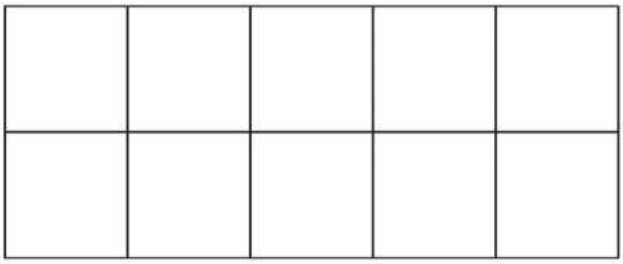
Miss Lawton's Pasta Maths: Place Value Year 1

A secure understanding of place value is essential for further progress in understanding mathematical concepts. Place value is the knowledge of the value of each digit in a number. For example, 23 is a 2-digit number. The value of '2' in this number is 20 and the value of '3' is '3'. The position (place) of the digit in a number determines the value.

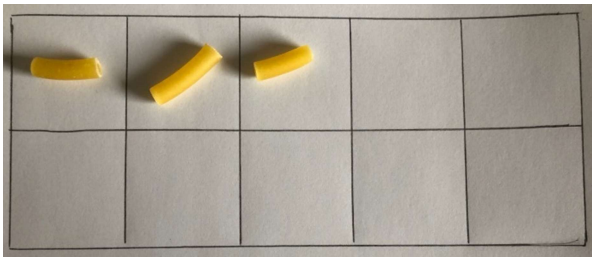
In Year 1 we focus mainly on understanding the value of digits in teen numbers (10-20) but at this time of year would start to look at numbers above 20.

In early mathematics, it is really important for children to experience 'concrete' representations of numbers to support their understanding. This is something you can replicate at home using a variety of items. I have used macaroni (a precious commodity at the moment I know!) but anything of a similar size would do e.g. buttons, rice grains, lego or even bits of coloured paper.

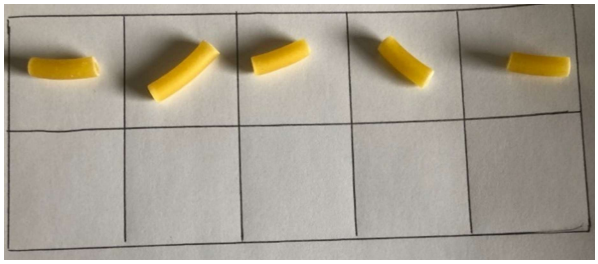
Year 1 children will be familiar with using 10 frames which you can print or draw very easily (as you will see in my examples).



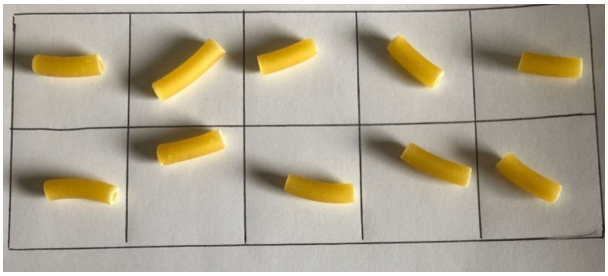
The amount of boxes filled in the 10 frames represents the number.



This represents 3



A line is filled so we know this represents 5 (because 5 is half of 10).



The whole 10 frame is filled so we don't need to count. We know it represents 10.

The first 10 frame is full so we know we have 10 and 1 more. We have 1 ten and 1 one so this represents 11.

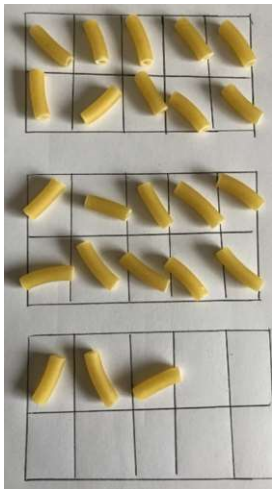
Tens	Ones	T	O
1	1	1	1

The first 10 frame is full so we know we have 10 and 3 more. We have 1 ten and 3 ones so this represents 13.

Tens	Ones	T	O
1	3	1	3

The first 10 frame is full so we know we have 10 and 6 more. We have 1 ten and 6 ones so this represents 16.

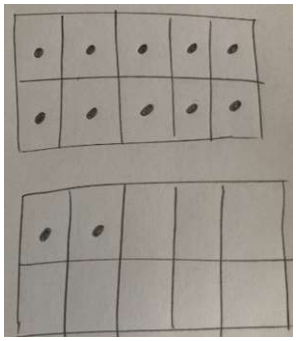
Tens	Ones	T	O
1	6	1	6



This time we have 2 full 10 frames so we know we have 2 tens which is 20 and 3 more. We have 2 tens and 3 ones so this represents 23.

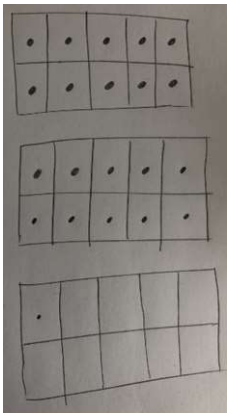
Tens	Ones	T	O
2	3	2	3

Once children have a secure understanding using concrete objects we can move on to pictorial representations (pictures or drawings). They follow the same rules using the 10 frames but instead of pasta we draw dots!



We have 1 ten and 2 ones so this represents 12.

T	O
1	2



We have 2 tens and 1 one so this represents 21.

T	O
2	1

As you can see, I drew these free hand. The only important thing is that there are 10 spaces in the 10 frame.

10 frames to print