



DAUBENEV MIDDLE SCHOOL

Maths Policy

RATIONALE AND AIMS

Mathematics is a tool for everyday life. It is a whole network of concepts and relationships which provide a way of viewing and making sense of the world. It is used to analyse and communicate information and ideas and to tackle a range of practical tasks and real life problems. It also provides the materials and means for creating new imaginative worlds to explore.

Using the Programmes of Study from the National Curriculum and the Primary and Secondary Frameworks for Teaching Mathematics it is our aim to develop:

- *a positive attitude towards mathematics and an awareness of the fascination of mathematics.*
- *competence and confidence in mathematical knowledge, concepts and skills.*
- *an ability to solve problems, to reason, to think logically and to work systematically and accurately.*
- *initiative and an ability to work both independently and in cooperation with others.*
- *an ability to communicate mathematics.*
- *an ability to use and apply mathematics across the curriculum and in real life.*
- *an understanding of mathematics through a process of enquiry and experiment.*

SCHOOL POLICY AND THE NATIONAL CURRICULUM

Knowledge Skills and Understanding

At Key Stage 2 and 3 teachers use the Primary and Secondary Frameworks for Teaching Mathematics to ensure that all parts of the National Curriculum Programmes of Study are taught.

Breadth of Study

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

- *practical activities and mathematical games*

- *problem solving*
- *individual, group and whole class discussions and activities*
- *open and closed tasks*
- *a range of methods of calculating e.g. mental, pencil and paper and using a calculator*
- *working with computers as a mathematical tool*

SCHEME OF WORK

Our school scheme of work is a functioning document and as such is composed of ongoing plans produced on a week by week basis. This is developed from the Primary and Secondary Frameworks and takes into consideration the needs of our children.

TEACHERS' PLANNING AND ORGANISATION

Each class teacher is responsible for the mathematics in their class in consultation with and with guidance from the mathematics coordinator.

The approach to the teaching of mathematics within the school is based on three key principles:

- *a mathematics lesson every day in Key Stage 2 and four times a week in Key Stage 3*
- *a clear focus on direct, instructional teaching and interactive oral work with the whole class and group*
- *an emphasis on mental calculation*

Lessons are planned using a common planning format and are periodically collected and monitored by the mathematics coordinator.

SPECIAL EDUCATIONAL NEEDS

Children with SEN are taught within the daily mathematics lesson and are encouraged to take part when and where possible (please see the section on differentiation).

Where applicable children's IEPs incorporate suitable Mathematics objectives and teachers keep these objectives in mind when planning work.

When additional support staff are available to support groups or individual children they work collaboratively with the class teacher. Lesson plans are made available for support staff and their comments, about the level of the pupil understanding, are used to inform future planning.

Within the mathematics lesson teachers not only provide activities to support children who find mathematics difficult but also activities that provide appropriate challenges for children who are high achievers in mathematics.

EQUAL OPPORTUNITIES

We aim to incorporate mathematics into a range of cross-curricular subjects and seek to take advantage of multi-cultural aspects of mathematics.

In the daily mathematics lesson we support children with English as an additional language in a variety of ways. e.g. repeating instructions, speaking clearly, emphasising key words, using picture cues, playing mathematical games, encouraging children to join in counting, chanting, rhymes etc.

PUPILS' RECORDS OF THEIR WORK

There are occasions when it is both quick and convenient to carry out written calculations. It is also important to record aspects of mathematical investigations. Children are taught a variety of methods for recording their work (See Kempston Calculation Policy) and they are encouraged and helped to use the most appropriate and convenient method of recording.

Children are encouraged to use mental strategies before resorting to a written algorithm.

Exercise Books for Recording

It is school policy that the following pattern is used:

- Year 5: 1 cm squares
- Year 6: 1 cm squares
- Year 7: 7 mm squares
- Year 8: 7 mm squares

All children are encouraged to work tidily and neatly when recording their work. When using squares, one square should be used for each digit. All children are also encouraged to record the date and success criteria for each lesson.

MARKING

Work in mathematics can generate a great deal of marking and it is recognised that it is not always desirable to mark every piece of work. The children themselves can mark exercises which involve routine practice with support and guidance from the teacher. Where appropriate, children are encouraged to check computational exercises with a calculator. This can foster independence in the children, who can seek help if they are unable to locate and correct their errors.

The quality of marking is crucial. A simple 'X' is of little assistance to a child unless accompanied by an indication of where the error occurred, together with an explanation of what went wrong linked to the success criteria for the lesson. Marking should be both diagnostic and summative and school policy believes that it is best done through conversation with the child but acknowledges that constraints of time do not always allow this (for more detail see the School Marking Policy).

ASSESSMENT AND RECORD KEEPING

Teachers are expected to make regular assessments of three children who are higher, mid and lower achievers within their Maths class, and use these judgements to form a guide for the rest of the class. The assessments should be recorded by highlighting and dating an assessment focus when achieved, using the 'Assessing Pupils Progress' materials. Evidence should be gathered from pupil exercise books and passed on to the next teacher at the end of the school year.

Formal Written Tests

Teachers use 'Goal Tests' or the 'Maths Frameworking Tests' at the end of each half term to monitor the understanding of all pupils.

The work set, combined with a scrutiny of children's recorded work over the previous half term, helps to review how well children have understood the topics taught and identifies any remaining misconceptions. A record of each child's attainment is recorded using the 'Bedfordshire Monitoring Sheet' and compared to the expected national progression. Also indicating any pupils making more/less progress than expected. Class records are passed to the child's next teacher at the end of the school year.

Termly Evaluation

The evaluation of termly plans shows what has been taught and what has yet to be learned. These plans inform future planning.

Formal Assessment

In the summer term the children are formally assessed using optional QCA tests in Years 5, 7 and 8 and SATs tests in Year 6, as part of the School's Assessment Policy.

REPORTING TO PARENTS

Reports are completed before the end of the summer term and parents are given opportunity to discuss their child's progress on two separate occasions.

Teachers use the information gathered from their half termly assessments and 'Assessing Pupils Progress' materials to help them comment on individual children's progress.

PARENTAL INVOLVEMENT

- *Parents are invited into school twice yearly to meet with the mathematics teacher.*
- *A SATs presentation evening is held once a year for parents of Year 6 pupils, during the Spring Term, to provide information about the SAT tests and how to support their child at home.*
- *When significant changes have been/are made to the mathematics curriculum parents are invited to a meeting or sent information via the half termly newsletter.*

HOMEWORK

Activities are sent home on a weekly basis, with specific days being indicated via the Autumn term newsletter. Homework takes the form of number games and tasks with some formal exercises that consolidate and extend the work carried out in class. Homework can also be set via the school learning platform 'Netmedia' and may take the form of ICT maths activities.

DIFFERENTIATION

This should always be incorporated into all mathematics lessons and can be done in various ways:

- *Stepped Activities which become more difficult and demanding but cater for the less able in the early sections e.g. must, should and could targets.*

- *Common Tasks which are open ended activities/investigations where differentiation is by outcome.*
- *Resourcing which provides a variety of resources depending on abilities e.g. counters, cubes, 100 squares, number lines, mirrors.*
- *Grouping according to ability so that the groups can be given different tasks when appropriate. Activities are based on the same theme and usually at no more than three levels.*

MONITORING AND EVALUATION

The mathematics coordinator is released regularly from his/her classroom in order to work alongside other teachers. This time is used to monitor and evaluate the quality and standards of mathematics throughout the school and enables the coordinator to support teachers in their own classrooms.

Opportunities for teachers to review the scheme, policy and published materials are given on a regular basis during staff meetings.

RESOURCES

All teachers should organise an area within the classroom dedicated to mathematics resources. This area is easily accessible to all children and allows them to become familiar with all resources.

Resources which are not used or required regularly are stored centrally:

- **Year 5:** **Trolley in Room 3**
- **Year 6:** **Trolley in Room 6**
- **All years:** **Room 14**

THE GOVERNING BODY

We have a mathematics governor who has a long standing commitment to Daubeney Middle School. The mathematics governor visits the school termly, to talk with teachers and the mathematics coordinator and evaluates subject developments, including the improvement plan and assessment statistics. He also reports back to the curriculum committee on a regular basis.