Mathematics Policy 2022-24

Updated: Spring 2022

Review: Autumn 2024

woodstock
CE PRIMARY SCHOOL

Nurture ~ Believe ~ Discover ~ Achieve

OUR CHRISTIAN VISION

Our vision for Woodstock CE Primary School reflects a passionate commitment to learning and recognition of the uniqueness of individual learners. Guided by our Christian values, it is driven by our desire to offer the best possible education for our pupils in partnership with parents, the Church and the local community.

Woodstock CE Primary School will be a centre for learning where adults and children:

- ✓ ***Nurture*** and prioritise wellbeing and development.
- ✓ ***Believe*** in themselves and in each other.
- ✓ ***Discover*** their own strengths and become successful lifelong learners.
- ✓ ***Achieve*** more than they ever thought possible.

OUR CHRISTIAN ETHOS

Recognising our historic foundation, we will preserve and develop our religious character in accordance with the principles of the Church of England and in partnership with the Churches at parish and diocesan level.

Woodstock CE Primary School strives to be an inclusive community where children grow, learn and achieve together. Within a nurturing, supportive and safe environment, mental health and wellbeing is at the heart of everything we do and recognised as the responsibility of all. Children's natural curiosity is fostered through a creative curriculum that excites and challenges, and enables them to be successful learners. Supported by a culture of equality and aspiration we aim to remove disadvantage so that every child can thrive.

We are committed to providing an education of the highest quality within the context of Christian belief and practice. We encourage an understanding of the meaning and significance of faith, and promote Christian values through the experience we offer to all our pupils.

"For I know the plans I have for you", declares the Lord, "***plans to prosper you and not to harm you, plans to give you hope and a future.***" Jeremiah 29, v11

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Introduction

Mathematics is not a subject in its own right. It is a skill which is acquired through being taught mathematics effectively. Mathematics helps children to make sense of the world around them through developing their ability to calculate, to reason and to solve problems. It enables children to understand and appreciate relationships and pattern in both number and space in their everyday lives. Through their growing knowledge and understanding, children learn to appreciate the contribution made by many cultures to the development and application of mathematics.

Rationale

- To establish an entitlement for all pupils
- To provide a clear and agreed framework for the teaching of Mathematics in our school
- To promote continuity and coherence across the school

Purpose

- To provide a framework to enable teachers to meet their statutory obligations with regards to the teaching of mathematics.
- To provide a consistent approach throughout the school to mathematics.
- To foster effective learning by suggesting appropriate ways of organising mathematics experiences in the classroom.
- To provide procedures for planning and record keeping ensuring continuity and progression throughout the school
- To meet the National Curriculum requirements

Aims

At Woodstock CE Primary School we aim to:

- Develop a positive attitude to maths as an interesting and attractive subject in which all children gain some success and pleasure.
- Develop mathematical understanding through systematic direct teaching of appropriate learning objectives.
- Encourage the effective use of maths as a tool in a wide range of activities within school and, subsequently, adult life.
- Develop children's ability to express themselves fluently, to talk about the subject with assurance, using correct mathematical language and vocabulary.
- Develop an appreciation of relationships within maths.
- Develop ability to think clearly and logically with independence of thought and flexibility of mind.
- Develop an appreciation of creative aspects of maths and awareness of its aesthetic appeal.
- Develop mathematical skills and knowledge and quick recall of basic facts in line with recommendations.

TEACHING AND LEARNING IN MATHEMATICS

Curriculum Time

To provide adequate time for developing numeracy skills each class teacher will provide at least five daily mathematics lessons per week. This may vary in length but will usually last for about 45 to 60 minutes.

Additional mathematics may be taught within other subject lessons when appropriate.

Teachers of the Reception children base their teaching on objectives in the Framework for Reception; this ensures that they are working towards the 'Early Learning Goals for Mathematical Development'. Towards the end of Reception teachers aim to draw the elements of a daily mathematics lesson together so that by the time children move into Year 1 they are familiar with the 45 minute lesson.

Teaching and Learning Style

The school uses a variety of teaching styles to cater for the variety of learning styles of pupils in mathematics lessons. Our principle aim is to develop children's knowledge, skills and understanding in mathematics. We do this through a daily lesson which includes whole-class and group direct teaching. During these lessons we encourage children to ask as well as answer mathematical questions. They have the opportunity to use a wide range of resources such as number lines, number squares, digit cards and small apparatus to support their work. Mathematical dictionaries are available in classrooms. Children use ICT in mathematics lessons where it will enhance their learning, as in modelling ideas and methods.

In all classes there are children of differing mathematical ability. We recognise this fact and provide suitable learning opportunities for all children by matching the challenge of the task to the ability of the child. We achieve this through a range of strategies – in some lessons through differentiated group work and in other lessons by organising the children to work in pairs on open-ended problems or games.

Mental and Written Calculations

An ability to calculate mentally lies at the heart of numeracy; therefore, it is important to emphasise mental methods from the early years. Written methods are also important at this stage; however, starting from the mental calculations will enhance imagery and the mathematical thought process. Both mental calculations and written calculations are taught in accordance with the policies.

Mathematics Curriculum Planning

Mathematics is a core subject in the National Curriculum, and we use the Primary Framework as the basis for implementing the statutory requirements of the programme of study for Mathematics.
We carry out the curriculum planning in Mathematics in three phases (long-term, medium-term and short-term). The Primary Strategy Framework gives a detailed outline of what we teach in the long term, while our three termly teaching programmes identify the key objectives in Mathematics that we teach in each year.

Our medium-term Mathematics plans, are adopted from the Framework and give details of the main teaching objectives for each term, define what we teach. They ensure an appropriate balance and distribution of work across each term. These plans are reviewed by the subject leader.
It is the class teacher who completes the weekly plans for the teaching of Mathematics.

These weekly plans list the specific learning objectives for each lesson and give details of how the lessons are to be taught. The class teacher keeps these individual plans, and the class teacher and subject leader often discuss them on an informal basis.
Every class teacher will spend dedicated time with his/her TA to discuss the weekly plans in advance of the lessons.

Assessment and Recording

At Woodstock CE Primary School we recognise that AfL lies at the heart of promoting learning and in raising standards of attainment. We further recognise that effective AfL depends crucially on actually using the information gained.

The assessment procedures within our school encompass:

- Short-term assessment will be an informal part of every lesson. The teacher will share the objectives for the lesson with the children and make sure they are clear what is being expected of them to successfully achieve the objective. This is a necessary part of assessment for learning and helps the children take ownership for their own learning. The short term assessment will also involve the teacher checking the children's understanding at the end of the session to inform future planning and lessons. At the end of the lesson the children will self and/or peer assess their work to further inform the teachers and their own understanding of what they have understood.
- Using knowledge of pupils drawn from on-going pupil tracking records and key objectives records to guide our planning and teaching.
- Adjusting planning and teaching within units in response to pupils' performance.
- Use of information gained from statutory and optional tests. Analysis is done at both a quantitative and qualitative level. Information gained is used to set focused curricular targets (what to teach) and also to determine which strategies or methods are particularly effective in respect of specific areas of mathematics (the how and why).
- Work in mathematics can generate a great deal of marking and it is recognised that it is not always necessary to mark every piece of work. The children can sometimes mark exercises with support and guidance from the teacher. Where appropriate, children in KS2 are encouraged to check computational exercises with a calculator. This can foster independence in the children, who can seek help if they are unable to locate and correct their errors.

In addition, at the beginning of every block and unit children will receive a differentiated target sheet that outlines the main objectives that will be covered. At the end of the block unit children will reflect on their learning.

The Maths Co-ordinator also sets whole school home mathematics targets each term for each year group. These are shared with the children and their parents and are worked on at home to support their learning at home.

There are three connected levels of assessment. These include:

Long Term	- End of Key Stage SATs and Teacher Assessment
	- Optional SATs
	- EYFS Profile
Records	- Record of Achievement in Mathematics (ROAIM)
	- OPT data
Medium Term	- Assessment of Termly Objectives
Records	- Medium Term planning sheets detailing assessment opportunities
	- IEPs
	- Individual Records for AMA
	- Teachers' assessments for each block against ROAIM
Short Term	- Informal assessments on a daily basis used to support planning
Records	- Written feedback on children's work using close the gap marking
	- Pupils' self-reflection of lesson objectives and units of work
	- Pupils' Record of achievement in Mathematics

Termly Assessment

Children's attainment and progress towards targets is monitored in November, March and June. In November children retake the Optional and End of Year SAT's test they completed the previous June. In March they take a practise test for their current year group, using old papers, and in June they will complete the Optional and End of Year SAT's test for their year group. The results of these tests will be recorded and progress towards the children's

individual targets reported to the Head teacher and the Maths Co-ordinator. Any children whose progress may be a cause for concern will then be discussed and appropriate intervention/support agreed. Targets may also be adjusted if children have made better than expected progress to ensure appropriate challenge for all. In addition, teachers will complete formative assessment throughout the terms using the Record of Achievement in Mathematics document. Each child has one of these booklets which follow them throughout their journey through the school. This is used to identify their strengths and areas for development in each of the MA strands and helps the next teacher when planning for provision for their new class September.

OPT will be used to record and report termly assessments scores, and to inform monitoring conversations between the class teacher and Head teacher at the end of every long term.

Recording of Work

There are occasions when it is not necessary to record mathematics in a permanent form, but there are also occasions when it is both quick and convenient to carry out written calculations. It is also important 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 are encouraged to use mental strategies before resorting to a written algorithm.

Recording work may involve children making rough jottings first followed by recording actual answers for the teacher's attention. All children are encouraged to work tidily and neatly when recording their actual answers but jottings may take any form and are important evidence for the teacher.

Academically More Able Children

More able children will be taught with their own class and stretched through differentiated group work and extra challenges. When working with the whole class, teachers will direct questions towards the more able (at their ability level) to maintain their involvement. The 'Record of Achievement in Mathematics' document is used to ensure that learning for more able learners is rigorous and set at the right level.

In addition, children in Year 6 will receive extra 'booster groups' at the higher level to ensure that they are reaching their potential.

SEND Children

Within the daily mathematics lesson teachers aim to provide activities to support children who find mathematics challenging. Children with SEND are taught within the daily mathematics lesson and are encouraged to take part when and where possible.

Where applicable children's Individual Profile incorporate suitable objectives from the National Curriculum and White Rose Maths and teachers keep these objectives in mind when planning work. When educational support staff are available to support groups or individual children they work collaboratively with the class teacher. The support teacher feeds back to the class teacher when appropriate to inform evaluations, assessment and future planning.

SEND children also have the opportunity throughout the year to take part in appropriate Intervention programmes that support them further, fill in any gaps in their understanding and enable them to reach their full potential.

Resources

The Reception and KS1 classes have the majority of the necessary mathematics equipment located within the classrooms. The KS2 classes have the majority of their resources centrally stored in the Years 5&6 shared area; however, some are located in the individual classes.

Information and Communication Technology

ICT is used in various ways to support teaching and motivate children's learning. ICT involves the computer, calculator, and audio-visual aids. These technologies will however only be used in the daily mathematics lesson when it is the most efficient and effective way of meeting the lesson objective.

Spiritual, Moral, Social and Cultural Development

The teaching of mathematics supports the social development of children through collaborative learning. Children are often grouped so that they can work together and they are given a chance to discuss their ideas and results. The study of famous mathematicians around the world and historical methods of the number system and calculating, contributes to the cultural development of our children. Mathematics contributes to children's spiritual development - children can find shapes and pattern in nature. They can see the order, logic and pattern that numbers offer. Opportunities for moral development are also offered – children are encouraged to discover how logical reasoning can be used to consider the consequences of particular decisions and the value of mathematical truth.

MANAGEMENT OF MATHEMATICS

Role of the Subject Co-ordinator

- Ensure progression in attainment from all year groups
- Monitor planning, teaching and assessment
- Teach demonstration lessons when appropriate
- Ensure teachers are familiar with the framework and help them to plan lessons
- Lead by example in the way they teach in their own classroom
- Prepare, organise and lead INSET, with the support of the Headteacher
- Work co-operatively with the SENCO
- Observe colleagues, when appropriate, with a view to identifying the support they need
- Purchase mathematical equipment that will raise attainment;
- Attend INSET provided by LA mathematics consultants and feedback important information to staff
- Analyse children's test results to measure attainment and improve mathematics within the school
- Inform and support parents
- Conduct an annual review of mathematics and the production of a report for the governors

Role of the Curriculum Committee

- Visit the school regularly to talk with the teachers and when possible, observe some of the daily mathematics lessons
- Report back to the Curriculum Committee on a regular basis
- Attend any relevant inset or training

Role of the Head Teacher

- Lead, manage and monitor the implementation of the framework, including monitoring teaching plans and the quality of teaching in the classrooms.
- Ensure that mathematics retains a high profile in the school's development work
- Deploy support staff to maximise support for the framework.

Monitoring and Evaluation

All teachers are responsible for monitoring standards but the subject co-ordinator, under the direction of the Head Teacher takes the lead in this.

Monitoring activities are planned across the year. In summary these are:

- Monitoring of class teachers' medium term plans for maths by the Maths Co-ordinator and Head Teacher. Individual teacher feedback provided by the Co-ordinator.
- Monitoring of teaching and learning taking the form of lesson observations, learning walks, book trawls and pupil interviews.
- Subject co-ordinator and Head Teacher to monitor results of Record of Achievement in Mathematics documents, Statutory Assessments, and termly OPT assessment data
- SENCO and Maths Co-ordinator to monitor progress of children on the SEND Register and agree support/interventions.
- Preparation of an end-of-year report for the governors by Maths Co-ordinator
- Monitoring evidence to inform the School Raising Achievement Plan (RAP)
- Head teacher to monitor annual reports to parents

Agreement and Review

The staff and Governing Body agreed the Mathematics Policy in Autumn Term 2019. It is important to know that our policy is working effectively and the extent to which it is having a positive impact on raising standards in mathematics. This policy is therefore reviewed every 3 years in-line with the school's policy review programme. The Maths Leaders are responsible for reviewing the policy in liaison with the Head Teacher, and for reporting to the Governor's Curriculum Committee about the quality of its implementation and its impact on standards.

Sally Rees & Sarah Asque
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