



All Saints CE (VC) First School, Busy Bees Nursery & Kingfisher Club

Policy on Maths

Date adopted: May 2017

By: Full GB

To be reviewed: May 2018

Introduction:

This policy statement outlines the purpose, nature and management of mathematics taught and learnt in All Saints CE(VC) First School. The implementation of this policy is the responsibility of all teaching staff and should be overseen and monitored by the maths leader and Headteacher.

At All Saints we believe that mathematics is a tool for everyday life. It is a whole network of concepts and relationships which provide a way of viewing and making sense of the world. It is used to analyse and communicate information and ideas and to tackle a range of practical tasks and real life problems.

National Curriculum, 2014:

“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.”

Aims:

Our aim is that all children should reach their full potential as mathematicians. In order to achieve this, our aims as teachers are

- ↳ to encourage an enthusiastic and inquisitive attitude to mathematics
- ↳ to foster high standards of achievement in mathematics
- ↳ to enable children to acquire and develop mathematical language, skills, knowledge and understanding within their individual capabilities
- ↳ to present mathematics as an enjoyable and interesting activity, involving enquiry and experimentation
- ↳ to develop clear logical thinkers, who become secure in Numeracy, through an understanding of the nature of number, space, relationships and patterns
- ↳ to equip children with strategies to enable them to apply mathematics to real and unfamiliar situations within and beyond the classroom
- ↳ to develop an appreciation of the intrinsic value and fascination of mathematics as well as its usefulness in life

Thus children will be able to

- ↳ develop a positive and confident attitude to mathematics
- ↳ make an active contribution to their own learning, by developing the skills of independence and enquiry
- ↳ become confident and competent working with mathematics
- ↳ develop an understanding of the ways in which information is gathered and presented
- ↳ become thinkers and problem solvers
- ↳ develop a clear understanding of the language of mathematics
- ↳ develop logical thinking, enabling them to record work clearly and in a variety of ways
- ↳ develop the skills, knowledge and understanding needed in daily life

Mathematics Curriculum, 2014:

“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.”

Teaching and Learning

Through careful planning and preparation, we aim to ensure that throughout the school children are given opportunities for:

- practical activities and mathematical games
- problem solving
- individual, group and whole class discussions and activities
- open and closed tasks
- using a range of methods of calculating eg. mental, pencil and paper and using a calculator if appropriate
- working with computers as a mathematical tool

Our staff have high expectations of all children, irrespective of ability, and encourage them to be successful and achieve their full potential. Where TAs are available, they are used to support individuals or groups, either within the class or withdrawing them for intervention strategies.

Cross- Curricular Applications

Throughout the whole curriculum opportunities exist to extend and promote mathematics. Teachers seek to take advantage of all these opportunities which have been planned in the All Saints mastery curriculum.

Teacher's Planning and Organisation

The approach to the teaching of mathematics within the school is based on:

- a maths lesson every day in all Key Stages
- cross curricular lessons which link to the topic being taught in the foundation subjects

There will be a clear focus on direct, instructional teaching and interactive oral work with both the whole class and smaller ability groups. Each class teacher organises a daily lesson for mathematics of an age appropriate length.

Lessons are planned using the objectives from the new National Curriculum 2014. This planning enables teachers to plan for mixed abilities with clarity.

Teachers of the Reception children, base their teaching on the objectives in the Revised Statutory Framework for the Early Years Foundation Stage 2012, ensuring that they are working towards the 'Early Learning Goals for Mathematical Development'.

Differentiation

This should be incorporated into all mathematics lessons and homework and can be done in various ways:

- Grouping according to ability so that the groups can be given different tasks when appropriate.
- Activities are based on the same learning objective where appropriate and usually at no more than three levels.
- Common Tasks which are open ended activities/investigations where differentiation is by outcome
- Resourcing, which provides a variety of resources depending on abilities e.g. counters, cubes, 100 squares, number lines, mirrors, set squares and protractors etc
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Special Educational Needs

Children with SEN are taught within the daily mathematics lesson whenever possible (please see the section on differentiation). Additional support staff support groups or individual children and they may withdraw small groups to use intervention materials when this is appropriate.

Within the daily mathematics lesson teachers not only provide activities to support children who find mathematics difficult, but also activities that provide appropriate challenges for children who are high achievers in mathematics.

Equal Opportunities

This policy is in accordance with The Equality Act 2010, which replaced all previous legislation in relation to equal opportunities. In line with that legislation, it seeks to ensure that this school provides equal opportunity for all children and adults, giving due regard to groups with 'protected characteristics', in terms of gender, race, disability, sexual orientation, religion/belief, age, gender reassignment, pregnancy/maternity and marriage/civil partnership, in accordance with the Act.

Pupils' Records of Their Work

It is important for the children to record written calculations and to record aspects of mathematical investigations. Children are taught a variety of methods for recording their work and they are encouraged and helped to use the most appropriate and convenient method of recording. Children will be encouraged to present their mathematics logically and clearly.

Marking

The marking of mathematics follows the school's marking policy (please refer to Marking & Feedback Policy on the school website).

Marking should be both diagnostic and summative and school policy believes that it is best done through conversation with the child but acknowledges that constraints of time do not always allow this and therefore a marking dialogue should be encouraged, particularly with Key Stage 2 children. When appropriate the children themselves can mark exercises which involve routine practice with support and guidance from the teacher.

Assessment and Record Keeping

Formative assessment is an integral part of teaching and learning; it contributes to learning through providing feedback. Children receive formative assessment through verbal feedback and marking. It will indicate to the child what was good about a piece of work and also indicate how the work could be improved. Effective formative feedback will affect what the student and the teacher does next.

Summative assessment of learning takes place after the learning and tells us where pupils have been at given points in time and what has been achieved. It is used mainly to measure performance rather than support learning.

Teachers assess all pupils termly against their specific year group expectations, as outlined in the new National Curriculum, using the LEP assessment system. Progress is tracked and children are aware of their next steps. Standardised tests (PUMA) are also completed termly in order to track attainment. Question level analysis of the tests is completed by teachers in order to inform future planning.

Reporting to Parents

Parents are given the opportunity to discuss their child's progress at parent consultations once a term and Annual Reports are completed before the end of the summer term.

Teachers use the information gathered from their assessments to help them comment on individual progress.

Monitoring and Evaluation

Monitoring and evaluation will be carried out by the

- Headteacher
- Mathematics subject leader
- Class teachers
- Teaching Assistants (working alongside the class teachers and SENDCo)
- Governors
- Member of the school's SIP/Advisory team on request

The mathematics leader and Headteacher monitor and evaluate the quality and standards of teaching of mathematics throughout the school with other members of the Leadership Team and supports teachers in their own classrooms where appropriate. The planning is monitored, teachers observed and the books scrutinised termly. The mathematics leader analyses the progress data of pupils in conjunction with the Headteacher to ensure good progress throughout the school.

Practical Resources

Resources which are not used or required regularly are stored centrally and accessed by teachers at the beginning of a topic. Areas/displays within the classroom are then dedicated to the mathematics resources and are easily accessible to all children, allowing them to become familiar with the relevant equipment.

Home Learning

Home learning will take the form of a weekly task, which links to the learning that the children have completed that week in their lessons. There is an ongoing expectation that they will learn their number bonds and times tables. In some year groups there may be a weekly test. The school is a member of an interactive maths website, which the children can use at home to consolidate their learning, but this is not a formal expectation. Children receiving certificates are celebrated in the weekly Celebration assembly.

Role of the Mathematics Leader

To take the lead in policy development

To support colleagues.

To monitor progress in Mathematics - eg leading staff CPD, scrutiny of work, analysis of formal assessment data.

To take responsibility for the choice, purchase and organisation of central resources for Mathematics, in consultation with colleagues.

To liaise with other members of staff to form a coherent and progressive scheme of work which ensures both experience of, and capability in, Mathematics.

To be familiar with current thinking concerning the teaching of Mathematics, and to disseminate information to colleagues.

The leader will be responsible to the Headteacher and will liaise with the Governors.

Monitoring, Evaluation and Review:

This policy reflects the consensus of opinion of the whole teaching staff. It has been reviewed by staff and governors and its implementation is the responsibility of the whole teaching team.

We plan to monitor this policy through

- regular review of children's work
- completion, implementation and monitoring of the National Curriculum
- evaluation of EYFS scores, KS1 SAT results, teacher assessments and other standardised assessments
- monitoring by the Headteacher and / or subject lead to observe the quality of teaching
- regular review of resources
- review of published schemes of materials and other resources to ensure they meet the aims of the policy
- planned regular visits to the school by the governor responsible for monitoring mathematics

This policy should be implemented alongside the following policies:

- Mental Calculations
- Equal Opportunities
- Marking & Feedback