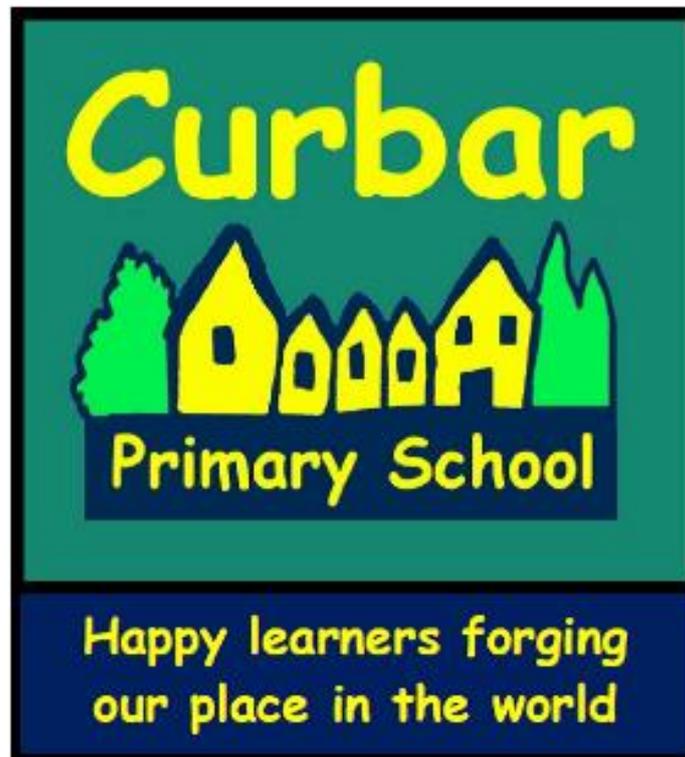

Maths Policy



Reviewed/Adopted:	January 2020
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Review Frequency:	Every year
Reviewed By:	Standards and Curriculum

Curbar Primary School Mathematics Policy

Statement of Intent:

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At Curbar Primary school we have adopted a teaching for mastery approach towards the teaching of mathematics. We believe that all children can achieve and succeed. We have designed a curriculum that balances the five key elements of coherence, representation and structure, variation, fluency and thinking mathematically. Our planning is bespoke to the needs of both groups and individuals. This, along with the fluency objectives expected at the end of each year, clearly set out the knowledge and skills that pupils will gain at the end of each stage. We continue to work, both within school and working alongside external support, to develop the curriculum further for the benefit of all our children

The Importance of Mathematics

Teachers should use every relevant subject to develop pupils' mathematical fluency. Confidence in mathematical skills is a precondition of success across the national curriculum.

'Educational programmes must involve activities and experiences for children... 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 shapes, spaces, and measure'

(EYFS statutory framework)

'Teachers should develop pupils' numeracy and mathematical reasoning in all subjects so that they understand and appreciate the importance of mathematics. Pupils should be taught to apply arithmetic fluently to problems, understand and use measures, make estimates and sense check their work. Pupils should apply their geometric and algebraic understanding, and relate their understanding of probability to the notions of risk and uncertainty. They should also understand the cycle of collecting, presenting and analysing data. They should be taught to apply their mathematics to both routine and non-routine problems, including breaking down more complex problems into a series of simpler steps.'

(National Curriculum, 2014)

Aims

The EYFS framework aims to ensure that all pupils:

- **(Number)** children count reliably with numbers from 1 to 20, place them in order and say which number is one more or one less than a given number. Using quantities and objects, they add and subtract two single-digit numbers and count on or back to find the answer. They solve problems, including doubling, halving and sharing.
- **(Shape, Space and Measure)** children use everyday language to talk about size, weight, capacity, position, distance, time and money to compare quantities and objects and to solve problems. They recognise, create and describe patterns. They explore characteristics of everyday objects and shapes and use mathematical language to describe them.

The national curriculum for mathematics for KS1 & KS2 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.

Delivering Mathematics Teaching

Organisation

The Early Years Framework and the National Curriculum for Mathematics describes what should be taught in each Key Stage. Curbar Primary school ensures continuity and progression in the teaching of mathematics.

The planning of mathematics at Curbar is reactive and personalised for the child. Assessment for learning is used rigorously and accurately to ensure the right teaching and learning strategy is applied to the right situation. Activities are selected to support the delivery and acquisition of specific and relevant learning objectives which meet the developmental needs of the children.

The learning planned for the varying groups is based on rigorous assessment (pre-assessment) and learning outcomes are clearly established before teaching commences. Performance outcomes are accurately mapped into a learning journey where conceptual, skills and application elements are developed effectively. Planning is reflected upon daily to identify children's next steps for learning.

The planning journey aims to ensure accuracy, pace and challenge to all children within class groups, ensuring that all diverse learning needs are met. Progress and success should be identified and relate directly to evidence within pupil workbooks.

Teaching and learning

Daily maths teaching provides rich opportunities for developing reasoning and using and applying mathematics. Making mathematical choices and explaining thinking are encouraged along with increased opportunities for reflection and exploration are provided within the classroom. Mathematical procedures are developed in line with children's understanding and directly reflect children's prior experiences of operating practically.

Before mathematical procedures are demonstrated to the children, a clear understanding of the key concepts must be established. Our mathematics teaching encourages children to become flexible problem solvers with a skilful application of their reasoning ability. Children are taught through exploration of conceptual ideas and mathematical rules and develop independence when applying knowledge, skills and understanding. Our maths teaching reflects a balance between computational efficiency, reasoning and application; ensuring depth of understanding and mastery.

It is the intention at Curbar to provide opportunity for pupils to explore depth in key maths principles before moving on to more complex ideas and procedures. Our maths teaching deepens learning through carefully

structured questioning, tasks and experiences to develop secure understanding of key structures within their learning.

The focus at Curbar is not to accelerate children through the breadth of curriculum content, but to spend longer exploring strands to ensure a deep and secure understanding of key concepts. Progress is measured through the increasing ability to access more sophisticated, intellectually demanding material which builds on basic conceptual learning.

It is at the class teacher's discretion how learning is structured within classrooms in order to maximise learning. The lesson structure of each session must address pupil needs and provide opportunities for all children to make progress. Teachers should use supporting adults to maximise the learning opportunities within each lesson; this could be supporting individual children, teaching groups of children independently from the main session or team teaching with class teacher.

Over time, an equal amount of teacher time should be allocated to each group of learners to provide skilled direct teaching, accurate assessment and evaluation for all children. Teaching at all levels should provide children with clear models, images and resources to develop a secure and in-depth understanding of the curriculum. Where children are identified as making slower than expected progress, action should be taken immediately. Assessment of the children's difficulties should identify how to proceed; formal intervention (e.g. Success@arithmetic/Jungle Maths) planned and delivered over time, or short term teacher / TA support before learning continues. All support must be bespoke to the children's needs; developing the gaps in understanding and mastery of procedures.

Feedback and marking of mathematics is in-line with Curbar Primary schools' marking policy.

Each classroom should contain a mathematics working wall; an essential tool that may have examples of the concepts taught during the unit, key vocabulary and examples of good work from the children.

Please refer to our Calculation Policy for progressions of concepts, skills and reasoning in addition, subtraction, multiplication and division from EYFS to the end of Key Stage 2. The calculation policy provides an accurate model in teaching children formal methods of calculation. Each method follows a practical journey enabling children to understand the key principles of each operation and explanation of how each method address the operational procedure. Steps should not be missed in the learning journey as they build structural progression.

Assessment

In early years, assessment is made according to the development matters statements. The children's next steps are planned in accordance with those outcomes. A record of the children's progress is kept within their learning journals. . Please refer to the EYFS policy for further information.

In KS1 & KS2, regular formative assessments are made as teachers evaluate children's responses to oral questions and written tasks and respond to misconceptions. Judgements about the achievement of learning objectives are used to inform future planning. Regular summative assessments take place throughout the school. Pupils will be judged as working towards, working at or working above age related expectations at specific and predetermined points throughout the year.

Mathematics across the curriculum

Mathematics contributes to many subjects within the primary curriculum, often in practical ways. Teachers plan for opportunities to make strong links between mathematics and the wider curriculum, to enhance learning in those subjects and to provide opportunities to apply and use mathematics in real contexts. These links are made both inside and outside of the classroom.

Roles & Responsibilities

Head Teacher

- Support the use of appropriate teaching, learning and assessment strategies by allocating resources effectively.
- Ensure that the school buildings and premises are best used to support successful teaching, learning and assessment.
- Monitor how effective teaching, learning and assessment strategies are in terms of raising pupil attainment.
- Ensure that staff development and performance management policies promote good quality teaching, learning and assessment.

Role of the Maths Lead:

- To have an impact on raising standards of attainment and progress for all children for mathematics across the school.
- To support and guide the classroom practice of teachers and support staff.
- To ensure the effective implementation of the statutory national curriculum for maths (by ensuring coverage, continuity and progression across the school)
- To engage with and share professional development opportunities and training.
- To monitor and evaluate the effectiveness of teaching, learning and assessment.
- To maintain an overview of current trends and developments within the subject.
- To ensure, together with the head teacher, a rigorous and effective programme of monitoring and evaluation of teaching, learning and assessment.
- To ensure a regular and effective action plan is in place that supports school improvement.
- To provide parents with information about maths teaching, learning and assessment.
- To produce action plans, update documentation and manage the budget allocation effectively.
- To review the contribution made by maths to a meaningful curriculum.

Role of the Teacher (please also refer to Teaching Standards)

- To ensure progression in the acquisition of mathematical skills, with due regard to the national curriculum for mathematics.
- To develop and update skills, knowledge and understanding of mathematics.
- To identify training needs in mathematics and take advantage of training opportunities.
- To keep appropriate on-going records/assessments that inform teaching.
- To plan effectively for mathematics and follow the agreed planning arrangements.
- To inform parents of pupils' progress, achievements and attainment.

Role of the Teaching Assistant/Learning Support

- If available, to support the teacher (as directed) by working with individuals or groups; or by following agreed intervention strategies.

Inclusion and Equal Opportunities

At Curbar Primary School we are committed to providing an inclusive environment where every child is welcomed and valued as an individual and has equality of opportunity for learning irrespective of gender, race or ability. We recognise children as individuals and base our teaching upon our knowledge of their specific needs. A range of teaching methods and resources allow children with a wide range of abilities to achieve their full potential. In order to achieve this we are committed to the principles of inclusion as outlined in the SEND Code of Practice 2014.

Pupils with Additional Needs

Please refer to the special education and higher attaining pupils' policy

Maths and SMSC

At Curbar our aim is to ensure all pupils develop as individuals equipped to cope in the ever-changing world in which we live. As such, we ensure that all our Maths lessons are constructed to empower children to think, reflect, be creative and to ponder the wonder that is our world. We demand that they develop a strong moral compass that will guide them through life. We aspire to give them a deeper understanding of the multi-cultural society in which we live; one that is governed by a democracy and where the power for change rests with citizens exercising their democratic rights. We aim for our lessons to provide an appreciation of the cultural influences that shape our land and provide challenges for our future.