Manland Primary School

Maths Parent Workshop

Part 1

Tuesday 27th November 2018

The National Curriculum

- The national curriculum ensure that all pupils:
- **Become fluent** in recall of mathematical knowledge
- **Reason mathematically**. We find out what pupils think by listening carefully to what they have to say, and asking questions to probe understanding. We focus on the 'why', 'why not', 'what if…'
- **Can solve problems-** We encourage learning from our mistakes and the ability to apply skills, concepts and procedures they are learning.
- Challenge is provided by going deeper not accerating.

When children leave Manland we want them to:

- Enjoy maths and see its relevance ‘in the real world’
- Have a secure knowledge of number facts and a good understanding of the four operations
- Use this knowledge to carry out calculations mentally
- Make use of diagrams and jottings to help record the steps to solving a problem
- Have an efficient, reliable and written method of calculation for questions
- Use mathematical thinking and reasoning – To be able to problem solve with confidence.

Key Stage 1

- Children develop confidence and mental fluency with whole numbers, counting and place value.
- Pupils develop the ability to recognise, describe, draw, compare and sort different shapes and use the related vocabulary.
- By the end of year 2, know the number bonds to 20 and be precise in using and understanding place value.
- An emphasis on practice will aid fluency.
- Pupils should read and spell mathematical vocabularly.

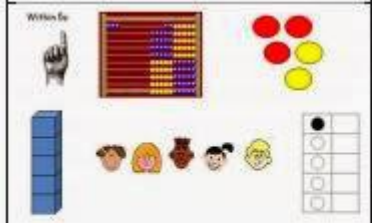
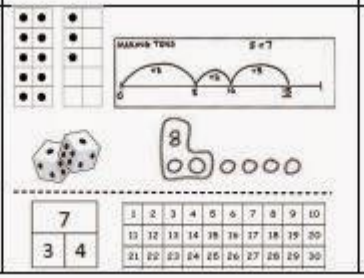
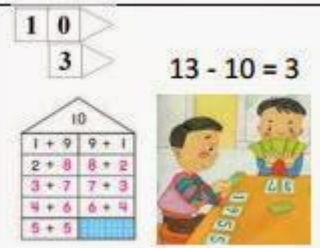
Number

- Number is key to all other aspects of maths
- It includes:

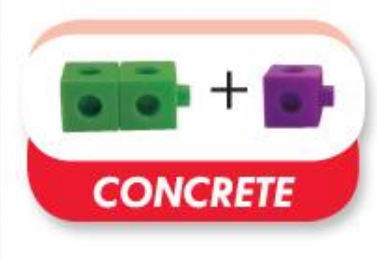
- Counting
- Understanding number
- Knowing and using number facts
- Calculating

You can make a difference to your child's learning by practising their mental recall of facts. With just a few minutes each day, children's confidence can soar.

Concrete- Pictorial-Abstract

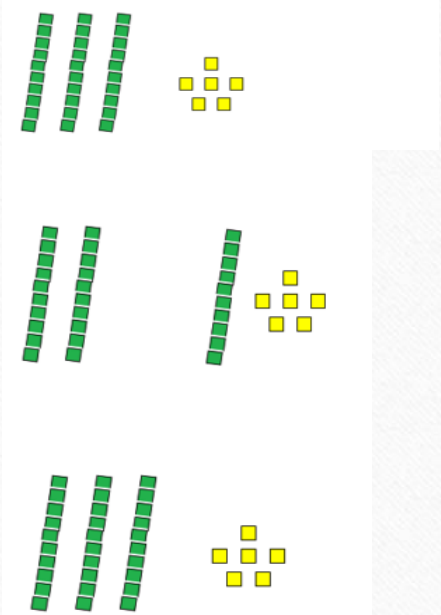
Concrete	Representational	Abstract
Students manipulate hands-on, concrete materials	Students draw and observe diagrams, or watch the teacher touching and moving hands-on materials	Numbers and mathematical symbols
		

The children explore a calculation using apparatus as well as pictorial representations of the same calculation. Without exploration, we cannot expect them to develop a full understanding of the concepts, facts and skills.

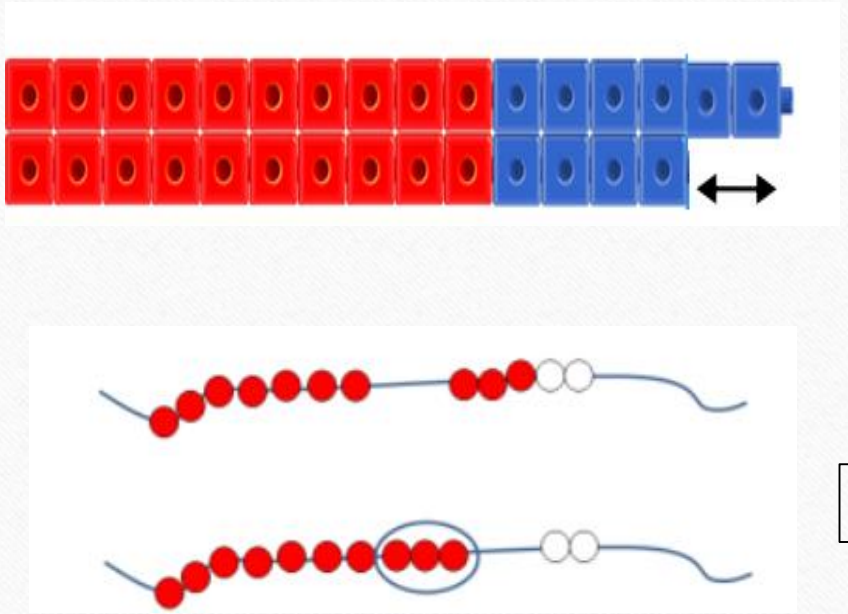


We use maths manipulatives- such as:

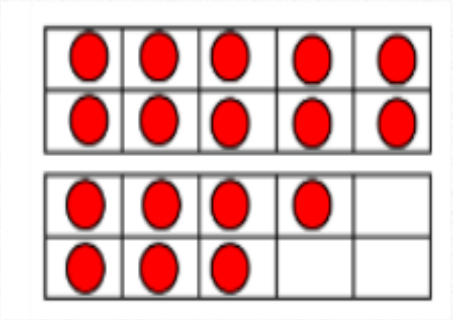
Base ten



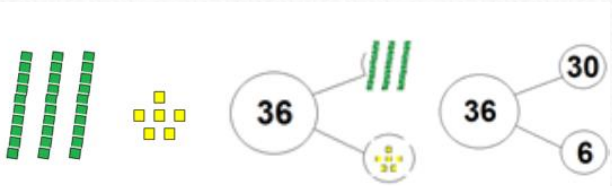
Counters

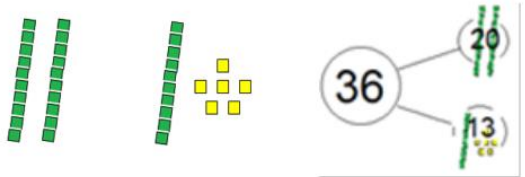


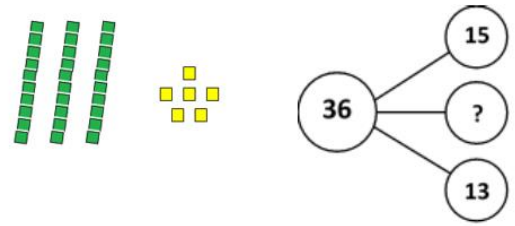
Tens frames

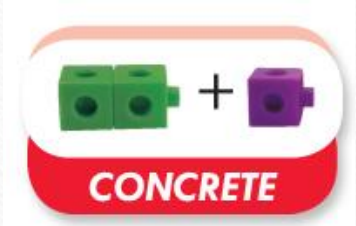


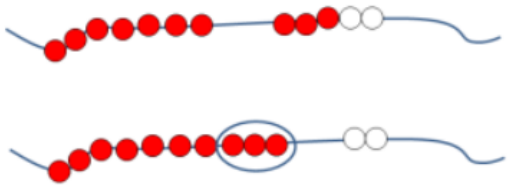
Bead strings







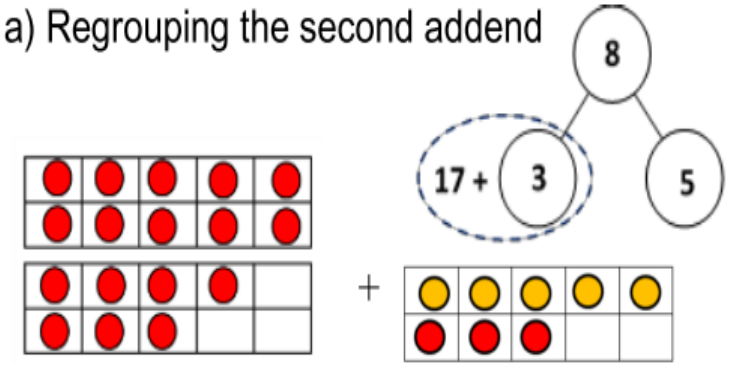




I can prove that 7 + 5 = 10 + 2 using a bead string.

□ = 17 + 8

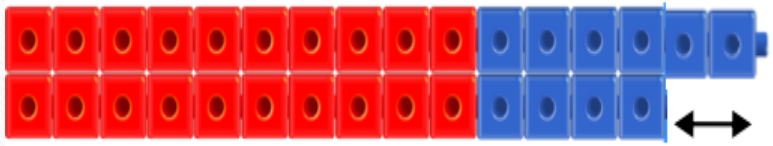
a) Regrouping the second addend



17 + 8 =

17 + 3 + 5 =

20 + 5 = 25



?

$14 + \square = 16$

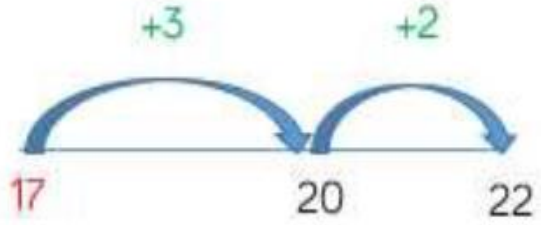
$\square + 14 = 16$

$16 - 14 = \square$

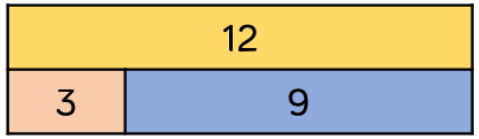
$16 - \square = 14$

14 and 2 more equals 16.
2 fewer than 16 equals 14.

$17 + 5 =$

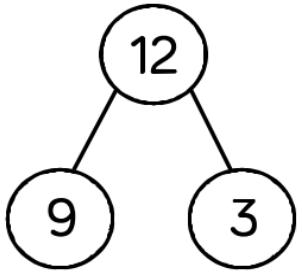


Which of the representations are equivalent to the bar model?



$12 = 9 + 3$

There are 9 cars in a car park, 3 cars leave.



$9 - 3 = 12$

Use the place value charts and concrete materials to complete the calculations.

Tens	Ones
|| :

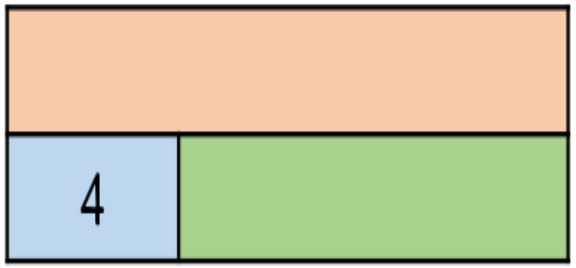
$$\begin{array}{r} 23 \\ +\ 40 \\ \hline \\ \hline \end{array}$$

Tens	Ones
|||||	⁝

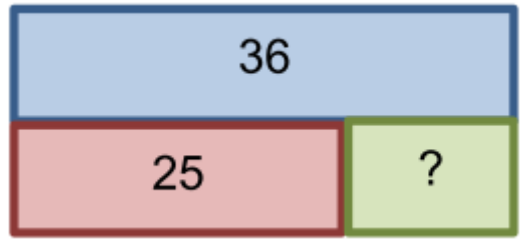
$$\begin{array}{r} 56 \\ -\ 30 \\ \hline \\ \hline \end{array}$$

Jottings

Here is an incomplete bar model.
The total is greater than 10 but less than 20
What could the numbers be?
How many different combinations can you find?



Recognising the parts and the wholes



36-25= ?

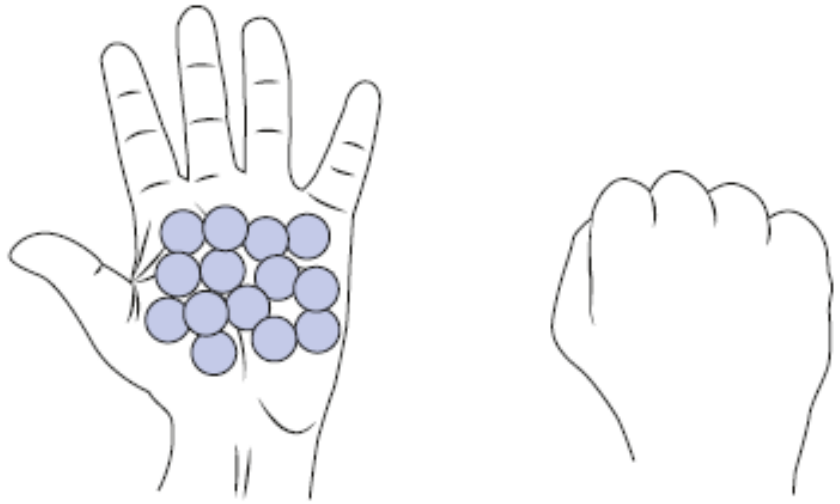
Turn it into
25 + ? = 36

Example

KS1 Paper 2
2016

20 Amy has **21** counters altogether.

She has **14** counters in one hand.



How many counters does she have in the other hand?

counters

1 mark

1

Manland Primary School

MATHEMATICS

WRITTEN CALCULATIONS POLICY

Adopted on :……

Chair of Governors:……..

Headteacher:……..

Compensation model (adding 9 and 11)

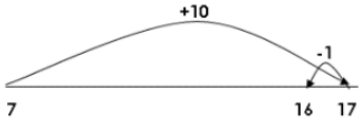
This model of calculation encourages efficiency and application of known facts (how to add ten) but can be a difficult concept to grasp

7 + 9

Bead string:

Children find 7, then add on 10 and then adjust by removing 1.

Number line:

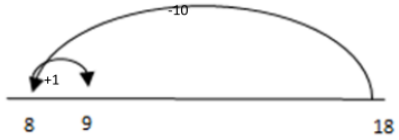


18 – 9

Bead string:

Children find 18, then subtract 10 and then adjust by adding 1.

Number line:



Available on
the school website.