



Calculations Policy

Maths calculations skills is a proficiency which involves confidence and competence with numbers. It requires an understanding of the number system, a repertoire of computational skills and an inclination and an ability to solve number problems in a variety of contexts.

Aims and Objectives

Maths is an essential tool for everyday life. It is Upwood Primary School's aim to:

- Encourage a positive attitude to Mathematics throughout the school.
- Develop children's confidence within the subject.
- Help children acquire mathematical knowledge, skills and language and the ability to apply these to everyday situations.
- Extend appreciation of the relationships within Mathematics.
- Encourage the use of imagination, initiative and flexibility of thinking.
- Develop systematic working procedures by requiring children to think of different ways to solve problems.
- Give opportunities for children to work independently and in pairs so that they may develop confidence in the accuracy of their own work.
- Give opportunities for collaborative work in order to promote learning from discussion, to generate ideas and to allow children to talk about their findings.
- Provide a challenge and a sense of achievement for all pupils.
- To equip children with appropriate language skills to decipher, solve and express opinions about mathematical problems.
- To provide mathematical experiences which are relevant to every child, and reflect the requirements of the New Mathematics Curriculum 2014.

We use a range of teaching resources to achieve this, including: Abacus Evolve scheme, Achieve – securing levels, KIRFS (Key Instant Recall Facts), Mathletics online programme, Hamilton Trust, Rising Stars mental maths tests and the Programmes of Study from the New Mathematics Curriculum 2014,

Reasons for Using Written Methods

To aid mental calculation by writing down some of the numbers and answers involved.
To make clear a mental procedure for the pupil.



To help communicate methods and solutions.

To provide a record of work to be done.

To aid calculation when the problem is too difficult to be done mentally.

To develop and refine a set of rules for calculations.

When children are ready for using the written method:

The list below is a guide for the teacher to judge when a child is ready to move from informal to formal methods of calculation.

Addition and Subtraction

Do they know addition and subtraction facts to 20?

Do they understand place value and can they partition numbers?

Can they add and subtract any pair of two digit numbers mentally?

Can they explain their mental strategies orally and record them using informal jottings?

Multiplication and Division

Do they know the 2, 3, 4, 5 and 10 times tables?

Do they know the result of multiplying by 0 and 1?

Do they understand 0 as a place holder?

Can they multiply two and three digit numbers by 10 and 100?

Can they explain their mental strategies orally and record them using informal jottings?

Teaching Methods

Through careful planning and preparation we aim to ensure that throughout the school children are given opportunities for:

- Practical activities and games;
- Mental maths practise;
- Problem solving;
- Individual, group and whole class activities;
- Open and closed tasks;
- A range of methods of calculating;



- Calculation Methods for each operation are on the school website for parents and carers.

Scheme of Work

We have adopted the Scheme of Work created by Harcourt called 'Abacus Evolve'. This scheme is used for Years 1 – 6; Foundation follow the Early Learning Goals.

The Scheme of Work allows teaching staff to differentiate calculation lesson plans and teaching styles to suit the needs of individuals and groups within a particular year group.

Curriculum Map

The units to be covered each term with the class are entered on the KS1 and KS2 curriculum maps.

Resources

Most age appropriate resources are kept in individual classrooms and shared with other teachers, if and when required.

Assessment, Record Keeping and Reporting

Half-termly assessments are made by each class teacher which are monitored by the Mathematics Co-ordinator, SENCo and Head Teacher. At the end of the academic year these are passed on to the next class teacher.

ICT

ICT is an integral part of teaching and learning within Mathematics. Opportunities will be sought to use ICT in order to practise calculation methods, whenever appropriate.

Cross - Curricular Links

Throughout the curriculum, opportunities exist to extend and promote the use of mathematical calculations. Teachers should take advantage of these opportunities, including access to an outdoor curriculum to increase interest and awareness of ways in which Numeracy can be used in everyday life.



Inclusion

Children with special educational needs are taught within the daily Mathematics lesson and are encouraged to take part at their own level, through differentiation.

Within the daily Mathematics lesson, differentiated activities should also be provided to extend higher attaining children.

In each Mathematics lesson, children are supported equally, in line with the school aims.

Monitoring and Evaluation

There is a Monitoring Calendar which is followed by all curriculum co-ordinators (see calendar). This important process gives an excellent opportunity for the Mathematics Co-ordinator to support other staff whilst offering ideas and suggestions for improved performance and praising good practice in the teaching and learning of calculations.

Classroom observations take place on a yearly basis by the Mathematics Co-ordinator; a book scrutiny to ensure differentiation and continuity throughout the school occurs each term.

Time Allocation

To ensure that there is adequate time for developing calculations skills, each class teacher is expected to provide opportunity to work on each of the four operations every term.

Professional Development

Opportunities are available for teachers to develop their own understanding and teaching strategies relevant to individual and school needs. The Inset Co-ordinator monitors all training undertaken. Professional development is reviewed each term, and takes account of performance management targets.