



St John's Calculation Policy

Parent's Guide

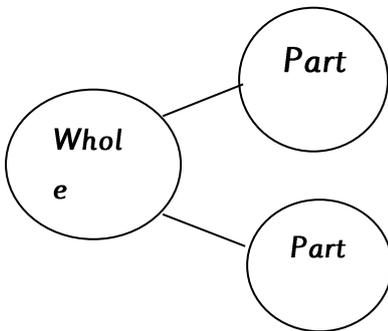
If what you remember as maths is pages of sums you may sometimes feel confused when your child's maths book contains writing, pictures, diagrams, jottings or blank number lines and not many 'formal calculations'. Certainly younger children, up to Year 3, will record calculations in a variety of ways that do not necessarily look like the kind of 'sums' you remember.

We know that school wide guidance, such as this, can ensure consistency of approach, enabling children to progress stage by stage through models and representations they recognise from previous teaching, allowing for deeper conceptual understanding and fluency. As children move between concrete and pictorial and abstract, teachers will be presenting strategies and equipment appropriate to children's level of understanding.

Progression in addition and subtraction

Addition and subtraction are connected.

Part	Part
Whole	



Addition names the whole in terms of the parts and **subtraction** names a missing part of the whole.

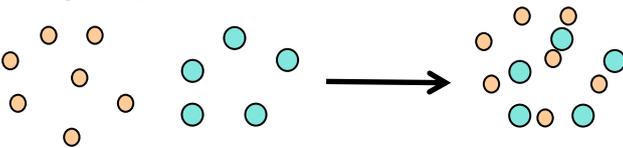
Year One

Addition

Combining two sets (aggregation)

Putting together – two or more amounts or numbers are put together to make a total

$$7 + 5 = 12$$



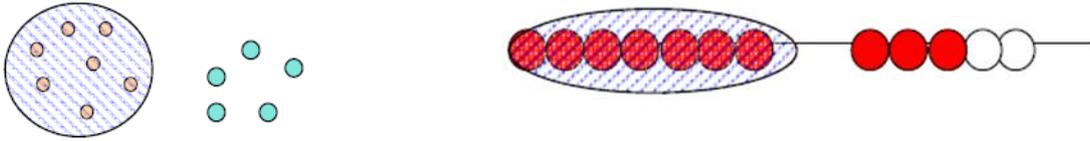
Count one set, then the other set. Combine the sets and count again. Starting at 1.

Combining two sets (augmentation)

This stage is essential in starting children to calculate rather than counting

Where one quantity is increased by some amount. Count on from the total of the first set, e.g. put 3 in your head and count on 2. Always start with the largest number.

Counters:



Start with 7, then count on 8, 9, 10, 11, 12



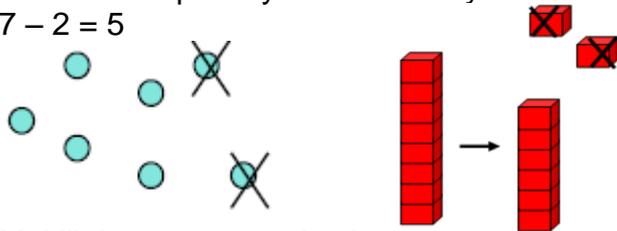
Progressing on, children move from concrete to pictorial and use number lines (with number on) to add by counting in ones. Starting with the greatest number and counting on the smaller number.

Subtraction

Taking away (separation model)

Where one quantity is taken away from another to calculate what is left.

$$7 - 2 = 5$$



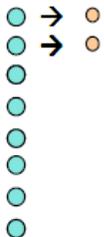
Multilink towers - to physically take away objects.

Finding the difference (comparison model)

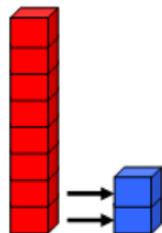
Two quantities are compared to find the difference.

$$8 - 2 = 6$$

Counters:



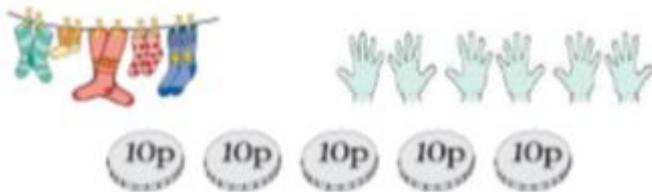
Multilink Towers:



Make a set of 8 and a set of 2. Then count the gap.

Multiplication

Children will have real, practical experiences of handling equal groups of objects and counting in 2s, 10s and 5s. Children work on practical problem solving activities involving equal sets or groups.



Division

Children will understand equal groups and share objects out in play and problem solving. They will count in 2s, 10s and 5s.



What you can do as parents:

- Have a look at the strategies we use in order to help with homework in a way the children are familiar with;
- Rehearse number facts often and thoroughly. These are the basis of most calculations and need to be learnt in order to be built on. It does take time, patience and practice at home but it leads to quicker calculating and the confidence of recognising something familiar;
- Practise counting forwards and backwards to 100 from any number, children need to develop counting on as a strategy so don't always start at one;
- Learn number bonds to ten.
- Rehearse multiplication facts – counting forwards and backwards in steps of two, five and ten from any multiple.
- Play number based games like cards, board games and dominoes because these support children's developing subitising skills.