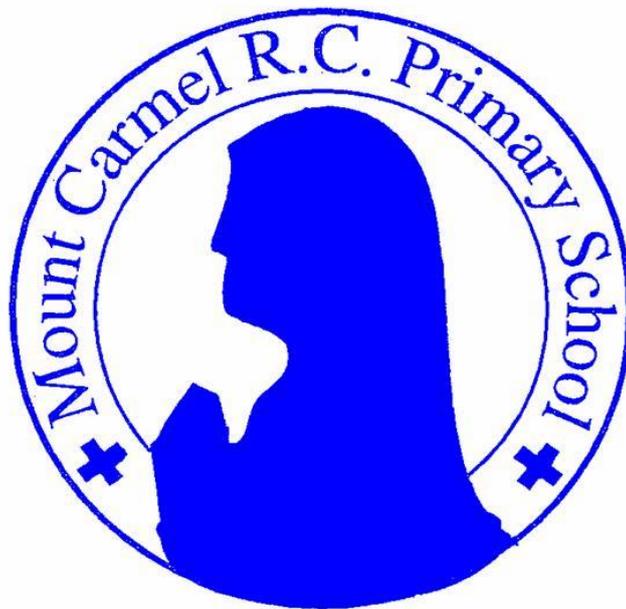


Our Lady of Mount Carmel R. C. Primary School

Mathematics Policy



Leader for Mathematics - Catherine Curran

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Mission Statement

At Mount Carmel R.C Primary School we are grateful to welcome each child, as loved by
God.

Proclaiming Christ's message of hope we live as a caring family of faith and in mutual
respect.

We celebrate our uniqueness, embrace our differences, create a space for forgiveness and
journey towards a shared understanding of God's plan of love for each of us.

Because our children are listened to, and valued, they feel they belong and, thus, continue to
achieve and grow.

Our Lady of Mount Carmel smiles on her children here each day!

Mathematics Policy

This policy outlines the guiding principles by which Mount Carmel R. C. Primary School will
implement Mathematics in the National Curriculum (2014) in England. It is reviewed
periodically.

Purpose

*"...teachers' knowledge of mathematics for teaching must be like an experienced taxi driver's
knowledge of a city, whereby one can get to significant places in a wide variety of ways,
flexibly and adaptively."*

(Ma, 1999, p. 123)

*Mathematics is a creative and highly interconnected discipline that has been developed over
centuries, providing the solution to some of history's most intriguing problems. It is essential
to everyday life, critical to science, technology and engineering, and necessary for financial
literacy and most forms of employment. A high-quality mathematics education therefore
provides a foundation for understanding the world, the ability to reason mathematically, an
appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity
about the subject.*

(The National Curriculum in England, July 2014)

Aims

- At Mount Carmel R. C. Primary School, we believe that mathematics is an essential tool
for everyday life and supports learning across the curriculum. It helps children make sense
of the numbers, patterns and shapes they see in the world around them and makes a crucial

contribution to their development as successful learners. Mathematics stimulates curiosity, fosters creativity and equips children with the skills they need in life beyond school.

- We want children to be confident in mathematics and to be able to apply their knowledge to make sense of the world around them. It is our aim to develop:
 - a positive attitude towards mathematics
 - competence and confidence in mathematical knowledge, concepts and skills
 - an ability to solve mathematical problems, to reason, to think logically and work systematically and accurately
 - promote enjoyment and enthusiasm for learning mathematics through practical activity, exploration and discussions
 - an ability to communicate mathematics and to work both independently and collaboratively with others.

- We follow the New National Curriculum for Mathematics and each day all classes have structured mathematics lessons. The lessons have a clear focus on direct, instructional teaching and interactive oral work. The children take part in individual, group and whole class work to carry out a range of activities across the areas of number, calculating, data handling, problem solving, shape, space and measures.

- We are continually aiming to raise the standards of achievement of pupils at Mount Carmel R. C. Primary School.

Spoken Language

The national curriculum for mathematics reflects the importance of spoken language in pupils' development across the whole curriculum – cognitively, socially and linguistically. The quality and variety of language that pupils hear and speak are key factors in developing their mathematical vocabulary and presenting a mathematical justification, argument or proof. They must be assisted in making their thinking clear to themselves as well as others, and teachers should ensure that pupils build secure foundations by using discussion to probe and remedy their misconceptions.

(The National Curriculum in England, July 2014)

Teaching and Learning

- All planning and teaching follows the aims and objectives detailed in the Mathematics curriculum by Key Stage and year group (updated July 2014).
- Underpinning all teaching in mathematics is the expertise and confident subject knowledge of the teacher.
- Teachers should deliver the National Mathematics Curriculum thoroughly and consistently:
 - by planning and delivering mathematical ideas into a coherent whole
 - by choosing practical resources, visual images and information and communication technology that promote inclusive teaching and a deeper understanding for all

- by asking challenging questions; modelling key mathematical vocabulary and strategies
- by using the Abacus Scheme (Abacus Evolve) for teaching mathematics (KS1 and KS2) as well as additional resources to meet the objectives of the National Curriculum for mathematics
- Early Years expectations follow the guidelines in the Early Years Foundation Stage
- by incorporating an element of problem solving into each lesson
- by using Assessment for Learning techniques to check understanding throughout and address misconceptions
- by assessing, or marking, all activities in line with the school assessment policy (including weekly homework activities)
- by using the targets highlighted from the GL Assessments and Accelerated Maths (Big Maths) to inform planning, teaching and address gaps in knowledge thereby ensuring all children make at least expected progress in each lesson and throughout the year

Planning

- Planning follows the National Curriculum for Mathematics and consists of year group:
 - Long Term annual plans
 - Medium Term plans per half-term
 - Short Term weekly/daily lesson plans.
- Abacus and Abacus Evolve are used to support teachers when creating medium and short-term planning.
- Teachers plan for deep coverage and mastery of the curriculum through both daily mathematics lessons and additional opportunities to develop mental mathematics and problem solving skills.
- Plans for daily mathematics lessons include teaching, practising, applying, reviewing and catering for all learning styles.
- Children's targets are at the forefront of all planning and are clearly linked to and reviewed through regular assessments.
- Lesson plans include opportunities for:
 - practical activities and mathematical games
 - outdoor learning
 - modelling strategies
 - problem solving
 - individual, small group and whole class discussions
 - open and closed tasks as well as investigation activities
 - a range of methods for calculating e.g. mental and formal strategies
 - working with ICT
 - homework preparation and/or review

- Plans should follow the development of addition, subtraction, multiplication and division from Reception to Year 6 as per the Mathematics National Curriculum. Teachers should use this detailed information on progression through each strand and how to use practical resources and models to develop understanding and application in each year group.
- Planning should identify mathematical possibilities across the curriculum, particularly in: science, geography, design and technology, physical education, history, computing and art so children understand mathematics is not an isolated subject. In early years, these links are more evident as the children experience mathematics through independent and dependent structured activities and pupil led investigations both inside and outside of the classroom environment.

Classroom Support

- It is the responsibility of the classroom teacher to ensure all classroom support, often a teaching assistant, is fully aware of the lesson objectives; understands the appropriate methodologies or strategies; uses the correct mathematical vocabulary; and knows how to use resources to aid learning and progression as well as address any misconceptions.
- Classroom Support/Teaching Assistants should:
 - Support small groups of children, or individual children, in teacher-led lessons or through intervention sessions.
 - Offer sensitive support and are able to modify tasks, materials and teaching resources as required by the classroom teacher.
 - Demonstrate initiative in using practical resources to support learning and help pupils overcome difficulties.
 - Identify misconceptions and gaps in learning; support the classroom teacher when assessing pupils in their groups; and help to identify the next steps and subsequent activities.
 - They participate in reviewing pupil progress are effective in identifying and supporting problems that present barriers to learning.

Assessment

- All assessment is used to inform teaching and learning in line with the school assessment policy:
 - Assessment for learning: continuous
 - Teacher/pupil marking: daily/weekly
 - Children use the traffic light system and indicate their understanding next to the learning objective (green = confident/orange = some understanding/red = I need more help please)
 - Year 6 “Accelerated Maths Club” daily marking and target setting.
 - GL Assessment (September/January/June) and “Big Maths” (10/20/30 weekly intervals)
 - Pupil Progress Meetings (three times a year in line with GL and “Big Maths” assessments)

- At the end of the school year, pupil progress is reviewed by: assessing attainment against the National Curriculum Mathematical objectives; supplementary notes and knowledge about children; and achievement through formal assessment.
- Parents are informed of progress and achievement through an end of year formal written report.
- EYFS track the children against the ages and stages in the Development Matters document before moving onto the Early Learning Goals in the summer term of Reception. During the 2020/2021 academic year, the changes to the mathematical descriptors will come into effect.
- KS1 SATS are undertaken by children in Year 2. This will remain statutory until 2023.
- KS2 SATS are undertaken by children in Year 6.
- From 2019/2020, Year 4 children will undertake a multiplication assessment.
- End of Key Stage assessments are moderated either with other schools and/or by the Local Authority.

Children with Special Educational Needs

- Wherever possible, children with SEN are supported in the classroom during the mathematics lesson by an additional adult (teaching assistant). This may be in the form of a small working group or one-to-one support.
- In consultation with the SENCO, an Individual Educational Plan may be written (three times a year) by the classroom teacher to target specific learning difficulties in addition to the mathematics National Curriculum objectives. If a child's needs are particularly complex and persistent, they will work on an individualised programme written in consultation with appropriate support from external agencies.
- When planning, teachers will attempt to address the child's needs through simplified or modified tasks and the use of classroom support/teaching assistants.

More Able Pupils

- More able pupils, across all key stages, should be challenged through differentiated questioning, activities and investigations. Their level of mastery in mathematics should be evident by: accessing higher order questioning; a confident use of mathematical vocabulary; and the ability to problem solve and apply mathematical strategies independently. They may be given an extended programme of work with more challenging, open ended problems, or activities beyond their year group or key stage.

Homework

- Children are given homework (weekly) in the form of learning times tables, reviewing and extending learning begun in the lesson or in preparation for new units of work.
- Children in Year 6 are actively encouraged to attend Accelerated Maths Club on a daily basis to improve their mathematical skills.

- Homework should be assessed in line with the school assessment policy by the classroom teacher or together with the children.

Equal Opportunities

- As a staff, we endeavour to maintain an awareness of, and to provide equal opportunities for all our pupils in mathematics. We aim to take into account cultural background, gender and Special Needs, both in our teaching attitudes and in the published materials we use with our pupils.

Leadership and Management

- An internal resource audit will take place in September 2017.
- All Abacus Evolve access links will be reviewed in September 2017.
- Accelerated Maths Club timetable will be reviewed to provide differentiated activities to below average, average and above average ability groups.
- GL Mathematics assessments will begin in September 2017.
- A staff meeting has been planned for October 2017 to review the policy and action plan for mathematics.

Areas for improvement

- Areas for improvement can be found in the Mathematics Action Plan July 2017.

Mathematics Policy Review

- The mathematics policy will be reviewed by the Leader for Mathematics and the senior management team annually. The date for the next review of the Mathematics Policy is July 2019.