



**BROADWOOD PRIMARY
SCHOOL**

CALCULATION POLICY

**Last review date
Reviewed by
Next review date**

**November 2016
J Smith
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Calculation Policy

When children leave Broadwood Primary School our aim is for them to:

- have a secure knowledge of number facts and a good understanding of the four operations;
- be able to use this knowledge and understanding to carry out calculations mentally and to apply general strategies when using one-digit and two-digit numbers and particular strategies to special cases involving bigger numbers;
- make use of diagrams and informal notes to help record steps and part answers when using mental methods that generate more information than can be kept in their heads;
- have an efficient, reliable, compact written method of calculation for each operation that children can apply with confidence when undertaking calculations that they cannot carry out mentally.

This is in line with the aims of the 2014 National Curriculum for Mathematics which are that all pupils:

- become fluent in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
- reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language.
- can 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.

As can be seen in these aims, the ability to calculate confidently is fundamental to success.

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.

Please note that early learning in number and calculation in Nursery and Reception follows the "Development Matters" EYFS document, and this calculation policy is designed to build on progressively from the content and methods established in the Early Years Foundation Stage.

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, only being moved onto the next level when they are really secure, 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:

To work out a tricky calculation:

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?

Approximate,

Calculate,

Check it mate!

Estimation and checking using the inverse should be an integral part of all calculations. The use of practical apparatus, such as Numicon, and interactive resources, such as the ITP programmes, are crucial to secure understanding. In Teachers on the Network, in the folder 'Maths Resources' is a

document: ITP (Interactive resources) link. This website has most of the archived ITPs but missing ones that are referenced can usually be found by a web search such as 'ITP multiplication arrays'.