EYFS Calculation Policy

At Seaton Academy, we use the 'White Rose' format as a basis for our maths planning across the school. This scheme follows the concrete, Pictorial, Abstract approach to teaching maths.

Concrete – Using physical objects to solve mathematical problems and further understanding of mathematical concepts

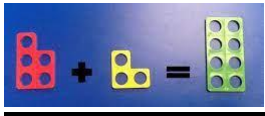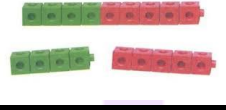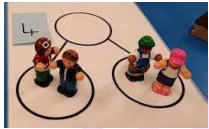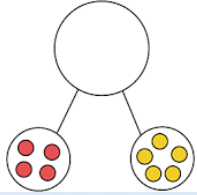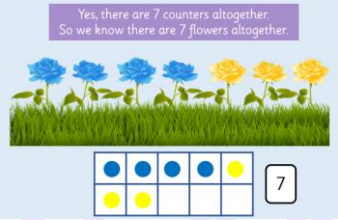**Pictorial** – Using drawing or images to solve mathematical problems

Abstract – Solving mathematical problems using only numbers

In EYFS, our aim is to provide all children with the opportunities to practice and improve their skills in all aspects of maths, laying the foundations for all future mathematical learning. The following five counting principles, underpin these first steps in the learning process.

1. **The one-to-one principle** – This involves children assigning one number name to each object being counted, ensuring they count each object only once.
2. **The stable-order principle** – Children need to understand that when counting numbers must be said in a certain order
3. **The cardinal principle** – Children understand that the number name assigned to the final object in a group is the total number of objects in that group
4. **The abstract principle** – This involves children understanding that anything can be counted including things that cannot be touched including sounds and movements
5. **The order-irrelevant principle** – This involves children understanding that the order we count a group of objects is irrelevant. There will still be the same number.
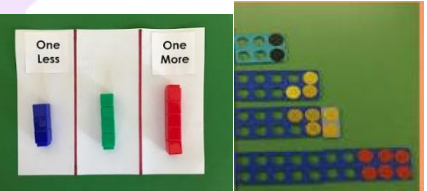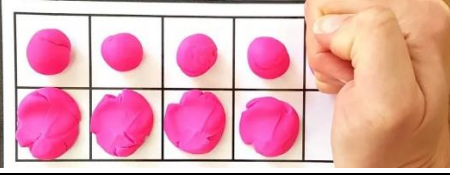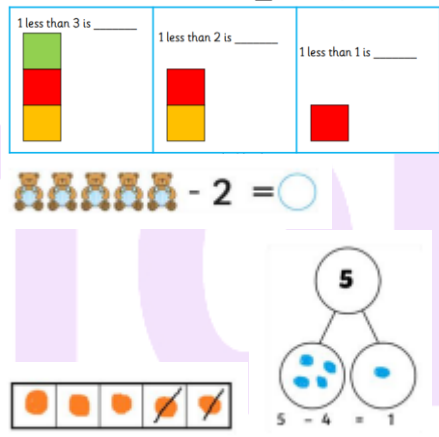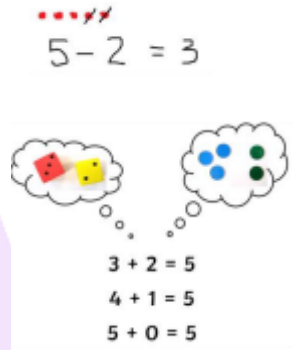
EYFS Calculation Policy

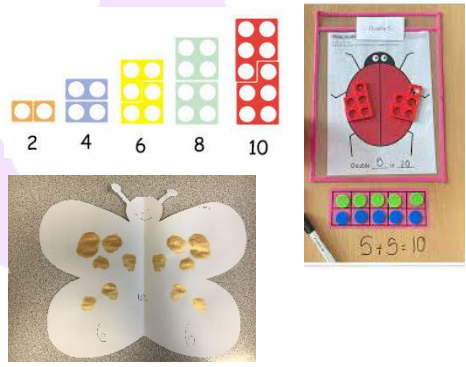| Addition			
	Concrete	**Pictorial**	**Abstract**
- Children are encouraged to gain a sense of the number system through the use of counting concrete objects - They combine objects in practical ways and find the total - They begin to use + and = to record number sentences - Children develop a mental picture of the number system through subitising to use for calculations - Children use first/ then/ now stories to work out word problems - Knows that a group of things change in quantity when something is added - Says the number that is one more than a given number	Use toys and other classroom resources to physically manipulate, group and regroup Use specific maths resources such as counters, cubes or Numicon Use visual supports, e.g. tens frames or part part whole models, with physical objects that can be manipulated 	Use images of two groups so that children are able to visualise and count the total Use the bar model, completing these with images, icons or colours Use visual supports, e.g. tens frames or addition mats, completing these using pictures or icons 	Become aware of symbols and numerals and how these can form a calculation There is no expectation for children to be able to record a number sentence/ addition calculation

EYFS Calculation Policy

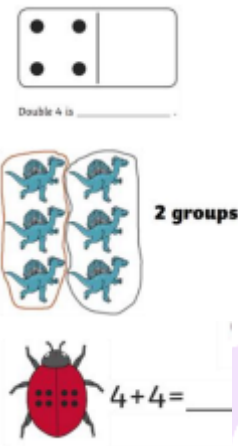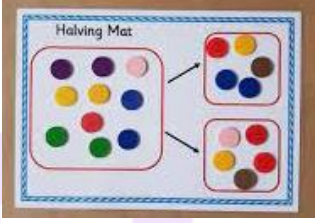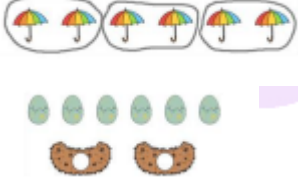| Subtraction			
	Concrete	**Pictorial**	**Abstract**
- Knows that a group of things change in quantity when something is taken away - Find one less from a group of five objects, then ten objects - In practical activities and discussion, beginning to use the vocabulary involved in subtracting - Using quantities and objects, they subtract two single digit numbers and count back to find the answer	Use toys and other classroom resources to physically manipulate, group and regroup Use specific maths resources such as cubes, numicon or bead strings. Use visual supports, e.g. tens frames or part part whole models, with physical objects that can be manipulated	Use a group of pictures for children to cross out or cover quantities to support subtraction Use visual supports, e.g. tens frames or addition mats, completing these using pictures or icons	Become aware of symbols and numerals and how these can form a calculation There is no expectation for children to be able to record a number sentence/ addition calculation

EYFS Calculation Policy

	Multiplication		
	Concrete	**Pictorial**	**Abstract**
• Doubling a number creates two groups of the same number • Creating multiple groups of the same quantity and counting them together	Toys and other maths resources for children to make 2 equal groups Physical and real life examples that encourage children to see the concept of doubling as adding two equal groups 	Pictures and icons that encourage children to see concept of doubling as adding two equal groups Double 4 is _____ 2 groups of 3 is 6 4 + 4 = _____	Addition calculations to model adding two equal groups Double 2 = 4 Double 4 = 8 3 + 3 = 6 4 + 4 = 8 5 + 5 = 10

EYFS Calculation Policy

	Division		
	Concrete	**Pictorial**	**Abstract**
• Solve problems including having and sharing • Halving a whole and halving a quantity of objects • Sharing a quantity of objects	Children have the opportunity to physically cut objects, food or shapes in half Use visual supports e.g. part part whole or halving mats, with physical objects and resources that can be manipulated Counting and other resources to share into 2 or more equal groups 	Pictures and icons that encourage children to see the concept of halving in relation to subitising, addition, and subtraction knowledge, e.g. knowing 4 is made up of 2 groups of 2, so half of 4 is 2 Bar model with pictures or icons to support understanding of finding 2 equal parts of a number, to further understand how two halves make a whole Pictures for children to create and visualise 3 or more equal groups from a quantity 	In Reception there are no expectations to do an abstract division in the EYFS.