete objects which they have used or use the bar model to illustrate what they need to calculate.  	Find the difference between 8 and 5. 8 – 5, the difference is ? Children to explore why 9 – 6 = 8 – 5 = 7 – 4 have the same difference.

Multiplication	Concrete	Pictorial	Abstract
Key language: lots of, groups of, equal groups, double, times.			
EYFS – Multiplication **Solve problems, including doubling, halving and sharing. Solve practical problems that involve combining groups of 2, 5 or 10, or sharing into equal groups (ELG Exc).**	Doubling using objects 	Doubling using pictures 	Double 2 2 + 2 = 4
Division	**Concrete**	**Pictorial**	**Abstract**
Key language: share, group, half, divided by.			
EYFS – Division **Solve problems, including doubling, halving and sharing. Solve practical problems that involve combining groups of 2, 5 or 10, or sharing into equal groups (ELG Exc).**	Sharing using a range of objects.  6 ÷ 2 	Represent the sharing pictorially. 	6 ÷ 2 = 3  Children should also be encouraged to use their 2 times tables facts.

Date written: January 2024

Date agreed and ratified by Governing Body: February 2024

Date of next review: January 2025