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Head of School: Mrs D Marusamy

Maths Policy

Chair of Governors	M Mortiboys (October 2023)
Executive Headteacher	A Hill (October 2023)
Next review date	October 2024

Intent
The National Curriculum

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

- become **fluent** in mathematics, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
- **reason mathematically** by following a line of enquiry, developing an argument, justification or proof, using mathematical language.
- can **solve problems** by applying their mathematics to a variety of problems with increasing sophistication, including breaking down problems into a simpler steps and persevering in seeking solution.

At Butts Primary School, we aim to deliver an inspiring, exciting and challenging curriculum, which fosters a life-long love of mathematics and develops all children into mathematical thinkers. Our aim is to continue to build on the numerical fluency and incorporate more reasoning and problem solving across the curriculum, as it provides children with opportunities to apply and transfer their maths skills, as well as increasing the breadth and depth of their understanding.

Implementation
At Butts Primary, we aim to embed a mastery approach throughout school from EYFS, so that the teaching and learning is consistent and will support all pupils with their understanding and retention. Pupils are required to explore maths in depth, using mathematical vocabulary to reason and explain their workings. Mathematical resources are used and pupils are taught to show their workings in a concrete, pictorial and abstract form wherever suitable. Pupils are taught to explain their choice of methods and develop their mathematical reasoning skills.

In our Early Years Foundation Stage, Maths is taught in a thematic way linking to real-life experience and current themes being taught. Children have directed activity, hands-on learning and collaborative play. The children use many practical resources to develop their mathematical understanding in both 'number' and 'shape, space and measures'. When the children are ready, we introduce formal recordings of their mathematical learning which compliments the photographic and written observations of their learning in these areas.

At Butts Primary, we will always encourage our children to choose the best method to solve a calculation/problem – pictures, mental calculation with or without jottings or written/structured strategies. Our long-term aim is for children to be able to select an efficient method of their choice (whether this be mental or written) for a given task.

Impact
Teachers reinforce an expectation that all pupils are capable of achieving high standards in mathematics. The large majority of pupils' progress through the curriculum content at the same pace. The Ark Maths programme is ensuring pupils experience challenge and success in mathematics by developing a grown mindset. We see pupils engaged in their maths lessons, able to talk about the subject and make links with other subjects. Pupils

are tackling mathematical challenges with some resilience and are more confidently using concrete resources and visual representations. Pupils are also becoming more articulate when discussing mathematical concepts and accelerated progress is taking place due to the way Ark Maths lessons are structured and the impact of immediate, tailored interventions.

Planning

The school follows the ARK Mathematics Mastery Primary scheme, which illustrates progression and outlines the methods to be taught. The scheme supports teachers with their planning and provides a range of resources.

Planning is undertaken at three levels:

- **Long Term** planning is based on the yearly teaching programmes set out in the National Curriculum.
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- **Medium Term** planning is carried out half-termly. Teachers select the main objectives from the yearly teaching programmes referring to the higher or lower years where necessary. Teachers use the suggested planning from the ARK Maths scheme and use a variety of other resources to support delivery (e.g. White Rose, Classroom Secrets, Active Learn online activities NCETM Maths Mastery to enhance their reasoning and problem solving skills).
- **Short Term** planning is carried out weekly. These plans include learning objectives for the mental/oral starter and the main activity, resources to be used, adaptive teaching, key vocabulary, key questions, homework. The Phase leader and SMT monitor short-term planning.

We recognise the need to **revisit, revise, consolidate** and then **extend** skills. The school uses the BIG MATHS BEAT THAT assessment tool to support with this. Two sessions each week are dedicated to the "Big Maths Beat That" challenge and "Big Maths CLIC" tests. Pupils complete the timed tests which are based on calculations, times tables and number bonds. The scores are recorded and then used to inform planning and intervention groups for the week. In addition, Corbett Maths, Shine and targeted interventions are used to build fluency.

Online Learning

Children throughout school; from EYFS through to KS2, can access Education City, TTRS and Active Learn at home and learn through play. They are able to access their homework and practise test papers throughout the whole of their school life. The school's website also has revision pages with appropriate aid such as powerpoints and test papers to support pupils learning.

Working Walls

Displays show CPA (Concrete, Pictorial, Abstract) methods being taught and we encourage working walls to model the range of strategies that can be used to solve calculations and problems. Every classroom has a mathematics board or area, which has number lines, number grids, vocabulary and other display material that provides a visual support for the children's mental processes.

Cross-Curricular links

Mathematics is taught mainly as a separate subject but every effort is made to link maths with other areas of the curriculum. We try and identify the mathematical possibilities across the curriculum at the planning stage. We also draw children's attention to the links between mathematics and other curricular work so they see that maths is not an isolated subject.

Homework

Mathematics homework is given each week. The amount set is usually about 30 minutes. Not all homework is written work, which needs marking. Children are also encouraged to practise number bonds and multiplication facts at home.

Teaching and Learning

- A variety of teaching strategies are used within each year group, which supports the children's learning.
    - Collaborative, group and paired work, which necessitates discussion is used, regularly, wherever appropriate.
    - Individual work, to encourage the application and practise of new skills and methods, is a regular feature of weekly plans.
- Where available, Teaching Assistants support individuals, pairs or groups of children in various aspects of the lesson.
- Peer mentoring is carried out throughout the week to support with calculations and the "Big Maths CLIC" tests.
- Discussions and explanations also feature in many lessons, as children will be encouraged to explore their own and others' ideas, as an essential part of the learning process.
- Maths games and investigations also play a large part in the learning of mathematics. Use of "Badger Maths Problem Solving", "NRICH" activities "Mathematical Challenges for able pupils in Key Stage 1 and 2", "Mastery Checkpoints" and "Teaching for Mastery: Questions, tasks and activities" are used on a regular basis, through-out Key Stage 1 and 2 to encourage reasoning and problem solving.
- Adaptive teaching is carried out through the delivery of custom learning experiences that address the unique needs of the individual by task set, the resources available for a task or the level of support given. It is important for teachers to ensure that all lessons are clearly adapted.

Targets

Maths targets are stuck in the front of children's books. Once a child shows evidence of meeting the target the target can be dated.

Assessment

Assessments take place throughout all lessons, with mini-plenaries, formative and summative assessments through discussions and questioning. A combination of teacher assessment and PUMA testing is used to track pupils and their progress throughout the year. Pupils are tested using PUMA three times a year. Following teacher assessment and

PUMA testing, the leadership team hold pupil progress meetings and individual pupil targets are reviewed regularly.

Time Allocation

Mathematics teaching in the Nursery and Reception takes place daily in a fully integrated curriculum. In the rest of the school, there are 5 dedicated maths sessions per week as well as an additional Mental Arithmetic session once a week.

Mathematical skills will also be applied in other areas of the curriculum as we take a cross-curricular approach to teaching and learning maths. In addition, Maths sessions may occur during allocated times in the computer suite; in programming sessions and on many interactive sites.

Children with SEND

We aim to fully include SEND pupils in the daily mathematics lesson so that they benefit from the emphasis on oral and mental work and by listening and participating with other children in demonstrating and explaining their methods.

Where necessary teachers will, in consultation with SENCO, draw up an Individual Educational Plan for a child. If a child's needs are particularly severe they will work on an individualised programme written in consultation with appropriate staff. When planning, teachers will try to address the child's needs through simplified and modified tasks or the use of support staff.

Enrichment

At Butts Primary, we believe in promoting opportunities for pupils to apply their reasoning and mathematical skills. Our Maths Ambassadors lead and host lunchtime maths games, and puzzles to enrich and build the love of maths across the school.

The Role of the Co-Ordinator

- To have an overview of practice that is taking place in the school.
- To support staff through Inset, planning and delivery of mathematics.
- To attend relevant training and meetings.
- To monitor and manage the use of resources and be responsible for the expenditure of the maths budget.
- To monitor planning and practice.
- To monitor pupils' progress through the analysis of whole school data.
- To audit and action plan areas of need.
- Keep up to date on current developments in maths education and disseminate information to colleagues.

Parental involvement/home links

At Butts Primary, we recognise that parents and carers have a valuable role to play in supporting their child's mathematical learning.

- An overview of the maths curriculum and our adopted calculation policy are readily available on the website. are readily available on the website.
- Activities which link to each maths topic are suggested for parents and carers to try at home with their child.
- Pupils are given maths homework at least once a week. In addition to this, they are encouraged to access Busy Things and TTRS at home to practise and consolidate the learning they have done in school.
- Parents are informed of their child's progress at Parents Evenings/Target Days and this is also communicated in written school reports. Information about their child's standards, achievements and future targets in maths is shared during these meetings, as well as ways that parents/carers may be able to assist their child's learning.
- The year group expectations are shared with parents so they are able to support them at home.
- Year 6 parents are invited to attend an information end of Key Stage 2 SATs meeting during Spring Term whereby the school share all relevant information as well as support parents/carers with any concerns or questions that they may have.