

Christ Church Charnock Richard C.E. Primary School

*Inspired to learn, grow and flourish within our
Christian family*



Mathematics Policy

Reviewed September 2022

At Christ Church Charnock Richard our core Christian values and ethos define all we do.

Our vision and mission statement underpin our curriculum intent and purpose.

‘Inspired to learn, grow and flourish within our Christian family’

**Firmly rooted in Philippians 4:13 ‘I can do all things because Christ gives me strength’
which encompasses all we do at Christ Church to develop happy, resilient and
confident children who thrive in body, mind and spirit.**

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We are extremely proud of our curriculum here at Christ Church and we pride ourselves on providing high quality learning that offers challenge and fun. Our enriched curriculum has been developed over three years considering the needs of our children at our school and ensuring that all children are able to thrive.

We believe that relationships are essential to ensure effective teaching and learning and all members of our community invest time in building meaningful relationships with one another. We have high expectations for all and want everyone to be

‘Inspired to learn, grow and flourish’.

We provide a broad and balanced curriculum with carefully planned additional learning opportunities to support the personal and social development of our children. In particular we focus on developing the characteristics of confidence persistence getting along organisation and resilience.

As a school community we believe that our curriculum ensures

All children are fluent and effective readers allowing them to read for pleasure and access the wider curriculum.

All children develop efficient mathematical methods and skills to allow them to use and apply these skills in the real world.

CHRIST CHURCH CHARNOCK RICHARD C.E. PRIMARY SCHOOL

MATHEMATICS POLICY

Intent

At Christ Church Charnock Richard CE Primary we **intent** to:

- Ensure our children have access to a high-quality maths curriculum that is both challenging and fun.
- Develop efficient mathematical methods and skills to allow them to use and apply these skills in the real world
- Ensure children are confident mathematicians who are not afraid to take risks
- Demonstrate resilience and independence in problem solving

Implementation

At Christ Church Charnock Richard CE Primary is through secure understanding of the curriculum and subject area.

Planning

Planning (long and medium): Lancashire maths planning.

Planning (short term): Daily lessons include a clear Learning Objective/ title and clear steps to success. Use of mini plenaries/ live marking. Supported by the use of Lancashire planning resources, TT Rock Stars, Early Bird maths, White Rose Maths resources and abacus textbooks.

Teaching

High quality teaching which offers challenge and fun.

Secure understanding of year group expectations

Effectively deploy adults, specifically during introductions, plenaries and intervention.

High expectations of all

Learning

High quality learning that offers challenge and fun

Happy, resilient and confident learners

Children know Philippians 4:13, 'I can do all things because Christ gives me strength.'

Assessment

Summative, test base/ past SATS paper, CGP resources

Formative – ongoing every day after lessons

Impact

Mid-year assessments

End of year assessment including SATS (KS1 and KS2)

Confident, happy and resilient children

This policy reflects the school's values and philosophy in relation to the teaching and learning of mathematics. Christ Church Charnock Richard C.E. School considers mathematics to be a vital part of its whole curriculum and it is taught within a Christian context.

Philosophy

At Christ Church Charnock Richard C.E school we feel that mathematics is a part of everyday life and work and is therefore an essential life skill. It provides a means of communication and helps the child make sense of the world. It also develops powers of logical thinking, accuracy and spatial awareness and offers pupils intellectual excitement and an appreciation of its essential creativity.

Aims

Using the Programmes of Study from the National Curriculum and the Lancashire framework for teaching Mathematics it is our aim to develop:

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

Key Skills

We undertake to promote the following skills:

- Application of number
- Information technology
- Working with others
- Improving own learning and performance
- Problem solving
- Times tables

National Curriculum Mathematics

At the Foundation Stage, teachers follow the EYFS, moving onto Problem solving, Reasoning and Numeracy in the Renewed Primary Framework. At KS1 and KS2, the new primary curriculum will now be taught to all year groups. Children should not be moved onto the next year's objectives until they have completed a breadth of activities showing they can use and apply their skills, using rich and sophisticated problems.

Organisation of Mathematics within our School

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

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

- a mathematics lesson every day
- a clear focus on direct instructional teaching and interactive oral work with the whole class
- an emphasis on times tables
- opportunities to use and apply their knowledge

The knowledge, skills and understanding in the programmes of study identify the main aspects of mathematics in which pupils make progress:

At Foundation Stage in:

- counting
- understanding and using numbers
- calculating simple addition and subtraction problems
- to describe shapes, spaces, and measures

At Key Stage 1 and 2, they are divided into the following strands:

- Number and Place Value
- Addition and Subtraction
- Multiplication and division
- Fractions (including decimals)
- Measurement
- Geometry: Properties of Shapes
- Geometry: Position and direction
- Statistics
- Algebra and Sequences

However, these are not all covered in every year group.

At all stages, teaching should ensure that appropriate connections are made between the sections and that the strand of **using and applying mathematics** is always included. These aspects are developed using mathematical ideas as set out in Breadth of study in the programmes of study and resources in the Primary Framework and EYFS at the Foundation stage.

Principles of Teaching and Learning in Mathematics

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, paired, 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
- use of the outdoor environment
- homework tasks

Following the guidance of the Primary Framework, children are encouraged to use mental strategies before resorting to a written algorithm. The children are encouraged to record and communicate their mathematics in a variety of ways. They will develop informal or non-standard methods of calculation and are encouraged to compare and discuss different methods of calculation. By upper KS2, the children will have progressed to efficient standard written calculations, when appropriate, as outlined in the school's policy on the progression through written calculations. All children are encouraged to work tidily and neatly when recording their work. When using squares, one square should be used for each digit.

The Development of Independent Learning in Mathematics

Opportunities are provided within mathematics for children to develop the skills of independent learning through investigation and problem solving. Teaching strategies to promote independent learning include whole class and smaller group teaching. In addition, children are encouraged to learn on an individual basis. Emphasis is placed on questioning and reasoning.

Time Allocation

Each class teacher organises a daily lesson of between 45 and 60 minutes for mathematics, except at the Foundation Stage when arrangements are more flexible.

Progression and Continuity Planning

Lessons are planned by the teacher. They are monitored periodically by the mathematics subject leader and SLT. These plans are developed from the new maths curriculum documents produced by the Lancashire maths team including Foundation Stage. All plans take into consideration the needs of our children. They form our school scheme of work – a working document.

The Role of the Co-ordinator

The co-ordinator for mathematics has oversight of the whole school curriculum plan for mathematics. They ensure that all N.C. programmes of study are being covered and that there is continuity and progression from the Foundation stage through to the end of KS2. Governors are informed by the co-ordinator annually through a subject leader statement and can also view the maths action plan.

The subject leader is also responsible for supporting and liaising with staff on topics and themes within mathematics. They are responsible for the resources in accordance with the school's budget allocation for mathematics. They arrange the storage and organisation of resources. An action plan for maths is formulated on an annual basis.

Monitoring

The subject leader undertakes some classroom observations. They may focus on a specific aspect of teaching and learning or on the maths lesson in general. The observation schedule is completed and discussed with the class teacher, highlighting any areas of development as appropriate. Scrutiny of pupils' work is carried out regularly, varying the focus during the year. Displays in the classroom and around school are monitored.

Evaluation

The subject leader evaluates the mathematics curriculum and the quality of teaching and learning as part of the monitoring process. This is to ensure that children's standards of achievement are raised and that they reach their full potential.

Marking the Children's Work

Children's work is marked by the class teacher in accordance with the whole school marking policy. Positive comments are included on pieces of work whenever possible (this may be a sticker), as well as comments which direct children to the next stage of learning (if appropriate). This can also be done through conversation with the child. However, exercises which involve routine practice with support and guidance from the teacher can be marked by the children themselves.

It is accepted that not all work will be recorded on paper. For example, in the early years recording may take the form of concrete materials and therefore be of a non-permanent nature. Teachers will record the tasks and outcomes of pupil's work appropriately. Maths work is also celebrated on the school twitter account and hash tagged cccrmaths.

Assessment

Teachers will make regular assessments of each child's progress. The techniques used will range from observation and talking to children through to questioning and marking children's work. Maths KLIPs sheets are still the recommended way of formally assessing the children (Lancashire Maths Team). These assessments will inform future planning and are carried out in line with the school's assessment policy. Year 3-5 use Testbase midterm and end of year papers. Year 2 and Year 6 use past SATs papers as assessments.

Children with Special Educational Needs

Children with SEN are taught within the daily mathematics lesson and are encouraged to take part when and where possible. Where applicable, children's IEPs incorporate suitable objectives from the Primary Framework and teachers keep these objectives in mind when planning work.

Additional support staff support groups or individual children, working collaboratively with the class teacher. Feedback is given orally or is recorded on plans. 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

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 (grid format) in line with the school's homework policy, the exercises becoming more formal as the children get older. Each child (Y2-6) has access to Time Table Rock Stars to use at home.

Cross Curricular Links

We believe that individual teachers should seek out opportunities for drawing mathematical experience out of a wide range of children's activities. Many curriculum areas give rise to mathematics, encouraging the development of mathematical skills and the using and applying of mathematics. In addition, mathematics can be developed within PSHE and to promote the key skills and thinking skills outlined in the National Curriculum. It can also promote pupils' spiritual, moral, social and cultural development.

Incorporation of computing within Mathematics

Computing is an important aspect of the mathematics curriculum. Children will apply and use mathematics when they solve problems using technology. For example, they will develop skills in data handling and their work in control includes the measurement of distance and angles. When using computer models and simulations, they will manipulate numbers and identify patterns.

Recording and Reporting

Teachers will keep their own records of each pupil's progress using the KLIPs documents and make annual comments to form part of the pupil's curricular record. The bullet points on the KLIPs document will be considered to see which best fits the child for teacher assessment (emerging, developing, secure or mastery) for their year group.

National Tests at the end of Key Stage 1 and Key Stage 2 will be undertaken and results reported to parents. In year 3, 4 and 5 midterm and end of year assessments (Testbase) will be carried out and results will be used to inform subsequent teachers of children's attainments, for target setting and to guide future planning. At the end of every half term, teachers are required to submit data to the headteacher so progress can be tracked, both individually and in various groups (eg gender, SEN, FSM, etc)

Results are discussed with the class teacher and used to decide on groupings within the class, besides identifying children with special needs.

Reports are completed before the end of the summer term and parents are given the opportunity to discuss their child's progress on two separate occasions. Teachers use the information gathered from their assessments (mid year and end of year testbase assessments alongside KLIPs) to help them comment on individual children's progress.

Parental Involvement

Parents in the classroom are an extremely useful resource, bringing their own strengths which can be shared with the children. Consequently, we encourage parents to help within classrooms and this is by arrangement with individual teachers. All parents are invited into school twice yearly to look at their children's work. Parents are also invited to assist with homework. Class information nights are held in September to explain teaching methods. The calculation policy is available to view on the school website.

When significant changes are made to the mathematics curriculum, parents are informed either through a meeting or by letter.

Health and Safety

All health and safety aspects are taken into consideration and guidelines are followed in accordance with the school's health and safety policy.

Staffing and Resources

Provision is made for the mathematical development of staff through Inset and also through County Courses, cluster meetings and staff meeting, as appropriate.

Policy updated –September 2022