Written Calculation Policy
for
Acle St Edmund
Primary School

Help your child with maths

Year 1

Progression towards a standard written method of calculation

Introduction

This calculation policy has been written in line with the programmes of study taken from the revised **National Curriculum for Mathematics (2014)**. It provides guidance on the appropriate calculation methods and progression. The content is set out in Year blocks under the following headings: addition, subtraction, multiplication and division.

Alongside written calculations, mental calculation strategies will be taught in Maths lessons throughout the school. Pupils will be encouraged to use a range of mental strategies to solve number problems and will be equipped with the necessary recall skills to aid problem solving.

Pupils will be taught to use the most efficient methods for solving both mental and written calculations and to make the right choice, depending on the size and context of the numbers. Children will use mental methods as their first port of call, but for calculations that cannot be done in their heads; they will need to use an efficient written method accurately and with confidence.

Aims of the policy

- To ensure consistency and progression in our approach to calculation.
- To ensure that children develop an efficient, reliable, formal written method of calculation for all operations (addition, subtraction, multiplication and division).
- To ensure that children can use these methods accurately and fluently with confidence and understanding.

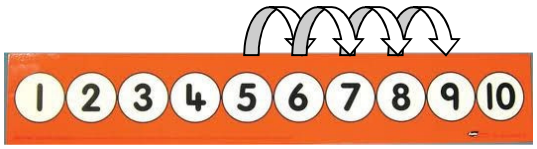
How to use this policy

- Use the year group your child belongs to as a guide.
- Always use suitable resources to support your child's understanding of calculation e.g. number line/track, a 100 square, counting apparatus or encourage their use of recording their work by drawing their own number line, multiplication grid or recording their jottings.
- Use the language of place value when supporting your child. Try to use the same language as your child's class teacher (examples are included with each year group) and check their answers are sensible.
- Encourage your child to make suitable choices about the methods they use when solving problems.
- Support your child to develop quick recall of number facts as this is essential in your child's development of efficient and accurate problem-solving e.g. number bonds, doubles and halves and multiplication tables.

+ Addition +

Year 1

Children will begin to use a **number track** to **count on** for addition, counting on from the largest number.



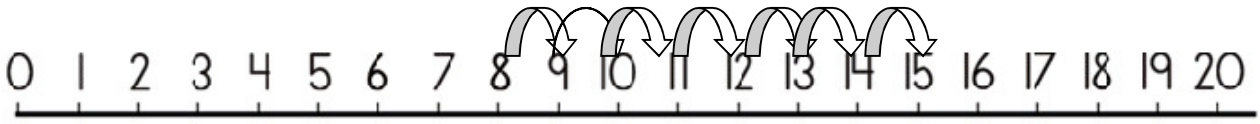
5 + 4 = 9

Put your finger on number five on the number track. Count on four. One, two, three, four. What number are you on now?

Children then progress to a marked **number line**:

8 + 7 = 15

Put your finger on the largest number. Count on seven.



- Subtraction -

Year 1

Children continue to practise counting back from a given number e.g. 'Twenty, nineteen, eighteen…' and use a **number track** to **count back** for subtraction.

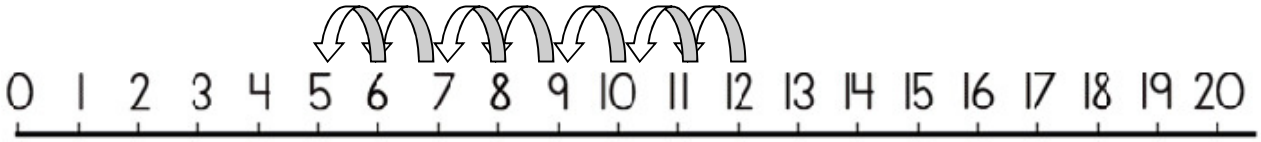
Put your finger on number nine.
Count back five.

$$9 - 5 = 4$$

They then progress to a **marked number line**:

Put your finger on the number twelve.
Count back seven.
What number are you on now?

$$12 - 7 = 5$$



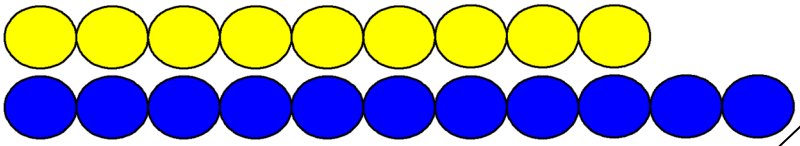
When children are confident using a marked number line, they can move onto a blank number line (see Year 2).

Counting on to find a small **difference**

The use of practical activities is important to understand the idea of '**difference**'. Children use apparatus to help them count up from the smallest number to the largest number to find the difference e.g. by using cubes, beads, Numicon, number tracks/lines:

The difference between 9 and 4 is 5.

9 – 4 = 5



The difference between 11 and 9 is 2.

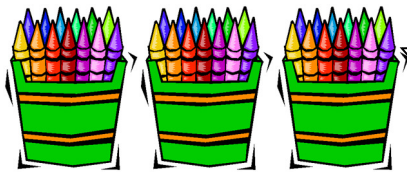
11 – 9 = 2

X Multiplication X

Year 1

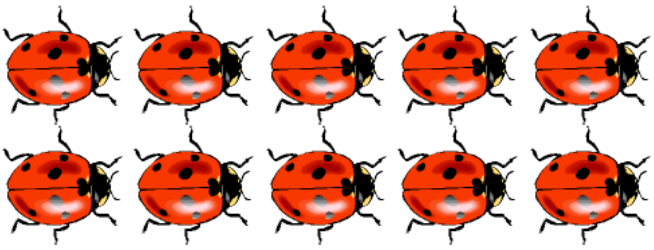
Children begin to understand multiplication in practical activities as **repeated groups** of the same size. They use the vocabulary of multiplication in practical contexts and solve practical problems that involve **combining** groups of 2, 5 or 10 e.g. pairs of socks, fingers, cubes, Numicon.

Here are five pairs of socks. How many socks are there altogether? Let's count in two's: 2, 4, 6, 8,10. There are 10 socks altogether.



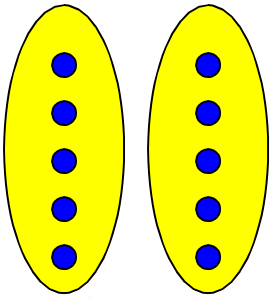
There are ten crayons in a pot. How many crayons are there altogether? Let's count in 10s:10, 20, 30. There are 30 crayons altogether.

Children also begin to use **arrays** to support early multiplication.



We have five groups of two ladybirds. How many ladybirds are there altogether? Ten ladybirds. We have two groups of five ladybirds. How many ladybirds now?

Children solve practical and pictorial problems, developing the language of multiplication using a variety of apparatus and picture resources.



There are 2 **groups** of 5. How many altogether?

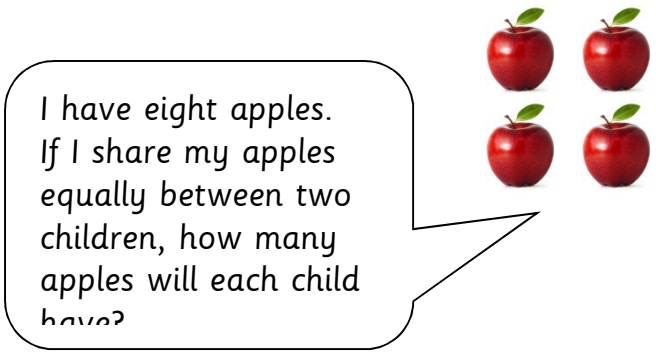
Double five is ten.

5 + 5 = 10.

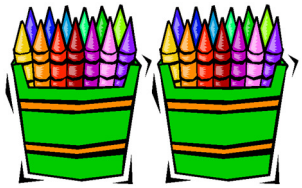
÷ Division ÷

Year 1

Children begin to understand division as **sharing.** They use a variety of practical resources and contexts to share objects into **equal groups**. They count in multiples of 2, 5 and 10.



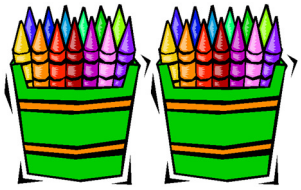
I have eight apples. If I share my apples equally between two children, how many apples will each child have?



Share 20 crayons between 2 pots.

How many crayons are there in each pot?

Children then move from **sharing** to **grouping** objects.

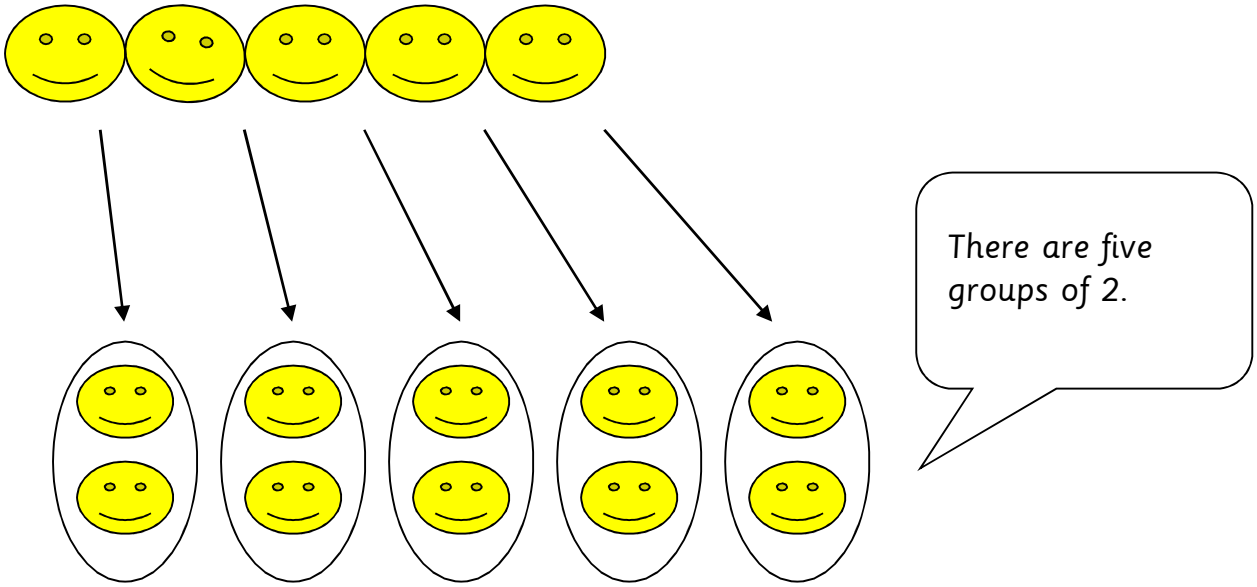


Put 20 crayons into groups of 10.

How many pots do we need?

Children begin to use **arrays** to support early division,

How many faces are there altogether? How many groups of 2?


There are five groups of 2.