



Ambleside Primary School

Calculations Policy

Introduction

The school policy for Calculations was developed primarily by the Aspect Manager for Mathematics and Deputy Head and agreed by the whole staff. It has the full agreement of the Governing Body. The policy was approved and ratified by the Governing Body during the Summer Term 2010.

Whilst this policy models the strategies and methods for recording and writing calculations, it is vital to stress that if a problem can be calculated mentally, it should always be done so. Only when calculations cannot be performed mentally should children use the written strategies.

Below are some of the key skills needed for performing mental, and from there, written calculations:

Visual mapping: e.g. visualising a number line or 100 square in their heads.

Counting – daily counting experiences in different jumps e.g. 2s, 3s 5s etc, as well as starting the count from different numbers.

Number Bonds:

Up to 10 e.g. $7 = 3 + 4$, $5 + 2$ etc.

To 10 e.g. 10 and 0, 9 and 1, 8 and 2 etc.

To 20 e.g. $14 + 6$, to 50 e.g. $37 + 13$, and to 100 e.g. $60 + 40$, $56 + 44$ etc.

Recall of these facts will help children perform mental calculations crossing the 10s and 100s boundary with more confidence.

e.g. $8 + 7$ would be seen immediately as $8 + 2 = 10 + 5 = 15$, instead of trying to count on 7 from 8 using fingers.

Doubles and Near Doubles and halving e.g. double 8 is 16 etc. will help children with larger calculations e.g. $80 + 80 = 160$, and that half of 160 is 80.

Adding and subtracting 10 and 100 from any number

Instant recall of facts e.g. $67 + 10 = 77$ and $457 - 100 = 357$, will help children perform larger mental calculations.

Knowing additions of units to multiples of 10 (the place value of each digit and being able to partition) e.g. $60 + 8 = 68$, $320 + 6 = 326$ etc.

Instant recall to the fact that if you add a single digit to a multiple of 10 (those with 0 in the units part), the tens will stay the same and the unit will be the same as the unit added e.g. $80+9=89$. This will stop children unnecessarily counting on 9 from 80 on their fingers.

Knowing Times Table facts to 10×10 by the end of year 3 (Level 3c).

Rounding – knowing that to solve e.g. $36 + 18$, you can do $36 + 20 - 2$ or $40 + 18 - 4$ or $40 + 14$.

Points to note:

- Although not always shown on the models in the Policy (this is due to the fact that these images have been taken from the National Strategies) at Ambleside Primary number lines should always have zero shown. This may be at the beginning but not always as some number lines may show negative numbers.
- When subtracting children need to recognise whether there will be a small difference or a large difference. If the difference is to be large then counting back should be used. If the difference is to be small then counting on (complementary addition) is more appropriate.
- Whenever possible children should record using one digit per square.
- Algebra ($\Delta + 3 = 12$ or $a \times b = 45$) should be taught in every year group.

Racial Equality & Equal Opportunities

All children have equal access and inclusive rights to the curriculum regardless of their gender, race, disability or ability. We plan work that is differentiated for the performance of all groups and individuals. Ambleside Primary School is committed to creating a positive climate that will enable everyone to work free from racial intimidation and harassment and to achieve their full potential.

Review

This policy will be reviewed in the Autumn Term 2014.



