Policy Version 1
Last updated January 2024

Brookfield Primary School Policies – Mathematics Policy

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Record of Policy Amendment / History

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BROOKFIELD PRIMARY SCHOOL
Mathematics Policy

Intent

Mathematics is an interconnected subject in which pupils need to be able to move fluently between representations of mathematical ideas. The programme of study we follow are by necessity, organised into apparently distinct domains, but pupils should make rich connections across mathematical reasoning and competence in solving increasingly sophisticated problems. Mathematical knowledge is also applied to Science and other subjects. We take a "mastery" approach to teaching mathematics.

1. To 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.
2. Reason Mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing argument, justification or proof using mathematical language.
3. 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. (The National Curriculum 2014)

Implementation

How to plan and teach Mathematics

Planning is carried out by individual class teachers using the Foundation Stage Curriculum in the Foundation Stage. In KS1 and KS2 planning is carried out using the NC 2014. Weekly plans are devised and supported by White Rose guidance examples. Weekly plans clearly show daily activities. Activities undertaken during the session may have interactive manner with good pace and using appropriate resources to support learning. Clear objectives are outlined in lesson plans.

Teaching Methods

At Brookfield Primary School we take a "mastery" approach to teaching mathematics. Certain principles and features characterise this approach:

- Teachers reinforce an expectation that all pupils are capable of achieving high standards in mathematics.
- The large majority of pupil's progress through the curriculum content at the same pace. Differentiation is achieved by emphasising deep knowledge and through individual support and intervention.
- Teaching is underpinned by methodical curriculum design and supported by carefully crafted lessons and resources to foster deep conceptual and procedural knowledge.
- Practice and consolidation play a central role. Carefully designed variation within this builds fluency and understanding of underlying mathematical concepts in tandem.
- Teachers use precise questioning in class to test conceptual and procedural knowledge, and assess pupils regularly to identify those requiring interventions so that all pupils keep up.

The intention of these approaches is to provide all children with full access to the curriculum, enabling them to achieve confidence and competence – "mastery" – in mathematics, rather than many failing to develop the maths skills they need for the future.

During the lesson, the children in KS1 and KS2 access a mid-lesson challenge to apply the skills and knowledge that they have learnt so far in the lesson. Mini-plenaries are built in throughout the lesson to address misconceptions and/or problems. In UKS2, 'Success@Aritmetic:Calculation' is used as an intervention.

Continuity and Progression

Our FS follow the WRMH planning which is interactive and often based around songs, nursery rhymes, stories, games and play. Our Reception take part in two sessions a day: a WRMH session (20 minutes) and an NCETM Mastering Number session (15 minutes) per day. Years 1 to 6 follow WRMH planning (which is based on the NC 2014), which has been devised to ensure continuity and progression. Prior learning is considered when planning to ensure continuity in teaching and learning.

Equal Opportunities and Differentiation

We endeavour to provide appropriate learning experiences to all children within our classes according to the resources we have available. Children of all abilities are encouraged to take an active role in their own learning and work to their full potential. The daily lesson includes differentiated activities where appropriate. Children will be set work suitable for their ability. We adopt a multi-cultural perspective and avoid the stereo-typing of cultures and gender. Whenever possible we provide support and adapted equipment for children who are physically impaired. Classes are organised into single year groups whenever pupil numbers allow this.

Impact

Assessment, Recording and Reporting

Each teacher will use their professional assessment of the children they teach to plan appropriate work. We build assessment into our teaching during show-me activities and through questioning during all parts of the lesson (AfL). White Rose Maths Hub assessments are used for pre and post assessments for each unit of learning. At the end of each term, PUMA assessments are used and this data is recorded on O'Track. Results are analysed to inform future planning. End of year tests are carefully analysed and used to develop the action plan for the next year. Parents are given a written report annually. This includes a written statement on mathematics, the child's progress and areas for further development. In Y2 and Y6 parents are informed of their child's end of KS results.

Health and Safety

The safe use of equipment is demonstrated and encouraged by all staff. Resources are carefully stored and pupils are expected to return equipment to its place of storage or to their teacher as appropriate.

Liaison

Teachers liaise closely with their colleagues especially when receiving a new class or at any time when they require information concerning individual children. KS1 and KS2 co-ordinators regularly meet and discuss the provision of mathematics throughout school final assessments are passed onto the new teacher.

Monitoring

Examples of weekly plans are monitored termly by the Headteacher and co-ordinator. A selection of children's work is evaluated regularly. Lesson visits are undertaken regularly; it is our aim that each teacher will be observed at least once a term. The co-ordinator interviews a sample of children from each class over the year to assess their understanding of the main objectives for their year group. Learning walks are undertaken to monitor the learning environment and differentiation.

The Role of the Headteacher

The Headteacher has responsibility for ensuring that the policy is followed and for bringing the policy to the staff for regular updating. The Headteacher will ensure that the policy is congruent with National and LA documents.

The Role of the Co-ordinator

1. To support and advise colleagues, both formally and informally.
2. To maintain and con-ordinate the purchase and deployment of mathematical equipment and resources.
3. To attend relevant courses and keep up to date with development.
4. To lead and assist in school-based INSET.
5. To work alongside the Headteacher to ensure the progression and co-ordination of the Maths National Curriculum,
6. To monitor the planning, teaching and learning of mathematics within the school.