

Shirley Community, Nursery and Primary School

Introduction to Progressive stages in calculation

At Shirley Community, Nursery and Primary school, we believe children should be introduced to mathematical calculations through practical, oral and mental activities through their school life. Over time children learn how to use models and images such as number lines, place value grids, 100 squares and diennes and units to support mental and written calculation. As children's methods are refined, so too are their informal and formal methods of written calculation.

Strategies for calculation need to be supported by use of practical resources in familiar and real-life contexts to reinforce understanding. This is vital to children becoming able mathematicians who can pick the most efficient and appropriate method for solving a calculation.

During their time at school, children will carry out lots of speaking and listening activities to help learn and reinforce mathematical vocabulary. Teachers use strategies such as Talk Partners and encourage a classroom culture of questioning and reasoning in which pupils learn from shared discussions with teachers, teaching assistants and peers.

Many of the mental facts which underpin any form of written calculations are taught and embedded through the use of mathematical models and images. Below are some of the resources that children have access to in the classroom (interactive and tactile versions).

Bead string 

Counting stick 

Number grid 

Place value apparatus



Counters



Number lines



Clocks



The policy is split into the four operations (addition, subtraction, multiplication and division). Key vocabulary associated with each operation is listed below:

Addition (+)

- Add
- Total
- Altogether
- Increase
- Count on
- More
- Plus

Subtraction (-)

- Subtract
- Minus
- Take-away
- Difference between
- Count back
- Count on
- Decrease
- Less
- Fewer

Multiplication (x)

- Lots of
- Groups of
- Multiply
- Multiples
- Product
- Array
- Row/column
- Repeated addition
- Double

Division (÷)

- Share
- Groups of
- Half
- Remainder
- Factor
- Divide
- Divisible by