All Saints C of E Primary School Year 3 - Number and place value

By the end of Year Three, children have been taught to:

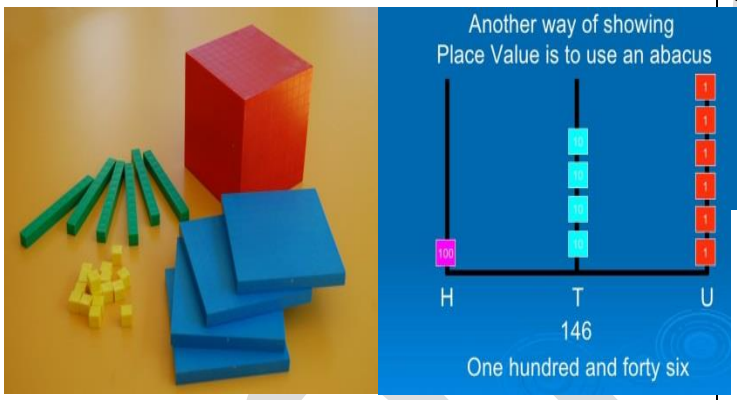
Objective	Why is it important? Things to watch out for!	Ways to support a Year 3 child
count in steps of 3, 4, 50 and 100	Counting in steps of different multiples is an excellent way to develop a child's awareness of patterns. The ability to recognise and continue number patterns is crucial and lays the foundations for learning times tables, as well as many other things. Counting from different starting points is also an important skill children learn, for example start counting in 4s from 24. Once children have secured counting forwards in different *multiples*, they need to move on to counting backwards in these multiples. This generally needs a lot more support because for a lot of children counting backwards does not feel natural. The reason why we count backwards is to lay the foundations for subtraction and repeated subtraction for division. Often children may need a 100 square or a number line to support counting forwards and backwards. By circling certain *multiples*, it helps children to recognise the pattern for example counting in 4s.  We encourage children to say what they notice in terms of repeating patterns and encourage them to explain why this might be happening.	Counting things is an excellent way of supporting a child with counting. We could count with:  ***<u>Ways to challenge children:</u>*** ***Count in 4s from an odd number*** ***Count in 3s starting at 13*** ***If I can count in 4s 6 times, what number will I get to?*** ***Count in 50s from 250*** ***Count in 50s from 90 as follows, 90,140, 190, 240, 290, 340…..*** ***Count in 100s starting from 56 as follows, 56, 156, 256, 356…..***
Read and write numbers up to 1000	Reading and writing numbers is crucial in securing understanding of place value and knowing whether answers are reasonable when calculating. Learning how to read and write numbers in earlier years groups needs time for children to practise and to relate written numbers to relative values.	

	A common misconception which you may see a child doing is writing 10023 when asked to write 123. One of the possible reasons for this is: the child knows what 100 looks like, however he/she hasn't internalised what that would look like in terms of the place value of hundreds, tens and units.	
Compare and order numbers from 0 up to 1000; use <,> and = signs	Comparing numbers in terms of their value is crucial to developing understanding. For example 'Would you rather have £685 or £658?' If you didn't understand the value you may not choose the value that has the most monetary value. We do start to introduce more mathematical symbols to describe relationships between values which are the greater than, less than and equals sign. > *greater than* < *less than* = *equal to* For example: 85>58 Values with the same digits but in different places can be a challenge at times and really tests a child to truly show his/her understanding of place value order Such as, place in order: 467 764 647 674 746 476	<u>Top tip</u>: the widest part of the symbol is facing the greatest value and the narrowest part of the symbol is facing the least value. The *equal to sign* implies that the values on either side are of the same value. For example: 64=64 or 560+4=500+60+2+2. The *equals* sign in this number sentence balances out the equation, just like a see saw or balance weighing scale.
Recognise the place value of each digit in a three-digit number (hundreds, tens, ones) up to 999	Numbers should be seen and represented in a variety of ways to allow children to build visual images in their brain, which they can recall at a later date. When discussing values of digits we often ask children questions such as: What does the 5 represent in 357? Response: 50 How many tens are in 357? Response: 5	

Year 2

We use resources such as: arrow cards, place value grids, mathematical equipment, money and other everyday items which can represent and reinforce the value of digits. Knowing the relative value is crucial when comparing values, knowing when an answer to a calculation is reasonable and many other aspects.





We often encourage children to partition values in different ways so that they understand how values are constructed. The examples below are some of many different ways 357 can be represented and created.

300+50+7=	100+100+100+50+7	200+100+50+7
350+7=	300+57=	300+25+25+7=
330+20+7=	325+25+7=	150+150+50+7=

The possibilities are endless!

Partitioning numbers is an excellent way of helping children play around with numbers to build their understanding of the relative values of numbers and how combinations of numbers can total a specific value. Children are encouraged to use equipment to help them, as well as mathematical drawings and mental calculations.

Give a child a shopping receipt - Challenge the child to order the prices of items from the most expensive to the least expensive. (There may need to be a conversation about how many pence are in a pound.) We could pick out two items from the shopping list and compare the prices – we could even turn it into a game – Guess the price! OR predict which is the most expensive item or least expensive item in the shopping. Discussions could be had about the digits which tell us that an item is more expensive than another.



A-APPLE EACH ORG FUJI	1.38
2EA @ 0.69/EA	
A-GRAPEFRUIT BAG RUBY RED 5 LB	4.49
A-POTATO BAG SWEET 2 LB	1.69
A-TOMATOES ON VINE PEARL 14 OZ	2.99
AVOCADOS ORGANIC 4 COUNT	3.99
BANANAS	0.76
4EA @ 0.19/EA	
B-BREAD WHOLE WHEAT FIBER (5G/	2.99
BURGER MASALA VEGETABLE	2.49
CEREAL BRAN FLAKES TJ'S	1.99
CHEDDAR SHARP WISCONSIN TJ'S.	2.62
COFFEE GROUND FRENCH ROAST	5.49
CORN ON THE COB EACH	1.47
3EA @ 0.49/EA	
FRUIT APPLESAUCE ORGANIC	2.49
FRUIT APPLESAUCE ORGANIC	2.49
MILK REDUCED FAT 2% GALLON TJ'	3.59
ORGANIC BROCCOLI FZN	2.49
SPARKLING SPRING WATER TJ'S P	0.79

Year 3

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