



Mathematics Policy

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Mathematics Policy

Introduction

The teaching of mathematics will enable pupils to develop the skills and knowledge required for life, further study or training, enhance communication skills and promote problem solving and logical thinking. We encourage pupils to acquire basic numeracy skills to think and reason mathematically and develop their ability to apply functional problem solving skills.

Pupils who attend The Woodlands Academy have moderate or severe learning difficulties and over a half of pupils have a diagnosis of Autism Spectrum Condition. Therefore many pupils have difficulties in three main areas including communication, social interaction, imagination as well as sensory processing difficulties. Due to these difficulties, our pupils require a personalised approach, which is structured whilst also allowing for exploratory learning. Continuous support and over learning of concepts is required throughout the Mathematics curriculum. Effective communication strategies are paramount to enable pupils to engage in learning.

Aims and Objectives

The teaching of Mathematics at The Woodlands Academy will encompass all aspects of 'real life' situations. Work in Mathematics will promote learning across the curriculum and underpins pupils' achievements and participation in all aspects of their lives. Staff will provide pupils with learning opportunities:

- To develop skills that enable children to use and apply numbers, measures, shape and space, and data handling with competence and confidence in a range of contexts.
- To develop children's practical and mental maths skills using knowledge of number facts and strategies for problem solving.
- To develop the skills and knowledge required for 'real life' situations, and promote problem solving and logical thinking.
- To use appropriate terminology and mathematical language in all areas of the curriculum.
- To experience a broad, balanced and challenging range of activities, appropriate to their attainments, and with due regard to each pupils personal targets.
- To provide continuity and progression in the 4 strands of the curriculum which include:
 - ✓ Number
 - ✓ Measurement

- ✓ Geometry
 - ✓ Statistics
- To have access to a wide range of resources to enrich and broaden their experience.

Organisation planning and content

- Mathematics at The Woodlands Academy is taught as a distinct subject and as an integrated part of the curriculum.
- Teaching will take place in small groups, and each pupil grouped according to ability. Learning objectives will reflect individual needs and will encompass pupils' learning styles.
- Planning will identify clear aims and objectives and evaluate pupil progress which will in turn inform future planning.
- Medium Term Plans that follow the recommendations of The National Curriculum inform all short term planning.
- Content is adapted and tailored according to the needs of individual pupils and class groups.
- The planning will ensure that pupil support assistants have a clear understanding of their role in each lesson, know what learning objectives they are working towards and be involved in assessing pupil progress.
- Mathematics Programmes of Study can be modified to match and challenge pupils' abilities through:
 - ✓ Choosing material from earlier key stages.
 - ✓ Aiming to maintain, reinforce, consolidate and generalise, as well as introduce new knowledge, skills and understanding.
 - ✓ Using the programmes of study as a resource, or to provide a context, in planning learning appropriate to the age and needs of individual pupils.
- Planning will incorporate the use of a variety of teaching strategies and will relate to the key objectives for the teaching of number, time, and money; and will be supported through TEACCH strategies, and the use of ICT.
- Mathematics is supported further through dedicated targets through the pupils Personalised Learning Intention Maps (PLIM) which are shaped by the pupils Education Health Care Plan.
- In addition to 'discrete' lessons, Mathematics is taught through a wide range of activities including Food Technology, shopping, Enterprise and enrichment activities. Pupils in KS4 have an opportunity to gain accreditation via ASDAN units of work and other accreditation including Open Awards.

Resources

- Numicon is used throughout the school, which is a practical, multi-sensory structured teaching tool. It supports the learning style of many of our pupils and enables them to make mathematical connections. The Numicon 'Breaking Barriers Teaching Guide' is available to support teachers plan practical lessons with clear progression.

- ICT is used to engage and motivate pupils. A range of programmes, games and apps are available on laptops, Smartboards and I Pads throughout the school.
- All classes in both semi-formal and formal classes use a pictorial / symbol or written timetable depending on the needs of the pupils. This structure and repetition aids the understanding of the concept of time and order in a meaningful way.
- In the semi-formal classes, maths is taught through a range of themes including the use of a multi-sensory approach including tactile play and musical activities.
- Teachers can access the schools shared mathematics resources which are monitored by the Mathematics Subject Leader.
- Classes have access to Food Technology resources in order to develop skills such as measuring and quantities.
- Classes access the Community regularly allowing for Mathematical skills to be developed such as money and time.
- Use of Communicate in Print and Board Maker programmes to produce symbols.
- Singalong books are available which includes the Mathematical signs.
- It is acknowledged that age appropriate materials are extremely important and teachers should be aware of this when selecting appropriate equipment to meet the children's needs

Assessment and Progress

- Assessment is an ongoing process through observation, discussion, scrutiny of work, and the use of PIVATS 5, MAPP and CLIPPS assessment tools. Pupils in the semi-formal classes are assessed using MAPP and the Levels of Engagement with PIVATS 5 being used for some. Pupils in the formal classes are assessed using PIVATS 5 and CLIPPS.
- Evidence of achievement in mathematics is recorded on daily plans and individual Target, Measure and Evidence files, which are updated termly. The semi-formal classes are piloting the use of Tapestry to evidence learning from September 2017.
- The assessment data is collected twice yearly to be collated as part of the CASPA process. CASPA is used as a tool to monitor pupil's progress against national data.
- Parents discuss pupil progress and achievement during parent evenings, informal meetings, daily home to school books and Annual Review Meetings.
- Pupils can make progress in Mathematics by:
 - ✓ Using a wide variety of multi-sensory activities relating to topics, individual areas of interest and real life situations.
 - ✓ Building on their prior knowledge and attainment in number.
 - ✓ Adapting to different circumstances and contexts with independence and confidence
 - ✓ Acquiring an increasing range of vocabulary, from the names of everyday objects, events and people, to vocabulary used across the curriculum and related to the wider community.

Monitoring and Evaluation

The quality of the teaching and learning of Mathematics will be monitored by the Subject Leader and by the Senior Leadership Team during classroom observations and 'learning walks'. This will assist the Academy in the self-evaluation process identifying areas of strength and areas of development.

In monitoring the Teaching and Learning of Mathematics, the Subject Leader will:

- Implement subject policies, plans and practises, which reflect the Academies commitment to high achievement and effective teaching and learning
- Monitor the progress made by pupils and progress towards achieving subject plans and targets.
- Evaluate the impact of actions taken on teaching and learning, and use this analysis to guide further improvement using a variety of tools including planning sampling, work sampling, teacher discussion, data analysis, pupil interviews, drop-ins, observing learning and rates of progress in lessons.
- Offer support to teachers in planning, teaching and assessment.
- Keep up to date with statutory requirements and relevant initiatives.
- Ensure that there is continuity and progression in the planning and teaching of mathematics throughout the school.
- Set targets for subject development.
- Ensure that the whole school assessment, recording and reporting is followed in relation to mathematics.
- Prepare detail of subject development, including the identification of training needs, to inform the school development plan.
- Manage the annual budget allocation for Mathematics.
- Organise and maintain a catalogue of resources.

Monitoring and Review

The Mathematics policy is subject to regular review in line with the Academy's curriculum monitoring. Changes and adaptations will be carried out as required. The Subject Leader will report on this to the Curriculum Committee annually. The work of the Subject Leader will also be subject to review by the Head teachers as part of the performance management arrangements.

Appendix 1: Key Documentation

This policy should be read in conjunction with the following school policies / guidelines:

Teaching and Learning Policy
Assessment Policy
ICT Policy
Positive Behaviour Policy
Subject Leader Policy

The following documents have informed this guidance:

Special Educational needs and disability code of practice: 0-25 years
<https://www.gov.uk/government/publications/send-code-of-practice-0-to-25>

National Curriculum – Maths Programmes of Study
<https://www.gov.uk/government/publications/national-curriculum-in-england-mathematics-programmes-of-study>