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Mathematics

Policy

2023

**Maths at Carrington Primary School**

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| **Curriculum Intent**At Carrington, the aim of our maths curriculum is to provide a curriculum which is accessible to all and will maximise the development of every child’s ability and mathematical understanding. We deliver lessons that encourage risk-tasking and that enable children to discuss mathematical concepts in order to make rich connections across mathematical ideas to develop fluency, reasoning and problem solving. As a school, we believe that a CPA approach and the use of mathematical vocabulary to explore new ideas and address misconceptions, will enable our children to leave as articulate and confident mathematicians who are able to make links and apply their learning to the world around them.  |
|  | **Aims** **General** |
|  | We aim to provide a mathematical curriculum that contributes to the acquisition of life-long skills and promotes enjoyment and enthusiasm for learning through practical activity, exploration and discussion. In addition, all staff, children, parents/carers and Governors are aware of the aims for learning and teaching Mathematics at Carrington Primary and that these are consistently applied. **School Staff**To promote enjoyment and enthusiasm for learning through practical activity, exploration and discussion through the following aims:* Encourage pupils by believing that every child can be good at mathematics
* To develop a deep, conceptual understanding of mathematics
* To promote confidence and competence so that children are ‘proud to shine’ about their achievements
* To develop a thorough knowledge and understanding of numbers and the number system through the use of the Nottingham number fact fluency project and Times Table Rockstars
* To develop the ability to solve problems through decision-making and reasoning in a range of contexts in all lessons
* To develop a practical understanding of the ways in which information is gathered and presented
* To explore features of shape and space, and develop measuring skills in a range of contexts
* To understand the importance of mathematical skills in everyday life
* To promote patterns and make links between different mathematical problems
* To encourage children to apply prior knowledge to new challenges.

**Children** * To develop an enjoyment of learning
* To develop confidence and competence with numbers and the number system
* To develop the ability to solve problems through connecting ideas, decision-making and applying their mathematical skills in a range of contexts, including other subjects such as Science and Geography
* To develop the ability to reason mathematically by following a line of enquiry, developing an argument and making justifications using mathematical language
* To develop a practical understanding of the ways in which information is gathered and presented
* To explore features of shape and space, and develop measuring skills in a range of contexts
* To understand the importance of Mathematics in everyday life, especially in relation to essential life skills such as telling the time and handling money
* To foster positive attitudes towards Mathematics by developing pupils confidence, independence, persistence and co-operation skills in a Mathematical context.

**Parents and Carers** * To be understanding and supportive of our aims in learning and teaching Mathematics
* To support their children with Mathematics homework activities (please refer to Homework Policy) including the importance of learning their number bonds and times tables off by heart
* To praise their children for the good things that they do in Mathematics.
* To communicate and work with School whenever further support is needed to develop their children’s mathematical skills and understanding
* To make mathematics part of children’s everyday lives

**Governors** The coordinator will meet with the Governors at least once a year to share the school’s systems for planning work, supporting staff and monitoring progress.Governors have responsibility to:* Oversee the allocation, use and adequacy of resources
* Monitor how the standards of achievement are changing over time
* Visit School and talk to pupils about their experiences of Mathematics
* Promote and support the positive involvement of parents in Mathematics
* Attend training and other events relating to the Mathematics curriculum
* To be understanding and supportive of our aims in the learning and teaching of Mathematics.
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|  | **Implementation** **Foundation Stage organisation** * Our Foundation Stage teachers use the Early Years Foundation Stage Curriculum to support their teaching of Mathematics in the Foundation Stage. They also use White Rose long term plan to organise their teaching effectively.
* The children have the opportunity to talk and communicate in a widening range of situations and to practise and extend their range of vocabulary and mathematical skills.
* The children explore, enjoy, learn about, and use Mathematics in a range of personalised situations.
* Mathematics is planned on a weekly basis and assessed using the criteria from the Early Learning Goals.

**The National Curriculum for Mathematics (Programmes of Study)*** Our teachers access a range of resources to support their planning and delivery of mathematics teaching. The White Rose scheme of learning is used as it is based on the principles of how mathematics is taught in Singapore and the small-step approach within the blocks ensures coverage of all the National Curriculum objectives.
* Teaching and learning is differentiated to best match the needs of the class and the individuals within it using Concrete, Pictorial and Abstract representations.
* Independent tasks are offered in a Starter, Main, Dessert format with tasks becoming more difficult through the ‘meal’.
* If the needs of the children are best met following an alternative plan, which deviates from the National Curriculum, then the class teacher decides on a way forward.
* Each pupil has a Times Table Rock Star Account to help them achieve rapid recall of times table and division facts by the end of Year 4.

**Key Stage 1 organisation** * Children in KS1 are taught Mathematics for approximately 1 hour daily in mixed ability class groups.
* Pupils have at least three maths fluency sessions per week in order to ensure quick recall of number facts and times tables.

**Key Stage 2 organisation** * Children in Years 3, 4, 5 and 6 are taught Mathematics in mixed ability class groups and are taught for approximately 1 hour daily.
* KS2 pupils also complete additional maths fluency activities at least three times per week, based on prior learning, in order to aid retention and fluency
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|  | **Planning*** Plans are taken from the White Rose scheme and adapted for use at Carrington Primary School.
* Teachers plan for deep coverage and mastery of the curriculum through both daily maths lessons and additional opportunities to develop mental maths skills.
* Classes are mixed ability and the groups within classes are fluid.
* Teachers use a range of grouping methods when planning. No children miss out on the daily mathematics lesson for the class as it is crucial they have access to Quality First Teaching.
* Plans for daily maths lessons cater for all learning styles through a teach, practise, apply and review approach.
* Children’s targets are at the forefront of all planning and are reviewed through regular assessment.
* Lessons include opportunities for:
	+ practical activities and mathematical games
	+ problem solving
	+ individual, small group and whole class discussions
	+ open and closed tasks
	+ a range of methods of calculating e.g. mental, paper and pencil and calculator

**Calculation Policy*** Teachers refer to Carrington’s Calculation Policy for information on the progression of skills in addition, subtraction, multiplication and division from Reception to Year 6 (and the use of practical resources/models for developing understanding).

**Cross curricular** * Opportunities are used to draw mathematical experiences out of a range of activities in other subjects, such as in PE, Science and Geography. This equips children to make links and to use and apply mathematics in both real life and academic contexts.

**Homework (please refer to the School’s Homework Policy)** • Mathematics homework is set as part of talk homework for children in Years 1-6 each week as well as weekly times table practise. • Homework provides opportunities for children to discuss and engage with adults at home about what they have learnt, and recall learning in order to aid retention. **Parents/Carers** The school aims to involve parents/carers in their children’s learning as much as possible and to inform them regularly of their child’s progress in mathematics.• Parents/carers have the opportunity to meet with their child’s class teacher at least twice a year at Parent Consultation Meetings to receive information about their child’s standards, achievements and future targets and advice for supporting learning at home.• Parents/carers are encouraged to speak to their child’s teacher at any point during the year, either informally or by making a specific appointment to discuss anything to further support them at home. • Parents/carers are encouraged to support their children with homework.• Written progress reports are shared with parents/carers during the year with an end of year report explaining their overall attainment for the year.  |
|  | **Monitoring and review** All assessment is used to inform teaching and learning. We identify children’s understanding and then swiftly focus interventions to overcome misconceptions. At Carrington we assess children in four main ways: 1. Assessment for learning: continuous
2. Marking: daily/weekly
3. Assessment of progress: provided through regular testing
4. End of Key Stage Assessments: annually, towards the end of the school year

We assess and review pupils’ overall progress and attainment through SATs, their class record of attainment against key objectives and supplementary knowledge to produce a summative record. Accurate information is then reported to parents and the child’s next teacher.  |
|  | A key aspect of the maths subject leader’s role is to monitor, evaluate and review the effectiveness of maths teaching throughout the school. This is achieved in a variety of ways including reviewing planning, scrutinising work, discussions with staff and pupils, observing in lessons and providing appropriate and high-quality resources. Key features of the maths subject leader role: |
|  | * To monitor the implementation of the maths policy.
* To use assessment data to monitor progress.
* To support staff with new ideas, resources and materials relevant to the policy.
* To monitor standards and to lead work sampling sessions where staff moderate marking across the school.
* To make recommendations for further improvement.
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|  | **Staff development** |
|  | * We are committed to ensuring that all staff develop and maintain their skills and are able to make professional decisions regarding the teaching and learning of Maths.
* Staff are encouraged to identify areas in which they feel they may benefit from further training.
* Clear policies and regular professional development from a range of sources will develop the expertise of staff to help:
	+ In delivering the school’s curriculum thoroughly and consistently
	+ In enhancing staff subject knowledge
	+ In weaving mathematical ideas into a coherent whole
	+ In choosing practical resources, visual images and information and communication technology that promote inclusive teaching and a deeper understanding for all
	+ In using good Assessment for Learning techniques to listen flexibly to children and to check and probe their understanding throughout.
* Training needs may also be identified by the subject leader.
* Training may be provided in a number of ways including in school provision and attendance on courses. The subject leader will ensure that staff are aware of training opportunities.
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|  | * It is the responsibility of our governing body to agree and then monitor the school Maths policy. Our governing body tracks the progress of core groups of children across the school. They will monitor how the Maths policy is being implemented in school as part of their work scrutiny.

**Impact** Planning, teaching and assessments have impact on progress and learning through ensuring:* Children are fluent in the fundamentals of mathematics and have procedural fluency embedded with conceptual understanding.
* Children can articulate a depth of understanding going beyond just procedural fluency, and using key mathematical vocabulary.
* Children can demonstrate the flexibility and fluidity to move between different contexts and representations of maths.
* Children are able to recognise and use a range of representations of mathematical ideas and concepts.
* Children are able to reason mathematically – to think mathematically and communicate mathematical ideas
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