**Maths Curiculum 2014 Aims**

The National Curriculum for Mathematics aims to ensure that all pupils:

* Become fluent in the fundamentals of Mathematics, including through varied and frequent practice with increasingly complex problems over time.
* Pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
* Pupils reason mathematically by following a line of enquiry, making relationships and generalisations, and developing an argument, justification or proof using mathematical language.
* They solve problems by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

**Mathematical Vocabulary**

It is essential that the children are exposed to and supported in developing quality and varied mathematical vocabulary.

Below is the list of vocabulary associated with each operation.

|  |  |
| --- | --- |
| **Addition and subtraction:**  add, addition, more, less, plus, and, make, sum, total, altogether, double, half, halve one more, two more, ten more etc… how many more to make… ? equals, count on  digits, ones, tens, inverse relationship, partitioning, commutative, ‘unit’ (of measure), place value | **Multiplication and division:**  lots of, groups of, sets of  times, multiplication, multiply, multiplied by multiple of,    times as (big, long, wide, and so on) repeated addition, array, row, column, inverse relationship |
| subtract, take away, minus, how many are left/left over? how many have gone? one less, two less… ten less etc… how many fewer is… than…?  difference between, inverse, count back | double, halve, share, share equally one each, two each, three each etc… group in pairs, threes… tens  equal groups of divide, division, divided by, divided into, divisible by, remainder, left, left over, inverse, repeated subtraction |

**Early Years Foundation Stage**

Before addition can be introduced, children need to have a secure knowledge of number. **In Early Years** children are introduced to the concept of **counting, number order and number recognition** through practical activities and games. The children will use apparatus of their choice both indoors and outdoors. Adults will guide and extend the children where opportunities arise for real-life counting experiences.

When the child is ready to begin addition and subtraction **(typically Reception)** they follow this sequence of events:

1. **Concrete, practical activities** (with whatever counting equipment the child enjoys!)
2. **Pictorial recording** (drawing of the objects e.g. coins, socks, number lines).
3. This is then followed by the **number sentence (abstract).**

This is for **ALL** operations and repeats for all concepts throughout **Key Stage 1.**

**Apparatus used to support each operation**

**Early Years**

Counting objects (any that the children are interested in both indoors and out), Numicon, Multi-link, number-lines, coins, ten frames, counters

The children will begin to record pictorially and link this to a number line.

**Year 1**

As above, and also Dienes, ten frames and other counting objects.

**Year 2**

Ten and One counters, blank number-lines

(The children will start to represent / draw tens and ones pictorially using circles with the numbers in.)

**Methods used**

See White Rose Maths Hub and parent booklet for detail about each specific operation.