

CAVERSHAM PRIMARY SCHOOL



Mathematics Policy

Date: January 2019

To be reviewed: January 2020

Subject Leader: Jo Alexander

At Caversham Primary we believe that mathematics is an essential life skill. All pupils need to be taught proficiently to acquire the knowledge and skills to be numerate.

Aims

- To develop the mathematical skills, knowledge and understanding for all pupils to meet and, wherever possible, master their age related expectations in order to meet their future needs and the needs of the work place.

Objectives

- To be able to apply and enjoy using their mathematical skills, knowledge and understanding to solve problems, tackle investigations and respond to challenges or questions using the correct mathematical language.
- To use their mathematical skills, knowledge and understanding in other areas of the curriculum in order to develop a deeper understanding.
- To use ICT to learn, practise and apply their mathematical skills and knowledge.
- To encourage children to work systematically, independently and co-operatively.
- To develop the quick recall of oral and mental calculations, tables etc. The quick recall of number facts is essential to tackle more challenging problems and written calculations.
- To involve and inform parents about the school's approaches to teaching mathematics so that parents have the skills to support their children at home.
- To offer all children an appropriate mathematical curriculum with pace and rigor.

Organisation

All children are taught the skills and knowledge of Mathematics, as outlined in the National Curriculum. The curriculum is based on a broad and balanced programme of mathematical activities, which build upon previous knowledge, concepts and skills from term to term and year on year. A whole school approach to Mathematics has been developed which gives consideration to the progression of knowledge, skills, strategies, as well as developing a positive attitude and confidence.

Target Setting

The school sets targets at different levels.

- Each child has a list of number facts to learn appropriate to their stage (usually their year group) at the back of their reading journals. Their current target is ticked so they know what they need to practise. These are then highlighted once they have been achieved. Children are assessed on these by parent helpers, teachers and TAs.
- All teachers are involved in predicting end of year attainment for the pupils in their class with the Head teacher so that progress can be monitored. This data is entered onto iTrack three times across the year. Children who are not making ARE or expected progress are discussed at pupil progress meetings.
- We submit these predictions to the LA for Year 2.
- The data from each termly and end of year assessment, plus data in the Autumn Package provided by the L.A. feed into the SIP and End of Year Subject Report and also into teachers' performance targets with the aim of monitoring and maximising pupils' progress.
- Support and targets are set for specific groups e.g. FSM, pupils/groups receiving support and specific year groups if there are concerns. Again these results are analysed.

Setting and Grouping

The children are taught in their classes by their class teacher. Children may sometimes be grouped for different reasons within each class.

Differentiation

It is expected for most lessons teachers will scaffold and deepen the work to meet the needs of all the pupils.

Why? Some children...

- benefit from work at a lower level to help them consolidate particular skills.
- lack confidence in their own ability.
- may need extra consolidation.
- need support in demonstrating their skills e.g. recording or communicating.
- may need additional support and take longer to reach their targets.

Alternatively some children;

- will be able to pursue more demanding/challenging work at a deeper or higher level and should be encouraged to do so.

Assessment, Recording and Reporting

Both formative and summative assessments are used.

Formative

- We gather information on a daily basis about pupils' strengths and weaknesses during the lessons. This information is collected from a variety of sources: e.g. self-assessment such as traffic lights, thumbs up/down, smiley faces; pupil responses, marking and performance in problem solving or investigative tasks etc.
- Marking may take many forms, but should include feedback/moving on statements etc. marking when appropriate to help the children to improve. Learning objectives are highlighted in the children's books: green for growth or yippee yellow. See '**Marking Policy**' for further information.
- Teachers may use a 'mark book' to record maths progress on a daily/end of unit basis.
- The Foundation Profile results in pupils being graded as exceeding, meeting and below expectations. The results of these assessments are shared with parents, colleagues and the LA during the summer term prior to the children moving up into Year 1.

Summative

- The pupils sit PUMA tests once each big term and these results are recorded in iTrack.
- Y2 and Y6 complete the SATs.
- Teachers complete iTrack once each big term to assess the stage at which each child is working for each strand of maths.

We use all the information gained from these various assessments to monitor and track progress and ultimately to inform planning at a class, group and individual basis.

The Assessment, Recording and Reporting Co-ordinator is responsible for ordering end of year test materials. Copies of all test results may be needed for reference by....

- Head teacher/Deputy
- Assessment Co-ordinator
- Mathematics Co-ordinator
- S.E.N. Co-ordinator (where appropriate)

End of Key Stage Assessments

At the end of Key Stage 1 each child completes the two SATs papers for Mathematics. These tests are then used as the basis for KS1 Teacher Assessment.

At the end of Key Stage 2 each child completes the three SATs papers for Mathematics. These are administered strictly as to National guidelines. The children then receive a scaled test score.

Monitoring Maths

Various monitoring occurs

- Lesson observation
- Book scrutiny by SLT/ Subject Leader etc.
- Subject Leader Review meetings with the Head teacher
- Pupil Progress meetings with SLT
- Samples for moderation
- Learning walks
- Questionnaires and surveys
- Tracking test results for classes on a yearly basis as they progress through the year.
- Pupils receiving any additional support will have their progress and attainment tracked.

Marking

See **Marking Policy** for further detail.

Equal Opportunities/Special Needs/Able Pupils

A broad, balanced and differentiated curriculum is provided, so children can achieve their full potential. All pupils have access to mathematics on an equal basis, irrespective of gender, race or religion at an appropriate level. A child with a specific disability will be provided with the same opportunities as his/her peers. Teachers' weekly planning must include details on anything that is required to enable any individual or group of children to access the appropriate curriculum during each lesson.

Interventions for pupils who need support

The Class teacher, Head teacher and Maths Subject Leader identify children attaining low scores in tests or assessments. Discussions at various levels take place in order to provide appropriate support within the capabilities of school resources (see Special Needs Policy).

Maths is addressed in SEND statements where appropriate.

Booster classes/groups may be set up and run by TAs to cater for children who need short focused support in specific areas.

Interventions for more able pupils.

Gifted and Talented pupils are catered for through teachers' planning and benefit from more demanding investigations, problems and puzzles and deeper reasoning activities. Also they are given special mathematical tasks to meet their EEPs.

They also have opportunities to take part in Enrichment Activities such as Master Classes and national and local competitions.

Some children are given the opportunity to take Foundation Level GCSE in maths during Year 6.

EEPs foster their maths skills and promote their skills

See: More Able Pupils Policy and Register

The Role of the Mathematics Curriculum Subject Leader.

To be responsible to the Head teacher for the subject of maths and undertake the following:

- Update regularly all policies and documentation to reflect the practices and needs of the school, whilst meeting the demands of the National Curriculum;
- Oversee and monitor Curriculum planning and delivery throughout the school;
- Track pupils' progress and monitor on a term to term and year to year basis;
- Oversee the support received by specific groups/or individuals;
- Oversee the annual Maths budget and provide resources to cater for pupils from Reception to Year 6;

- Identify and advise the Head teacher on current and future needs thereby contributing to whole school planning;
- Advise and support colleagues in all aspects of their Maths teaching including the use of IT;
- Identify, oversee and provide in-service and INSET for all staff, including TAs;
- Where necessary, liaise with external agencies for advice/support;
- Inform newly qualified teachers, new members of staff and supply teachers about arrangements for mathematics;
- Meet with the maths Governor on a regular basis to update them;
- Communicate and discuss the school's maths policy and philosophy to parents and governors.
- Organise workshops for parents, as and when required;
- Keep abreast of current thinking by attending relevant courses and meetings; reports and research; and share significant National and Local initiatives.

School Organisation and Management

- Mathematics is a daily timetabled subject, for which a lesson lasts for approximately one hour, depending on the age of the children.
- Each day the children are involved in oral and mental work in line with the National Curriculum.
- The objectives of the lesson and appropriate mathematical vocabulary should be made clear to the pupils in each lesson and over a unit of work too.
- Pupils will record their work in various ways, such as Pictorial, Diagrammatic, Worksheets, Numerical, and Jottings etc.
- Mental calculations lie at the heart of Numeracy. There should be a balance between mental and written methods, and the way in which pupils progress from one concept to another. A clear progression needs to be identified and links made. The premature teaching of standard written methods should be avoided. The Maths Calculation Policy should be used as guidance.

Maths is an essential tool to be used throughout the whole curriculum.

Additional adults in the classroom

Our aim is for TAs to be clear about teaching objectives, mathematical terminology and vocabulary when working alongside teachers. During the daily maths lesson it is the TA's responsibility to ensure that the children they are working with are responding and interpreting instructions correctly, concentrating and behaving sensibly.

Parents at home

Parents and society must show children the importance and practical benefit of having secure maths skills. Parents need to be well-informed about what their children are learning and confident about the activities they are doing in Maths. Each term a year group Curriculum Overview is put on the school web site and describes the topic areas for the term. Parent sessions are run during the year for KS1 and KS2 parents. The power points are then put on the web site for reference. The CPS written maths calculations policy is also available on the web site. Maths homework may be put on the VLE by class teachers if appropriate and should always have an example of the method the teacher wants pupils to use where necessary.

The Scheme of Work and Planning for Mathematics

Mathematics is a subject where skills, concepts and knowledge are built up in a structured way. Each term most concepts are revisited, reinforced and built on to enable children to become more confident. We follow the National Curriculum Programmes of Study. Medium Term and Weekly Plans are available for each year group on the Hamilton Trust website and can be used as support for teachers to create their own plans.

Homework

Teachers provide regular mathematical activities and exercises for pupils to do at home to extend their learning time for Mathematics. It is recognised that families who support the school and who are well informed can help to raise attainment and standards.

Years 1-2 ideas of ways to support your child at home placed on the VLE.

Years 3 to 6 complete homework for Mathematics once a week and are regularly encouraged to learn times tables. Examples of unfamiliar strategies should always be sent home with homework to ensure continuity between home and school is achieved.

See: Homework Policy

Resources

Mathematics resources are stored in several places:

- Classrooms.
- Library/Interventions room
- Dining Room

Classroom

Each classroom has a maths area, in which all equipment should be clearly labelled and easily accessible by the children. Mathematical dictionaries, banks of maths vocabulary, number lines, posters and charts such as number squares, multiplication tables etc, should also be in view and accessible. Each classroom should have a 'Working Wall' for mathematics where information and examples of children's work or comments about the current area of work are displayed.

Calculators

Calculators are sometimes used as an effective tool for learning about numbers and the number system, such as place value, multiples, fractions and decimals. They are also used to support work in other subjects such as science, geography or history, where children are handling real data gathered in their experiments or research which may contain numbers which may be too difficult to calculate.

They are NOT to be used as a prop for simple arithmetic. We strongly believe that the first strategy in the classroom should be to use mental calculation skills. We also encourage children to have a sense of the appropriate size of an answer when using a calculator and also know how to check their own calculations if they are not sure whether it is correct.

ICT

Each teacher has an interactive white board with access to all numeracy resources and ITPs.

All year groups have access to a whole class set of ipads.

Additional slots are available each week if teachers wish to use the suite for a mathematics lesson. The software that teachers use in ICT can be used to introduce and develop specific aspects of number, to sharpen pupils' mental recall and calculation skills in an enjoyable and challenging way. Calculators and Beebots and roamers are also available.

All children from Year 2-6 have membership to Times Tables Rockstars and Year 2 have membership to Sumdog.

Date written: January 2019

Jo Alexander

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