

## Maths Manipulatives

Whilst your child will use many different resources in maths, the following three are key across the school:

### Cuisenaire Rods



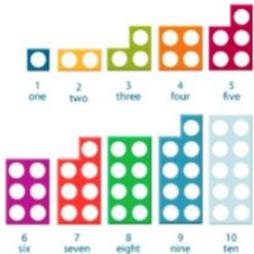
Cuisenaire Rods allow children to explore the relationship between rods, without ascribing each rod a value. The use of the rods enables early understanding of number e.g. greater than/less than; double and half; three times bigger; it also allows an understanding of algebra from an early age where children are happy to replace a letter for a digit e.g. Orange (O) is double Yellow (Y) – perhaps written as  $Y \times 2 = O$  or  $Y + Y = O$ .

### Diennes



Children across the school use this image to support their understanding of our number system, exploring the multiplicative relationship between each place value – 1s, 10s, 100s, etc. Base 10 is valuable in giving children a sense of the size of a number so that where a number has identical digits e.g. 222, children understand that each 2 has a different value depending on the place it holds in the number.

### Numicon



Numicon allows children to see the one-more/one-less value of consecutive numbers; the odd/even pattern is obvious; the tiles can be overlaid so children can explore how many 2s are in 7 and the remainder can be easily seen. Numicon also allows exploration of equivalence further up the school where children can explore the relationship between halving and doubling in multiplication.



### Place Value counters

Place value counters help children see what each digit in a number is worth, making numbers easier to understand and partition. They also let children manipulate numbers with confidence and support their understanding of whole numbers and decimals.