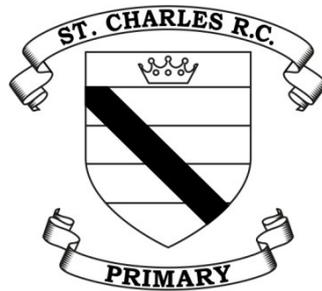


St Charles RC Primary School

Mathematics Policy

2016-17



CHRIST IS AT THE CENTRE



Compassionate
Helpful
Respectful
Inclusive
Sharing
Truthful



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Our mission at St. Charles RC Primary School is to try and centre our life in Jesus Christ, the spiritual foundation of our community.

We aim to pass on the faith we share in partnership with you.

We want the children in our care to grow and develop to their full potential within a caring Catholic community which recognises fully their true worth and God given talents. We look forward to working with you in a spirit of mutual trust and support.

We take pride belonging to St. Charles RC Primary School.

MISSION STATEMENT

As a family of God, we love to learn and learn to love

Introduction

Mathematics is a creative and highly inter-connected 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 in most forms of employment.

A high-quality mathematics education therefore provides a foundation for understanding the world, the ability to reason mathematically, and a sense of enjoyment and curiosity about the subject. This revised policy takes into account the National Curriculum.

This document is a statement of the aim, principles and strategies for the teaching and learning of mathematics at St Charles RC Primary School.

Aims and Objectives

Mathematics equips pupils with the uniquely powerful set of tools to understand and change the world. These tools include logical reasoning, problem solving skills and the ability to think in abstract ways. Mathematics is important in everyday life.

It is integral to all aspects of life and with this in mind we endeavour to ensure that children develop a healthy and enthusiastic attitude towards mathematics that will stay with them to encourage economic wellbeing.

The National Curriculum order for mathematics describes what must be taught in each key stage. St Charles RC Primary School follows the National Curriculum for mathematics.

This ensures continuity and progression in the teaching of mathematics. In early years the curriculum is guided by the Early Years Foundation Stage curriculum. This policy follows a whole school format and rationale.

Aims

We aim to develop lively, enquiring minds encouraging pupils to become self motivated, confident and capable in order to solve problems that will become an integral part of their future.

The National Curriculum for mathematics aims to ensure that all pupils:

- become fluent in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils have conceptual understanding and are able to recall and apply their knowledge rapidly and accurately to problems
- reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language
- can solve problems by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.
- To be set appropriate learning challenges
- To be taught well and be given the opportunity to learn in ways that maximise the chances of success.
- To have adults working with them to tackle the specific barriers to progress they face.

Objectives

- to ensure that all pupils follow a broad and balanced mathematics programme based on the requirements of the National Curriculum to ensure that all pupils are provided with interesting and challenging tasks that enable them to achieve standards commensurate with their abilities and potential;
- to ensure that pupils can work individually, collaboratively in groups and within the whole class
- to allow pupils to develop as independent learners, able to make decisions about their own work.

School Curriculum

Early Years Foundation Stage

The programme of study for the Foundation stage is set out in the EYFS Framework. Mathematics involves providing children with opportunities to develop and improve their skills in counting, understanding and using numbers, calculating simple addition and subtraction problems; and to describe shape, spaces and measures.

Key Stage 1 and 2

The Programmes of study for mathematics are set out year by year for Key Stages 1 and 2 in the National Curriculum (2014). The programmes of study are organised in a distinct sequence and structured into separate domains.

Pupils should make connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems. By the end of each key stage, pupils are expected to know, apply and understand the matters, skills and processes specified in the relevant programme of study.

Key Stage 1

The principal focus of mathematics teaching in Key Stage 1 is to ensure that pupils develop confidence and mental fluency with whole numbers, counting and place value. This should involve working with numerals, words and the four operations, including with practical resources (e.g. concrete objects and measuring tools).

At this stage, pupils should develop their ability to recognise, describe, draw, compare and sort different shapes and use the related vocabulary. Teaching should also involve using a range of measures to describe and compare different quantities such as length, mass, capacity/volume, time and money. By the end of Year 2, pupils should know the number bonds to 20 and be precise in using and understanding place value. An emphasis on practice at this early stage will aid fluency. Pupils should read and spell mathematical vocabulary, at a level consistent with their increasing word reading and spelling knowledge at Key Stage 1.

Lower Key Stage 2

The principal focus of mathematics teaching in lower Key Stage 2 is to ensure that pupils become increasingly fluent with whole numbers and the four operations, including number facts and the concept of place value. This should ensure that pupils develop efficient written and mental methods and perform calculations accurately with increasingly large whole numbers.

At this stage, pupils should develop their ability to solve a range of problems, including with simple fractions and decimal place value. Teaching should also ensure that pupils draw with increasing accuracy and develop mathematical reasoning so they can analyse shapes and their properties, and confidently describe the relationships between them. It should ensure that they can use measuring instruments with accuracy and make connections between measure and number.

By the end of Year 4, pupils should have memorised their multiplication tables up to and including the 12 multiplication table and show precision and fluency in their work. Pupils should read and spell mathematical vocabulary correctly and confidently, using their growing word reading knowledge and their knowledge of spelling.

Upper Key Stage 2

The principal focus of mathematics teaching in upper Key Stage 2 is to ensure that pupils extend their understanding of the number system and place value to include larger integers. This should develop the connections that pupils make between multiplication and division with fractions, decimals, percentages and ratio.

At this stage, pupils should develop their ability to solve a wider range of problems, including increasingly complex properties of numbers and arithmetic, and problems demanding efficient written and mental methods of calculation. With this foundation in arithmetic, pupils are introduced to the language of algebra as a means for solving a variety of problems.

Teaching in geometry and measures should consolidate and extend knowledge developed in number. Teaching should also ensure that pupils classify shapes with increasingly complex geometric properties and that they learn the vocabulary they need to describe them. By the end of Year 6, pupils should be fluent in written methods for all four operations, including long multiplication and division, and in working with fractions, decimals and percentages.

Pupils should read, spell and pronounce mathematical vocabulary correctly. Cross curricular Throughout the whole curriculum, opportunities to extend and promote Mathematics should be sought.

Nevertheless the prime focus should be on ensuring mathematical progress delivered discretely or otherwise.

Teaching and Learning

The approach to the teaching of mathematics within the school is based on:-

- A mathematics lesson every day
- A clear focus on direct, instructional teaching and interactive oral work with both the whole class and smaller ability groups. The curriculum is delivered by class teachers. All work is differentiated in order to give appropriate levels of work.

Planning is based upon the National Curriculum (2014).

Programmes of Study should inform medium term plans and subsequently weekly planning. Class teachers are responsible for the relevant provision of their own classes and individually develop weekly plans which give details of learning objectives and appropriate differentiated activities. Although planned in advance they are adjusted on a daily basis to better suit the arising needs of a class and individual pupils.

Calculation Policy

This policy should be read in relation to the whole school calculation policy. Inclusion and equal opportunities All children are provided with equal access to the mathematics curriculum. We aim to provide suitable learning opportunities regardless of gender, ethnicity or home background.

Resources

We provide a variety of resources and materials for pupils and staff to access, including access to online materials.

Displays

All classrooms must have a maths display. This should be in the form of a working wall relating to the current topic. Assessment Children in the Foundation Stage are assessed in accordance with the EYFS curriculum.

Mathematics passport - All children receive a numeracy passport. This document has the children's maths targets aimed towards the expectations for each year group. Children are aware of their targets being part of the process in choosing them.

They complete their passport by meeting chosen objectives, which are then highlighted by staff. Children's progress and attainment is reported every half term to the assessment coordinator.

Gaps in performance are identified and next steps are put in place.

Marking

See marking policy SAT's – These take place in Years 2 and 6 and should be analysed to inform planning.

Mental maths tests

These are weekly tests set by the teacher. They can be based on the Wigan materials and/or the weekly times tables focus.

Marking and presentation

Teachers are expected to adhere to the schools marking policy when marking books and presentation policy when guiding children as to how to present their work. Homework Maths homework is set weekly. There is a weekly mental maths focus and work that relates to that week's topic.

Monitoring and Evaluation

The Curriculum leaders, alongside SLT, are responsible for monitoring and evaluating curriculum progress. This is done through book scrutiny, planning scrutiny, lesson observations, pupil interviews, staff discussions and audit of resources.

Review

The mathematics policy will be reflected in our practise.

SEND and Inclusion

There are children of differing abilities in all classes at St Charles RC Primary School. We provide suitable learning opportunities for all children by matching the challenge of the task to the ability of the child.

We identify which pupils or groups of pupils are under-achieving and take steps to improve their attainment.

Gifted children will be identified and suitable learning challenges provided. We achieve this through a range of strategies. In some lessons we do it through differentiated group work, while in other lessons we ask children to work from the same starting point before moving on to develop their own ideas.

We use teaching assistants to support some children and to enable work to be matched to the needs of individuals. Work in Mathematics takes into account the targets set for individual children in their Individual Education Plans (IEPs).

Teachers provide help with communication and mathematics through:

- using visual aids such as number lines, 100 grids, calculators and Numicon;
- using visual and written materials in different formats;
- using I.C.T., other technological aids and recorded materials;
- using alternative communication such as signs and symbols;

- using translators and amanuenses.

Equal Opportunities

St Charles RC Primary School has universal ambitions for every child, whatever their background or circumstances. Children learn and thrive when they are healthy, safe and engaged. In order to engage all children, cultural diversity, home languages, gender and religious beliefs are all celebrated.

We believe in 'valuing what the child brings to school' and recognise the importance of supporting a child's first language, not only to foster self-esteem, but to assist in the learning of English.