St. Mary and St. Peter

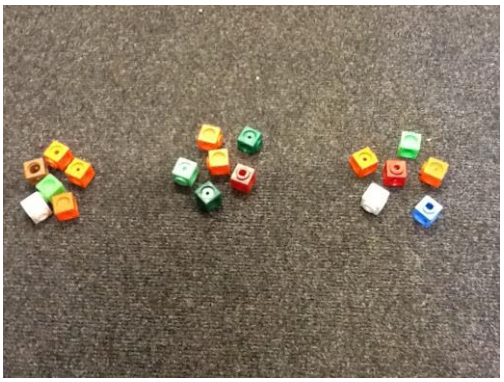
Year Three Calculation

Division

Words we use…

division, dividing, divide, divided by, divided into, left, left over, remainder, grouping, sharing, share, share equally, one each, two each, three each ... ten each, group in pairs, threes ... tens, equal groups of, halving

In Year Three these are some of the ways we explore division



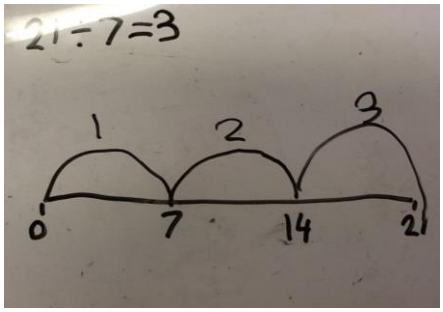
How Year Three learn divide

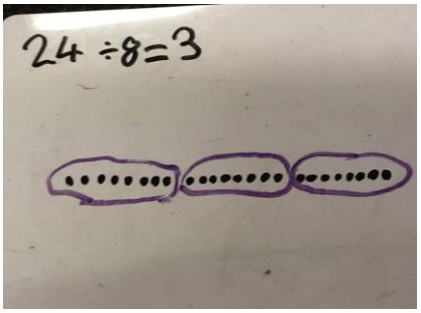
In Year Three children use the multiplication facts that they know to support them in finding the related division facts. They use a range of structured maths equipment including Numicon, Denes and Cuisenaire to support their learning.

The arrays they make to aid multiplication are also used to help them see how numbers can be partitioned in a variety of ways. This partitioning assists in building up understanding of relationships between numbers that helps to make the children fluent in picking quick ways to solve problems.

The children record their divisions in drawings, number lines and simple number statements.

In Year Three we use these jottings and methods to solve our division on paper

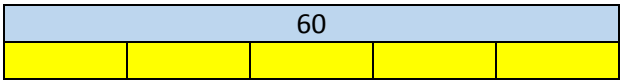




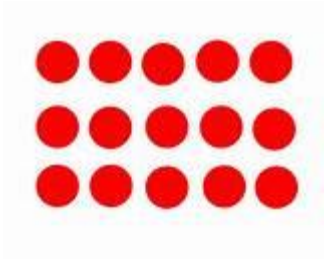
Fluency – this is about building up an understanding of how numbers work. In year 3 we look for children who can recognise multiplication can be done in any order and use known facts to help with discovering unknown times tables. For example:

How many different ways could I share the bottles into equal groups?

If the blue bar is 60 what are each of the yellow bars worth?



Problem Solving - importantly this is about working out ways to explore a problem. Children learn to work in a logical way and try out different ways to come to solutions. It is essential for problem solving that children are resilient and keep going even if they are finding the problem tricky. Here are some examples of Multiplication problems for Year Three.



How many different ways can you share these equally?

What if there was one more counter. Would there be more ways you can share them equally?

In Year 3 sometimes the children work in pairs, sometimes in 3's and sometimes in 5's. If everybody is in class there is never anybody not in a group. How many children could be in the class?

Biscuits come in packets of 12. How many packets would I need to feed 50 children.

Would I have any biscuits left over? Why?

Reasoning – is about explaining thinking. Children are asked questions such as: "How do you know?", "Can you convince me this is true?", "What do you notice about these numbers?" and "Can you give another example?"

Which of the problems below can be solved using 8 ÷ 2? –

There are 2 bags of sweets with 8 sweets in each. How many altogether?

A rollercoaster carriage holds 2 people, how many carriages are needed for 8 people?

I have 8 crayons and share them out so people have 2 crayons each. How many people did I share them between?

I have 8 buns and I give two to my brother. How many do I have left?

I can use my three times table to work out 180 ÷ 3

Do you agree? Explain why.