



St. Mary's R.C. Primary School Mathematics Policy

Vision:

We believe that every child is a gift from God, therefore, we aim to provide an outstanding and happy Catholic education which develops the 'whole child' whilst enabling them to reach their full potential.

Mission statement:

We love God ... so we follow the examples of Jesus

We love learning ... so we always do our very best in everything

We love each other ... so we treat each other as we want to be treated

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Overview

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.

Aims and Objectives

Using the National Curriculum and Abacus Mathematics scheme our aim is 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

The Maths teaching at St. Mary's R.C. Primary School is designed to enable each pupil to develop within their capabilities; not only the maths skills and understanding required for later life, but also an enthusiasm and fascination about Maths itself. We aim to increase pupil confidence in Maths so they are able to express themselves and their ideas using the language of Maths with assurance. We are continually aiming to raise the standards of achievement of the pupils within St. Mary's School.

Strategies:

Knowledge Skills and Understanding

Mathematics, one of the core subjects, is planned using the Abacus Mathematics scheme. Learning is planned under seven strands:

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 eg. mental, pencil and paper and using a calculator
- working with computers as a mathematical tool

Scheme of Work

Our school scheme of work is Abacus, which is edited and adapted to meet the needs of each cohort. This is developed from the National Curriculum and takes into consideration the needs of our children. The learning and teaching of Mathematics is carefully planned and delivered to ensure clear progression throughout each strand whilst enhancing and enriching the curriculum for all. Mathematics teaching should be linked to meaningful concepts wherever possible and to help support this, investigation and problem-solving activities are regularly used. Through the wider curriculum cross-curricular links can be made when appropriate. A wide variety of resources are available to encourage 'hands on' approach to learning.

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 four key principles:

- a Mathematics lesson every day
- Use of the Learning Journeys approach to teaching and learning where pupils can move themselves up the learning journey and progress faster in lessons, in a more independent way
- a clear focus on direct, instructional teaching and interactive oral work with the whole class and group
- an emphasis on mental calculation

Each class organises a daily lesson of between 45 and 60 minutes for Mathematics

Lessons are planned based on the objectives and resources available from Abacus 'activelearn primary' website and are collected and monitored by the Mathematics coordinator.

Teachers of the Reception and Nursery classes use the objectives set out in the EYFS (Early Year Foundation Stage) Profile to meet the 'Early Learning Goals For Mathematical Development'.

Special Educational Needs (SEN)

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).

Quality First teaching enables all children to access the Mathematics curriculum at St. Mary's. All staff adapt planning and resources so that children can access the curriculum as part of the core offer.

When additional support staff are available to support groups or individual children they work collaboratively with the class Teacher. Support staff are required to provide feedback for the class Teacher at the end of each lesson, this can be verbal or written depending upon the individual Teacher and circumstances.

Within the daily 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 (Learning Journey approach).

Gifted and Talented

Teachers are asked (with support from the subject leader) to identify those children who are gifted within the subject of Mathematics. The subject leader

keeps a record of these children and supports the class Teacher in planning and developing work for these children to further extend their abilities. Staff recognise that pupils may be particularly gifted within one area of Mathematics and this may not necessarily extend to other areas of the subject e.g. a child gifted in numbers may not necessarily be gifted in shape and space. (Teachers report on these pupils in half-termly progress meetings with the Headteacher and Assessment Coordinator).

Equal Opportunities

We incorporate Mathematics into a wide 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.

eg. Identifying key vocabulary at the start of a lesson (and where necessary, pre-teaching of vocabulary takes place), repeating instructions, speaking clearly, emphasising key words, using picture cues, playing Mathematical games, encouraging children to join in counting, chanting, finger games, rhymes etc.

Recording of Pupils' Work

Pupils are encouraged to record Mathematics in a variety of ways. Pupils from Year 1 upwards are provided an individual Maths book which contains square paper. The size of the squares varies according to age and fine motor skills. The Maths book is used to record evidence of mathematical activity. Therefore, alongside formal calculations there could also be photographic evidence of practical activities, drawings, annotations and informal jottings. Teachers will encourage a systematic approach e.g. one digit, one square. Teacher evaluations can also be used to record pupils' work e.g. conversations, teacher observations, etc.

Marking

Teachers mark work in Mathematics in accordance with the Marking and Feedback Policy; which clearly outlines how written work should and can be marked.

Assessment and Record Keeping

Teachers are expected to make regular assessments of each child's progress and to record these systematically. The following is the school policy for assessment in Mathematics:

Informal Tests of Mental Arithmetic

This involves 20 mixed questions given orally on a regular basis. This is followed immediately by discussion with the whole class so that any misconception can be put right and the merits of different methods discussed.

Summative Assessment

Class teachers are expected to build into their planning assessment opportunities. This is to inform future planning and to identify those children requiring extra support or extension. This is used to complete the Rochdale Assessment Grids which identify objectives within each year group.

Formal Written Tests

During Whole School Assessment Weeks pupils complete a formal written test. This provides the Teacher with a standardised score and equivalent Maths points to monitor progress towards the termly target. We alternate between the QCA test and the GL Assessment 'Progress in Maths' tests.

Data

At the end of each Assessment Week the Teacher inputs individual Maths points for each child into the SIMS programme. From this the teacher and the subject coordinator can monitor individual progress and highlight any children who require additional support.

Formal Assessment

At the beginning of Autumn Term children complete baseline assessments to establish their current position in learning. The school recognises that over the summer holidays some slippage can occur and children can drop backwards from their end of Summer Term level. The Teacher uses this information to inform planning for the next half-term and to support individual children with their learning.

Throughout the year, data is analysed by the class Teacher to identify next steps and pupils that would need support, intervention or extending. Pupil groups are monitored by the subject and Assessment co-ordinator and progress is measured. Pupil Progress meetings are held with the Headteacher so that standards in the subject and individual pupil progress can be monitored. The SENCo, alongside the Subject Co-ordinator, monitors the impact of any interventions taking place.

Reporting to Parents

Individual targets are set for pupils based on 4APS points per year over Key Stage 2. However, these are adapted in consultation with the class Teacher and SENCo. These targets are shared with parents at Parental Conference and in the written reports. Progress against their targets is also reported and next steps identified.

The school holds two Parental Conferences each academic year where the Teacher discusses pupil progress and shares new targets with parents. In the third term instead of a Parental Conference, a written report is compiled.

Written reports are completed before the end of the summer term and parents are given opportunity to discuss their child's progress and any issues arising from this report by making an appointment with the class Teacher.

Teachers use the range of assessment information gathered throughout the year to help them comment on individual children's progress.

Parental Involvement

- Parents are invited into school twice-yearly to look at their children's work during Parental Conferences
- An open evening is held once a year
- When significant changes have been/are made to the Mathematics curriculum parents are invited to a meeting or sent information via the school website
- Parents are asked to support their child/ren with the Maths homework which is taken home on a weekly basis

Differentiation

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

This is mainly delivered through the implementation of Learning Journeys. This is an approach where there is a Universal Learning Objective. This is then broken down into many steps. Step 1 is always the easiest and is aimed at including all children in being successful. Steps then increase in complexity and progression throughout each Year's objectives can often be seen. Children can start and progress through different sections with a lesson; enabling the maximum amount of progress to be made.

In addition these strategies may be used:

- Common Tasks which are open ended activities/investigations where differentiation is by outcome
- Resourcing which provides a variety of resources depending on abilities eg. 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 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. Monitoring and evaluation can take place in different ways:

- Planning scrutiny
- Work/book scrutiny
- Teacher questionnaires
- Lesson Observations
- Pupil discussions
- Audit of subject
- Lesson walkthroughs

The Mathematics coordinator is a member of the Senior Leadership Team and her findings are regularly fed back to the other members of the Senior Leadership Team.

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

Collecting Evidence

It is the responsibility of the subject coordinator to collate a portfolio of evidence. Often this will be examples of pupils' work that demonstrate a particular stage of understanding. It is expected that Teachers will support the subject co-ordinator in this role by providing examples of work upon request. Joint moderation of the new Rochdale Assessment grids will enable staff to become more confident in assessing using this framework.

Staffing and Resources

Subject co-ordinator

The Mathematics co-ordinator has an up-to-date job description which outlines her roles and responsibilities. Part of this is to create and review Action Plans for the subject area with support from the management team. She will also provide the Governing body with an annual subject report and provide staff with the necessary training to deliver the Mathematics curriculum to a good standard.

Practical 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:

- Inside the Number Room

It is the responsibility of the subject leader to ensure that all staff are fully aware of the range of practical resources available and that they are being used to the best of their ability.

Homework

It is our school policy to provide parents and carers with opportunities to work with their children at home. These activities may only be brief, but are valuable in promoting children's learning in Mathematics. Activities are sent home on a regular basis (see the separate school Homework Policy) and take the form of number games and tasks with some formal exercises for older children. Electronic activities are set using the Education City and Abacus Pupil Website. All homework will link to class activities and is designed to reinforce and extend what is happening in the classroom.

The Role of the Governing Body

We have identified a Monitoring of Attainment and Achievement Committee who are informed termly about the standards of teaching and learning in Mathematics. Through this Committee and an annual Subject Report, Governors are kept informed about the quality of provision and achievement in Mathematics. Governors are invited to challenge and question the subject co-ordinator at these meetings.

Outcomes

For all pupils to become fluent in the fundamentals of Mathematics, through varied and frequent practice with increasingly complex problems, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately. Pupils will develop the ability to reason by following a line of enquiry, conjecturing relationships and generalisations and developing an argument, justification or proof using Mathematical language. They will be able to solve problems by applying their Mathematics to a variety of routine and non-routine problems with increasing sophistication. Mathematics is an interconnected subject in which pupils need to be able to move fluently between representations of Mathematical ideas. Children will learn to make connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving problems. They will also apply their mathematical knowledge to other curriculum areas.

Date: **Sep 2014**

Signed: **Chair of Governors**

Reviewed: