Mathematics Policy

At All Saints' We are 'Children of God'.
We wear our crowns with pride.
Together, we are Included, Involved and Inspired

[24] Do you not know that in a race all the runners run, but only one gets the prize? Run in such a way as to get the prize. [25] Everyone who competes in the games goes into strict training. They do it to get a crown that will not last; but we do it to get a crown that will last forever. [26] So I run with purpose in every step.1 Corinthians 9 v 24-26

Vision Statement

At All Saints' CE Primary School, it is our intent to nurture and develop the whole child, delivering a high-quality education where Christian values are central to the ethos of the school and its teaching.

We are all INCLUDED INDIVIDUALS but here at All Saints' we belong- we have an identity. We worship God together, we are family, we celebrate our Inclusivity and are respectful of our differences.

We are INVOLVED and INDEPENDENT in our learning, we have a purpose. We aim to be the best that we can be. We always work hard, try our best, ask questions and wonder.

We are INSPIRED and IMAGINATIVE. We want to be life-long learners and successful in all that we do. We have great ideas and imagine a better future that we know we can work towards. We are inspired and want to inspire others too to make a difference in this world.

MATHEMATICS POLICY

Jesus said that he had come to bring "Life in all its fullness".

At All Saints' CE School the staff and Governors understand that this fullness includes our belief in the uniqueness and high value of every child, and our teaching is devoted to helping all children to learn to the best of their ability and develop towards their fullest potential.

This policy has been written to support these aims through the teaching of mathematics.

1. INTENT

This policy provides a clear background which will support all the mathematics work in the school. It reflects the needs of children in this school, both as they are expressed in the aims of the school and also in the requirements of the National Curriculum for mathematics.

It is intended that this policy will:-

- provide a corporate statement of purpose
- ensure that each pupil's entitlement to mathematical experiences is realised
- provide a clear basis from which to plan programmes of work

It seeks to provide a framework which will maximise the strengths of individual teachers and ensure that pupils receive a high-quality mathematical education.

At All Saints' CE School we intend that all pupils:

- experience an **inspiring, exciting and enjoyable curriculum**, in which they can **achieve success** and **develop a growth mindset** and **increased risk-taking**.
- 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
- **reason mathematically** by following a line of enquiry, conjecturing relationships and generalisations and developing and 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

To achieve this, pupils should be able to:-

- develop appropriate language and be able to communicate effectively about mathematics
- have a well-developed sense of the size of number and where it fits into the number system.
- use numbers in counting, describing, estimating and approximating
- recognise common, simple mathematical relationships, both numerical and spatial
- apply four basic operations of number in practical activities
- perform simple calculations using four basic operations of number, involving rapid recall of number bonds and multiplication tables
- use and interpret various forms of pictorial representation and make connections
- check whether the result of a calculation is reasonable and to be able to explain their method and reasoning

- record mathemtics clearly, neatly and systematically undertake, and work through, problem solving and investigation activities, including non-routine/ 'real life' problems
- explain and make predictions from the numbers in graphs, diagrams, charts and tables
- develop spatial awareness and an understanding of the properties of 2D and 3D shapes
- appreciate and be able to use measures in common use - length, weight, volume and capacity, shape, time and money

2. IMPLEMENTATION

At All Saints' CE Primary School, we use White Rose as the backbone for our mathematics lessons. This approach begins in EYFS and runs through to Year 6, thus ensuring consistency throughout the school and enabling pupils to develop an understanding of basic concepts thoroughly. Mathematics skills are built on throughout the year so that pupils gain a cumulative knowledge; longer time may be spent on topics so that pupils become fluent in them.

Teachers should adapt and supplement the White Rose sessions with carefully selected tasks and resources which they feel compliment, enhance and extend pupils' learning. These resources may come from a range of sources, including but not limited to: Mathematics Mastery (our previously followed program), Master the Curriculum, Third Space Learning, Target Your Maths and Nrich.

Our classroom principles are the evidence-based foundations upon which our entire teaching approach is built:
SUCCESS FOR ALL
Every child can enjoy and succeed in mathematics as long as they are given the appropriate learning opportunities.

Throughout the school we aim to develop mathematical skills through using;

Conceptual Understanding:
Children use concrete manipulatives (objects) and pictorial representations (pictures), before moving to abstract symbols (numbers and signs).

Language development:
The way that children speak and write about mathematics has been shown to have an impact on their success. Lessons should highlight key vocabulary, modelled stem sentences and include opportunities for children to explain or justify their mathematical reasoning.

Mathematical Thinking and Problem solving:
Mathematical problem solving is at the heart of our approach – it is both how children learn mathematics, and the reason why they learn mathematics. By accumulating knowledge of mathematics concepts, children can develop and test their problem solving in lessons. Through problem-solving, pupils of all standards are required to select, understand and apply the relevant mathematics principle. They represent concepts using 'bar models', objects and pictures, and by making connections between different representations. This gives them the confidence, resilience and ability to tackle any problem rather than repeating routines without grasping the principles.

Multiple Representations:
Using objects, pictures, numbers and symbols to represent mathematical ideas and make connections in different ways.

Pupils will engage in:-

- the development of mental strategies
- written methods
- practical work
- mathematical discussions
- problem solving and reasoning tasks
- investigational work
- maths meetings
- maths games
- consolidation of basic skills and number facts

Pupils will develop and extend their mathematical skills through quality first teaching, group work, paired work, individual 1:1 support, pre and post-teaching and various interventions.

CURRICULUM TIME

Whilst there will be fluctuations in weekly time allocated to mathes, an average of around 15 - 20% of teaching time is spent on this subject each week.

CONTENT ORGANISATION AND PLANNING

All Saints' will follow the requirements of the National Curriculum in KS1 and KS2 and those of the in Early Years Foundation Stage framework.

EQUAL OPPORTUNITIES

Equality of opportunity is a fundamental right that must be allowed to all children regardless of race, culture, gender or special educational needs.

Gender

It is very important that teachers adopt very positive attitudes to counteract any prejudice. In group work teachers will need to be alert and ensure that both genders are allowed to participate fully.

Race

Teachers and pupils should be aware that different cultures have contributed to the development and application of mathematics and the subject transcends cultural boundaries. Every effort is to be made to ensure that there is no racial bias during lesson time.

Special Educational Needs

Children with learning difficulties should be expected to succeed and be provided with appropriate opportunities to succeed. Able children should be given appropriate challenges so that they can fulfil their potential. Open-ended activities can often be successful in challenging able children. Successful teaching and learning will depend on the effectiveness of the differentiation as well as the extent to which:-

- the learning process is broken down into manageable steps

- assessment procedures are used to identify learning difficulties
- children are aware of their own successes and progress
- children are given opportunities to become independent learners
- children are able to improve their self-esteem

Class teachers will consult the SEND co-ordinator whenever they are concerned about a child's progress. Where necessary they may be placed on the SEND register.

DIFFERENTIATION

This is a key issue. In the majority of lessons there will be levels of challenge (bronze, silver, gold and digging for diamonds) children will chose their level of challenge and be encouraged to have a growth mindset; staff will monitor or direct choices as appropriate and ensure that children are accessing an appropriate level of challenge. No one teaching strategy will be sufficient in itself, but teachers will use a variety of approaches as appropriate:-

- decreasing of scaffolding
- being offered support through increased scaffolding e.g. pictorial representations
- should they need them, children can select a variety of manipulatives and resources to support independent learning
- children can be given differing levels of support by the teacher, teaching assistant and other children
- children can be given open-ended tasks which will allow for a range of different outcomes

The expectation is that the majority of pupils 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 pupils' understanding and their readiness to progress to the next stage.

Pupils 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.

CONTRIBUTION TO SPIRITUAL, MORAL, SOCIAL AND CULTURAL NEEDS

Mathematics is a skill that is necessary for adult life. Increasingly, basic numeracy and confidence with handling data are key requirements for many jobs. In addition, mathematical skills are necessary to evaluate the value of discounted goods, interest rates and other financial activities. Reports in the media often include tables of statistics or ratios and percentages. To make wise decisions both now and in the future, children need to be equipped with a full range of mathematical evaluative skills.

There are also opportunities to celebrate the achievements of many cultures including, Arabic, Indian and Chinese contributions to the development of aspects of mathematics that can be accessed by all children. Displays and special occasions provide the chance for children to begin to discover that mathematics is a truly universal language. We also hope to enrich children's lives by helping them to develop an appreciation of the beauty and creative aspects of mathematics.

CONTINUITY

Continuity will be achieved through the planning process used in the development of the medium term plans. Discussions between teachers will ensure that continuity is achieved between years

and between Key Stages. The calculation policy will ensure that there is continuity within our school.

RESOURCES

The responsibility for maintaining an adequate supply of resources rests with the mathematics subject leader. Every pupil will be encouraged to use and have access to a large variety of manipulatives within their own classroom, however some resources will be stored centrally within each Key Stage. The effective management of these resources (whilst ultimately the responsibility of the mathematics subject leader) is also the responsibility of each classroom teacher who uses them. Children should know where the apparatus is kept, how to access them independently, how to use it correctly and how to put it away.

FINANCE

There is an annual budget for mathematics which is set at the beginning of each financial year. It is the responsibility of the mathematics subject leader to oversee this, maintain adequate resources and where possible update equipment.

3. IMPACT

ASSESSMENT

Assessment is important in that it provides information about children's achievements, which can then be used to inform the planning of future work. The school's approach to assessment can be summarised as follows:-

- an assessment schedule which informs staff which tests will be taken at which point in the school term formal assessment will take place
- assessment must be planned and relate to the objectives chosen in lessons or units
- assessment will be a regular feature of classroom practice; teachers will adapt their lessons in the light of ongoing assessment of the children's learning
- planning of future work will be dependent upon assessment of progress
- assessment will be done both inside and outside the classroom using simple recording systems
- a variety of approaches will be used as and when appropriate; these may include the use of red and green dot tasks, end of half tests and the use of PUMA assessment tests
- professional judgement will be supported by moderation of work and agreement trialling in school
- teachers will have opportunities to share and standardise their judgements with local schools and exemplars
- previous Year 2 SATS and Year 6 SATS are used to inform teacher assessment
- termly pupil progress meetings will take place between the Head Teacher and each class teacher to help identify pupils who may need additional support and inform planning and interventions
- foundation children are assessed against the Early Learning Goals
- verbal feedback, next steps marking, self-assessment and peer assessment will be used as appropriate
- Target Tracker is used to monitor progress and attainment on at least a termly basis
- marking of pupils' work will be in line with the school's Assessment Policy

MATHEMATICS POLICY

MONITORING AND REVIEW

The teaching and learning of mathematics at All Saints' CE Primary School is overseen by the mathematics subject leader and Headteacher. These include responsibility for developing the curriculum, supporting other staff, and prioritising the purchase of resources from the available budget. The mathematics subject leader will attend regular MAT network meetings and liaise with the MAT Head of School Improvement to ensure that as school we are continuous adapting and improving our mathematics curriculum and practise. In addition to this, the mathematics subject leader and other members of staff will attend courses run locally as needed, for continuing professional development. Senior management meetings and staff meetings will take place to discuss the on-going development of mathematics and our commitment to refining and improving the quality of our mathematics teaching and the standards achieved by the children. These formal settings are in addition to informal support, advice and feedback opportunities throughout the school year.

The school will regularly review and update the policy and evaluate mathematical practice in mathematics teaching and learning, and to improve it in order to prepare children for end of key stage tests, for progression to secondary education, and for the use of mathematics throughout their adult life.

REPORTING TO PARENTS

In the autumn and spring term parents' consultations will be held, during which parents and carers will be informed of their child's mathematical attitude and progress respectfully, including key areas to be worked on in the future. In the spring term, parents will receive a mini-report indicating their child's mathematical level at that point in time. In the summer term, parents will receive a more detailed report outlining their child's achievement across the curriculum, including written comments for mathematics as well as Target Tracker assessment level.

Version Control

Date	Change
February 2001	**Policy written in consultation with Headteacher, staff and Governors.**
September 2003	**Policy reviewed and amendments made, to reflect current practices.**
October 2007	**Policy reviewed, minor amendments made.**
March 2010	**Policy reviewed, minor amendments made**
September 2014	**Policy reviewed, amendments made to reflect New Curriculum and approaches i.e. Maths Mastery**
November 2017	**Policy reviewed in consultation with Mathematics Mastery School Lead. New National Curriculum aims inserted, Monitoring and Review section added, Differentiation section altered, SMSC section inserted and other minor alterations.**
November 2020	**Policy reviewed and amendments made, to reflect current practices.**
September 2022	**Policy reviewed and amendments made, to reflect current practices.**