

Woodside Academy



Mathematics Policy

***“We want the very best teaching and learning experiences for all our children.”
from School Vision Statement “Excellence Through Opportunity”***

Agreed by the Governing Body 18th June 2020

Introduction

This policy outlines what we are aiming to achieve in pupils' mathematical education. It describes our agreed approach to the planning, delivery and assessment of the mathematics curriculum.

Aims

Mathematics helps children to make sense of the world around them through developing their ability to calculate, reason and 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 through the development and application of mathematics.

At Woodside Academy we aim to ensure that all pupils:

- Develop a positive attitude to Maths as an interesting and attractive subject in which all children gain 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 an ability in the children to express themselves fluently and 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 fluency

Teaching and Learning

The school uses a variety of teaching strategies to cater for the different needs 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 that has a high proportion of 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 to support their work including mathematical vocabulary displayed around all classrooms as well as the use of ICT in mathematics lessons where it will enhance their learning, as in modelling ideas and methods. As of September 2020 all years of the school will be following Schemes of Learning (SOL) from White Rose Maths.

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, for example through differentiated group work, TA support and small group interventions. Key Stage 2 classes are also set into ability groups.

We use teaching assistants to provide appropriate support to groups and individuals during lessons and with targeted interventions. Teaching assistants within Woodside Academy are viewed as an important asset to the school, their knowledge, skill and understanding is regularly updated through discussions with the class teacher and training opportunities, most recently in February 2020.

Mathematics Curriculum Planning

Mathematics is a core subject in the National Curriculum and we use the Department for Education guidance as the basis for implementing the statutory requirements of the programme of study for mathematics through the White Rose Maths SOL.

We carry out the curriculum planning in mathematics in year groups. Our weekly plans list the specific learning objectives and success criteria for each lesson and give details of how the lessons are to be taught as we all differentiation. The principal and mathematics subject leader are responsible for monitoring the mathematics planning within our school.

Assessment

Assessment has two main purposes:

- Assessment of learning (also known as summative assessment)
- Assessment for learning (also known as formative assessment)

Assessment of learning is any assessment that summarises where learners are at any given point in time, it provides a snapshot of what has been learned. AoL is used appropriately in every year group from Nursery to Year 6. Years 1-5 undertake the White Rose Assessments each term and Year 6 use past SATs papers as their assessments. This enables them to prepare to sit the national Key Stage 2 SATs. Assessments of curricular targets are carried out from Years 1-6 every half term and put in to the O Track for analysis.

“Assessment for Learning is the process of seeking and interpreting evidence for use by learners and their teachers to decide what stage they are at in their learning, where they need to get to and how best to get there” – NFER.

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 Woodside Academy encompass:

- Making ongoing assessments and responding appropriately to pupils during day-to-day teaching. These immediate responses may be verbal as well as written. Work is marked daily using a range of teacher marking, peer assessment and self-assessment.
- Using knowledge of pupils drawn from ongoing pupil tracking records and analysis of results from previous half termly and end of year tests
- Adjusting planning and teaching within units in response to pupils' performance
- End of unit assessments and termly assessments are used to assess progress and identify gaps
- Use of information gained from statutory and optional tests, analysis is done at both a quantitative and qualitative level

The Foundation Stage

We give all children many opportunities to develop their understanding of mathematics. We aim to do this through varied activities that allow them to use, enjoy, explore, practise and talk confidently about mathematics. Nursery have a focus for each half term and Reception follow the White Rose Maths SOL.

Maths at Home

MyMaths is used to set weekly homework for pupils from Year1-6, this website also provides support to parents and pupils to enhance their learning of key concepts.

Times tables are encouraged to be learnt at home with the use of the TTRockstars website. Regular competitions in school and weekly certificates for improvements are used to encourage pupils in using this site. Key Stage 1 addition and subtraction skills are being encouraged through the Numbots website as well as weekly certificates being used to encourage pupils.

Maths Across the Curriculum

Teachers will make sure that pupils are aware of the Maths skills they are using in different subjects so pupils can make links. Almost every scientific investigation or experiment is likely to require one or more of the mathematical skills of classifying, counting, measuring, calculating, estimating and recording in tables and graphs. Measurements are often needed in Art and Design and Technology, many patterns and constructions are based on spatial ideas and properties of shapes, including symmetry. In History and Geography children will collect data by counting and measuring and make use of measurements of many kinds, looking at and mapping rainfalls involves using line graphs. The study of maps includes the use of co-ordinates and ideas of angle, direction, position, scale and ratio. For older children historical ideas require understanding of the passage of time, which can be illustrated on a

time line like the number line that they already know. The pattern of the days of week, the calendar and recurring annual festivals all have a mathematical basis.

Outdoor Maths

“Pupils’ participation and achievement can benefit significantly from getting involved with activities outside of the classroom” – Ofsted.

We encourage teachers to use outdoor learning where possible and have days allocated in the school calendar to encourage additional outdoor learning sessions.

Teaching Maths to Children with Additional Needs

At Woodside Academy we aim to provide a broad and balanced education to all pupils. Quality First Teaching is considered an entitlement for all pupils. Effective pupil tracking every term enables identification of pupils who may benefit from early intervention at an appropriate level or re-teaching the objectives to cover gaps. We also recognise, and aim to make provision for, pupils who have a particular ability in Maths by providing groups to stretch pupils with a mathematical flair with a focus on problem solving and investigations.

Resources

There are a range of resources to support the teaching of mathematics across the school. All classrooms have a range of appropriate small apparatus. A range of software is also available to support Maths work and is available to all staff and pupils via the main server. All children have password access to MyMaths for their continued learning at home. Laptops are also available for classes to use to help support pupils learning.

Responses to Children’s Work

We recognise the importance of responding to children’s work, whether orally or in writing, we seek to encourage children by acknowledging their achievements. This could include descriptive praise for use of a viable method even if the end results were incorrect. Children are given opportunities and actively encouraged to explain their work to others and to display their work when it seems appropriate. Children are also encouraged to value and respect the work of others.

Monitoring and Review

Monitoring of the standards of children’s work and of quality of teaching in mathematics is the responsibility of the subject leader. The work of the subject leader also involves supporting colleagues in the teaching of mathematics, being informed about current developments in the subject and providing a strategic lead and direction for the subject in the school.

Carl Radford 2020