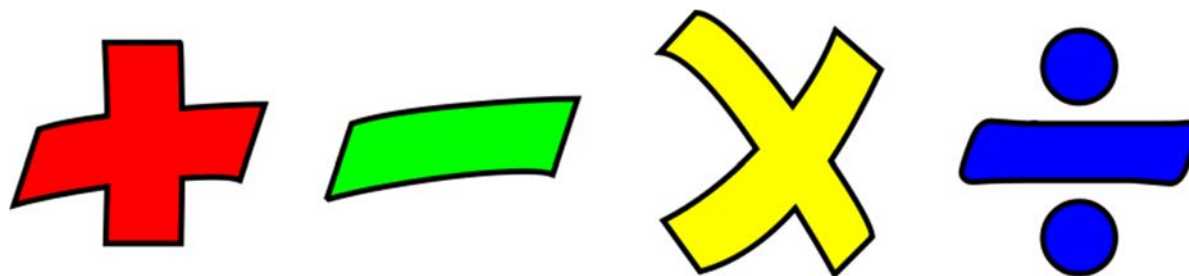


Mathematics

At Ashmole Primary



**A Guide To Written
Calculation Methods**

Ashmole Primary Calculation Policy 2018

The following calculation policy has been devised to meet requirements of the National Curriculum 2014 for the teaching and learning of mathematics, and is also designed to give pupils a consistent and smooth progression of learning in calculations across the school.

Age stage expectations

The calculation policy is organised according to age stage expectations as set out in the National Curriculum 2014, **however it is vital that pupils are taught according to the stage that they are currently working at**, being moved onto the next stage once they show conceptual understanding, or working at a lower stage until they are secure enough to move on.

Providing a context for calculation:

It is important that any type of calculation is given a real life context or problem solving approach to help build children's understanding of the purpose of calculation, and to help them recognise when to use certain operations and methods when faced with problems. This must be a priority within calculation lessons.

Choosing a calculation method:

Children need to be taught and encouraged to use the following processes in deciding what approach they will take to a calculation, to ensure they select the most appropriate method for the numbers involved:

Can I do it in my head using a mental strategy?

Could I use some jottings to help me?

Should I use a written method to work it out?

To work out a tricky calculation:

Approximate

Calculate

Check

Key Stage 1 – Addition

Y1

Through practical activities in meaningful contexts and informal written methods.

- Recall number bonds to 20 and within 20.

- Pictures and Marks – 1 more / 2 more.

There are 3 cars in the garage. 1 more came along.



$$3 + 1 = 4$$

$$4 + 1 = 5$$

Terry has 3 apples and Tony has 2 apples. How many altogether?



- Number lines to 20.

$$6 + 3 = 9$$



- Derive related facts to 20.

$$\square = 5 + 4$$

$$5 + 4 = \square$$

$$\square + 4 = 9$$

$$\square + \square = 9$$



- Money and addition up to 20p.

- Read, write and interpret mathematical statement involving addition (+) and equals (=).

Video clips:

[Using a range of equipment and strategies to reinforce addition statements](#)

National Curriculum requirements:

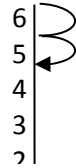
Add 1 digit and 2 digit numbers to 20, including 0.

Key Stage 1 – Subtraction

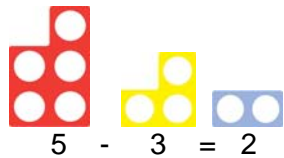
Y1

Through practical and meaningful contexts and informal written methods.

- We made 6 cakes. We ate 2 of them.
How many cakes are left?



- Link to vertical number line $6 - 2 =$



- Find the difference within 20.
- Represent and use number bonds within 20.
- Record using subtraction ($-$) and equals signs ($=$)
- Derive related facts up to 20.

$$\begin{array}{ll} 5 - 2 = \square & \square = 5 - 2 \\ 5 - \square = 3 & 3 = \square - 2 \\ \square - 2 = 3 & 3 = 5 - \square \\ \square - \square = 3 & 3 = \square - \square \end{array}$$



- Counting back on a 100 square and a vertical number line.

National Curriculum requirements:

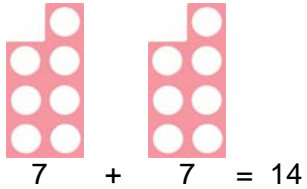
Subtract 1 digit and 2 digit numbers up to 20, including 0.
Represent and use number bonds and related subtraction facts.

Key Stage 1 – Multiplication

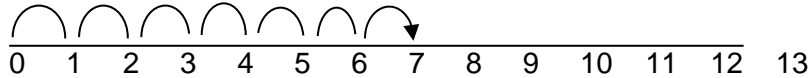
Y1

Through practical activities and meaningful contexts using concrete objects, pictorial representations and arrays with the support of the teacher.

- Doubles.



- Make connections between arrays, number patterns and counting in 2's, 5's to 50 and 10's to 100.
- Use of number lines.



- “100 Square” to count in 2's, 5's and 10's.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20

- There are 2 sweets in one bag. How many sweets are there in 5 bags?



- Counting multiples of coins: 2p, 5p, 10p.



National Curriculum requirements:

Solve one step problems involving multiplication, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.

Key Stage 1 – Division

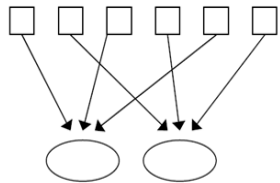
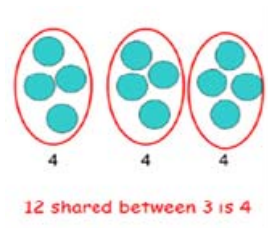
Y1

Through practical activities in meaningful contexts.

- Division as sharing.

Emphasise the importance of sharing equally.

Share a bag of 15 sweets between 5 children – one for you, one for you, one for you, one for you, one for me.



This is an important stage in teaching the difference between grouping and sharing.

- Introduce halving even numbers up to 10.

Half of 4



National Curriculum requirements:

Solve one step problems involving division, by calculating the answer by using concrete objects, pictorial representations and arrays with the support of the teacher.

