Sir Alexander Fleming Primary School and Nursery
Mathematics Policy

Reviewed September 2019
Next Review September 2020

At Sir Alexander Fleming Primary School and Nursery, we follow the guidance of the new National Curriculum in England in designing a programme of study which supports and stretches all children to achieve their best. Our aim is to ensure that all pupils:
•become **fluent** in the fundamentals of mathematics, through varied and frequent practice with increasingly complex problems over time. Pupils will develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
•**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." (Mathematics programmes of study: key stages 1 and 2, National Curriculum in England, September 2013).

A high-quality mathematics education therefore provides a foundation for understanding the world, the ability to reason mathematically, and a sense of enjoyment and curiosity about the subject. New Curriculum 2014

PURPOSES
The aims of mathematics are closely related to the general aims of Primary Education. Children will acquire skills of both language and number and will experience a variety of methods of learning. They will learn to think logically, discover, explore and in doing so, will begin to make sense of the world in which they live. To ensure this, they will acquire a range of mathematical experience, relevant mathematical language and skills to be able to solve mathematical problems with confidence. We strive to develop strategies which allow inclusion by all in Maths lessons. We aim to ensure that each child, no matter the ability or difficulties, will develop:
•a positive attitude to mathematics as an interesting and attractive subject.
•an ability to think clearly and logically in mathematics with confidence, independence of thought and flexibility of mind.
•an awareness of the uses of mathematics in the world beyond the classroom
•an understanding that mathematics will frequently help them to solve problems they meet in everyday life
•an appreciation of the nature of numbers and of space, and therefore an awareness of the basic structure of mathematics
•self-motivation and aspiration to persevere and succeed
•a perception that Maths is fun and enjoyable

These aims will be met by increasing confidence in mathematics through a process of enquiry and experiment. The aims will be evident in the children's ability to express ideas fluently, to talk about the subject with assurance and to use the language of mathematics confidently and in the appropriate context.

Aims

1. Staff to share a common understanding and vision of the mathematics curriculum and how best to teach it.
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6. The curriculum offer is based on identified learning objectives, and is planned thoroughly, to ensure high expectations, consistent approaches and good progression throughout the school for all pupils. Success criteria; I understand, I know and I can are used to ensure that pupils know the steps in learning and are taught how to achieve them.
7. The foundations of mental calculation, including number sense and the recall of number facts will be established thoroughly before compact notation is introduced.
(See Calculation Policy and Number Sense Document)
8. All pupils will be working at mastery, becoming competent to work at depth. Mastery is an approach where all children can achieve a high standard. Mastery involves knowing 'why' as well as knowing 'that' and knowing 'how'. Mastery is where challenge is provided by going deeper rather than accelerating into new mathematical content. Mastery is an approach where all children can achieve a high standard.
9. The more able will work at depth.

CROSS-CURRICULAR MATHEMATICS OPPORTUNITIES

Teachers will seek to take advantage of opportunities to make cross-curricular links. We want all children to be able to see mathematics as an interconnected subject and be able to make connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems. We want our children to apply their mathematical knowledge to science and other subjects. The learning objectives within books show where the cross-curricular links and references are.

THE USE OF ICT

We recognise the important role ICT has to play in our school in the development of Mathematic skills. ICT is used to enhance the teaching of mathematics and to give all children the opportunity to experience, remove barriers, act as a drip feed to their understanding in difficult areas and provide instant feedback.
ICT also makes it easier to handle real data in cross-curricular projects. For example children in the second world war looking at rationing – weights, measures and quantities in wartime recipes.

ASSESSMENT AND TARGET SETTING

The expectation in the National Curriculum is that the majority of children will move through the programmes of study at broadly the same pace. However, decisions about when to progress should always be based on the security of children's understanding and their readiness to progress to the next stage.
Children who grasp concepts rapidly should be challenged through being offered rich and sophisticated problems before any acceleration through new content. Those who are not sufficiently fluent with earlier material should consolidate their understanding, including, through additional practice, before moving on.Work will be assessed in line with the Assessment Policy and recorded on the School Pupil Progress Tracking systems. All pupils will have Mathematics Targets and will know their 'next steps' to ensure progression.

INCLUSION

We aim to provide for all children so that they achieve as highly as they can in Mathematics according to their individual abilities. We will identify which pupils or groups of pupils are under-achieving and take steps to improve their attainment. More able children will be identified and suitable learning challenges provided.

ROLE OF SUBJECT LEADER

The Subject Leader is responsible for improving the standards of teaching and learning in Mathematics through:

• monitoring and evaluating Mathematics:
1. pupil progress
2. provision of Mathematics
3. lesson observations
4. the quality of the Learning Environment,

•taking the lead in policy development
• auditing and supporting colleagues in their CPD,
• purchasing and organising resources,
• keeping up to date with recent Mathematics developments.

PARENTAL INVOLVEMENT

We aim to involve parents in the development of children's skills, knowledge and understanding in Mathematics. Parents are involved in the home school partnership with homework. There are opportunities each term when parents can discuss their children's progress with their teacher. Half termly class letters provide information about the Mathematics curriculum and how parents can support their children. Parents are welcomed into school as part of the Maths morning.