



Ashton West End Primary Academy

Maths Policy

Vision:

In our multicultural and eco- friendly school, we celebrate differences and encourage mutual respect. We support each other and our community to work together and take pride in the things we do. We demonstrate perseverance, inclusion and respect. Everyone is welcome!

Mission Statement:

‘Today I am proud of my school,
tomorrow my school will be proud of me.’

The aim of this policy is to guide teachers and support staff in providing the best possible learning experiences for our children. At Ashton West End Primary Academy we undertake to:

- Raise levels of attainment for all pupils, enabling them to achieve their personal best.
- Develop confident, disciplined and enquiring learners, able to make informed choices.
- Foster a love of learning.
- Foster self-esteem and personal responsibility, linked to respect for the needs and feelings of others.
- Facilitate considerate and positive relationships between all members of the academy community.
- Ensure equal opportunities in relation to gender, race, class, special needs and belief.
- Value and respect all cultures.
- Provide a safe and happy work place.
- Promote a thoughtful attitude towards the immediate and wider environment.

Our mission sets out our commitment to ‘aiming high’. Improvements in the quality of teaching and learning are brought about through a process, which involves:

- reflection by individual professionals
- acting on planning feedback and guidance
- use of assessment data
- the target setting process
- sharing in-house expertise through
 - joint/team planning
 - discussion with colleagues, subject coordinators and SLT
 - Staff training at school
 - Team teaching lessons
 - Peer observation and lesson studies
- implementation of recommendations arising from classroom observation
- CPD courses

This policy will be reviewed regularly to enable us to take account of new initiatives, curriculum changes, technological developments and any changes to our pupil cohort profile.

(Next view date: July 2022)

Aims and Objectives:

At Ashton West End we follow maths in line with the National Curriculum (2014), the aims for maths state:

- To become fluent in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
- To reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language
- To solve problems by applying their mathematics to a variety of routine and nonroutine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

The policy is set within the context of the school's vision, aim and policy on teaching and learning. As a result of their learning mathematics and problem-solving across the curriculum the children will:

- For all children to achieve their full potential in maths and foster a love of mathematics.
- To develop the process, application and consolidation of maths skills, concepts and facts and allow children the opportunity to test strategies, solutions and concepts.
- To praise and boost children's self esteem to experiment and learn from misconceptions.
- To develop the ability to logically think of different ways to find new and confident strategies to answer mathematical problems.
- Pupils to identify relationships and connect ideas: reasoning logically, explaining, conjecturing and proving.
- Pupils to recognise the relevance of maths to everyday problems and situations and identify cross-curricular links.
- To provide children the opportunity to question and enable chances for discussion on mathematical problems.
- To develop fluency strategies to allow the independence to tackle problem-solving and reasoning activities.
- To set the building blocks of Mathematics and to provide a solid foundation to lead onto secondary, further and higher education.

Teaching and Learning:

Maths is a fundamental subject and supports children in all areas of their learning. Every child has the right to be taught mathematics and maths is taught daily, for approximately an hour each day. Maths teaching starts in the Foundation Stage, children are given the opportunity to develop their understanding of number, measurement, pattern and shape and space through a combination of short, formal teaching as well as a range of planned structured play situations, where there is plenty of scope for exploration. Moving through the key stages and years, children have the opportunity to develop and build on their fluency, problem-solving and reasoning skills. Pupils have the opportunity to build competency by being exposed to concrete, pictorial and abstract approaches. All children are exposed to build their skills and knowledge of maths throughout the curriculum, whether this be: place value, addition and subtraction, multiplication and division, statistics, fractions, decimals, percentages, measurement, geometry. Lessons are planned to incorporate all children's progression and abilities and teachers ensure that resources are available to challenge and support all children's learning. Children are praised for challenging themselves and praise is given to support their misconceptions, in order to learn and develop further from this. Moreover, the children are given

many learning opportunities for maths to be incorporated into real life situations, in order for the children to understand the importance of mathematics. Teachers should plan for further support to follow up with interventions for the children - based on the objectives which they need further support with. Homework is also given to support mental strategies, number bonds, times tables and problem-solving activities of practised classroom learning. We recognise that all children learn in different ways towards maths and we achieve this in a variety of ways:

- Planning and setting differentiated tasks, where appropriate, in order for all children to learn.
- Provide a range of fluency opportunities and exposing children to reasoning and problem-solving tasks.
- Supporting children with resources and using the classroom to demonstrate our maths learning journey.
- Using a range of variation in lessons to support all children's learning abilities.
- Supporting children with support staff and using ICT applications (Times Table Rockstars and Mathletics).
- Providing children with different variations of maths.
- Planning for support with other members of staff within the school.

Curriculum Planning:

We recognise that Maths is a core subject in the National Curriculum. The school uses the National Curriculum scheme of work for Maths as the basis for its curriculum planning. Our long-term school overview shows the coverage of the Maths units for each year group. Using the national curriculum, subject leaders have created schemes of work to ensure coverage and to support teachers when creating medium term plans.

The programmes of study for mathematics are set out year-by-year for Key Stages 1 and 2 using the National Curriculum framework (2014). Planning for Maths involves using the National Curriculum (2014) aims of being fluent, to reason and problem solve mathematically. Planning begins from a thorough understanding of children's needs gleaned through effective and rigorous assessment and tracking, combined with high expectations and ambition for all children to achieve. Teachers plan long term, looking at the overview of the objectives being taught over the year. Medium term planning outlines the areas of mathematics that will be taught during the term to ensure coverage of the National Curriculum objectives. Short planning is crucial and should be demonstrated through a clear success criterion for each learning objective. Planning should be created and ensure that clear progression is demonstrated, and input activities are differentiated by considering which parts of the success criteria individual children are ready for.

Class teachers are provided with resources to help plan for opportunities for children's maths skills. Teachers use the objectives from the White Rose Maths scheme, which aids to block and help strategically plan for weekly, half termly and long-term planning. White Rose Maths can be accessed from online and follows the maths objectives from the National Curriculum (2014). White Rose Maths also supports the Department for Education's Ready-to-Progress criteria which is covered in each year group. These objectives are broken down into blocks for teachers to follow. The White Rose Maths scheme allows teachers to plan for fluency and includes problem-solving and reasoning questions to use in the classroom. Nonetheless, resources provided to help teachers can be used flexibly from the White Rose Maths, Nrich, Twinkl, NCETM and Third Space Learning Maths hub. Moreover, using the objectives from White Rose Maths allows teachers to cover the previous year groups objectives to support missed learning from Covid-19.

Nrich supports problem-solving and reasoning questions which can be accessed online to support different age ranges. In addition, NCETM has a 'teaching for mastery' approach to help stretch and challenge children's mental strategies and help master concepts. It also allows teachers to choose what can be accessible for their learners. Furthermore, Third Space Learning helps aid teachers to provide stimulant activities, which work alongside the White Rose Maths scheme.

EYFS:

This policy acknowledges the requirements for promoting the learning and development of children set out in the [Early Years Foundation Stage \(EYFS\) statutory framework](#).

Mathematics is taught in reception classes as an important part of work covered using the EYFS curriculum. Mathematics involves providing children with the fundamental maths skills to follow them through the curriculum. Mathematics in EYFS involves providing children the opportunities to develop and improve their skills in counting, understanding and using numbers, calculating addition and subtraction problems; and to describe shape, space and measures. Children have the opportunity to be engaged in mathematics through playing and exploring, this shows through finding out and exploring, playing with what they know and being willing to 'have a go'. Also, mathematics in EYFS contributes to motivating and actively engaging children through enjoying and achieving what they set out to. Moreover, thinking critically and being creative through making links and having their own ideas. EYFS have had maths mastery training and are committed to embedding this into the curriculum.

Contribution to the other curriculum areas:

Maths

Maths supports learning throughout the whole curriculum and opens to extend and promote maths within the foundation subjects curriculum. Maths contributes to Science, as children appreciate how to *Work Scientifically*, by supporting them with graph, measurement and statistic skills. Within Geography, we teach children how to represent objects with maps; they study space, scale and distance, and learn how to use grid references. In History, we look at timelines and calculate the difference in dates, we sequence events using dates, and we analyse charts and graphs for historical information. Maths lends itself to ICT and it allows children to analyse coding and conduct specific programmes, such as Microsoft Excel.

Inclusion:

At Ashton West End Primary Academy teachers set high expectations for all pupils. Teachers use appropriate assessment to set ambitious targets and plan challenging work for all groups, including:

- More able pupils
- Pupils with low prior attainment
- Pupils from disadvantaged backgrounds
- Pupils with SEN
- Pupils with English as an additional language (EAL)

Teachers plan lessons so that pupils with SEN and/or disabilities can study every National Curriculum subject, wherever possible, and ensure that there are no barriers to every pupil achieving. At Ashton West End Primary Academy, all children are involved in Maths lessons, whatever their ability, experiences and individual needs. This is in line with the school's curriculum policy of providing a

broad and balanced education to all children. Through a range of teaching and learning approaches, we enable all children to access the Maths curriculum. We strive to meet the needs of those pupils with special educational needs, those with disabilities, those with special gifts and talents, and those learning English as an additional language, and we take all reasonable steps to achieve this. For further details see the SEND policy. Where learning takes place outside of the classroom, we will carry out risk assessments to ensure that the activities are safe and appropriate for all pupils.

Legislation and guidance:

This policy reflects the requirements for academies to provide a broad and balanced curriculum as per the [Academies Act 2010](#), and the [National Curriculum programmes of study](#) which we have chosen to follow.

It also reflects requirements for inclusion and equality as set out in the [Special Educational Needs and Disability Code of Practice 2014](#) and [Equality Act 2010](#), and refers to curriculum-related expectations of governing boards set out in the Department for Education's [Governance Handbook](#).

Assessment for learning:

Assessment for maths is as follows:

- Children in the Foundation Stage are assessed in accordance with the EYFS curriculum. Teachers use Target Tracker to assess where the children are depending on the time of the year (Autumn, Spring and Summer). EYFS teachers also assess through observing a child's development through independent maths skills.
- Target Tracker is used in KS1 and KS2. Data is collected every half-term. The objectives are from the National Curriculum and the teachers highlight statements whether a child is: 'Working Towards', 'Expected' or 'Greater Depth'.
- Target Tracker is also used to assess the progress a child has made each half term, which the teacher assesses every half term based on half-term assessments. This is reflected in children's maths book as teachers tick the statements to show if a child has met the objective, working to the objective and working greater than the objective.
- Pupils' work should be marked in line with the Marking Policy and should model how corrections should be made, giving children a chance to learn from their misconceptions or incorrect methods.
- Assessment of pupils' work and progress is ongoing by the class teacher and informs future planning, Teachers mark work in mathematics - in line with the school marking policy.
- On a daily basis, children should self-access against the learning objective and success criteria, giving them a sense of success. Children should know when they are meeting their targets and self-assessing against these too.
- SATS – These take place in Years 2 and 6 and should be studied to inform future planning. The Senior Management Team and Maths subject leader can monitor pupils' progress through this and put interventions in place to support particular aspects of weaknesses or strengths.

Resources:

Teachers have resources available for them to access in their daily practice or providing them with support with their planning and ensuring all children can access mathematics. Resources to help with planning are available online from White Rose Maths, NCTEM, Nrich or Third Space Learning. Other websites such as TES and Twinkl provide teachers with other maths resources. In addition, hands-on resources available in Ashton West End and these are easily accessed in the school.

Teachers are encouraged to use the appropriate resources to aid maths lessons for the particular concept being taught and provide support to all learners.

Every classroom provides a maths display, which is easily accessible to children. Displays include level appropriate resources, particularly concrete and pictorial apparatus to support children to grasp concepts. Mathematical vocabulary is displayed so children can use this in communication of their understanding. Examples of children's maths work should be displayed in classrooms in order to encourage a positive attitude and enthusiasm towards mathematics for all children.

Roles and responsibilities:

The governing board: The governing board will monitor the effectiveness of this policy and hold the headteacher to account for its implementation.

The governing board will also ensure that:

- A robust framework is in place for setting curriculum priorities and aspirational targets
- The school is complying with its funding agreement and teaching a "broad and balanced curriculum" which includes English, maths, and science, and enough teaching time is provided for pupils to cover the requirements of the funding agreement
- Proper provision is made for pupils with different abilities and needs, including children with special educational needs (SEN)
- The school implements the relevant statutory assessment arrangements
- It participates actively in decision-making about the breadth and balance of the curriculum

The Principal: The principal is responsible for ensuring that this policy is adhered to, and that:

- All required elements of the curriculum, and those subjects which the school chooses to offer, have aims and objectives which reflect the aims of the school and indicate how the needs of individual pupils will be met
- The amount of time provided for teaching the required elements of the curriculum is adequate and is reviewed by the governing board
- They manage requests to withdraw children from curriculum subjects, where appropriate
- The school's procedures for assessment meet all legal requirements
- The governing board is fully involved in decision-making processes that relate to the breadth and balance of the curriculum
- The governing board is advised on whole-school targets in order to make informed decisions
- Proper provision is in place for pupils with different abilities and needs, including children with SEN

The subject leader: S Taylor – Mathematics Subject Leader

The role of the mathematics leader are as follows:

- To keep up to date with the developments of maths learning and the maths curriculum.

- To maintain an overview of the delivery of Maths in the school, through book scrutinises, assessment and observations.
- Prepare policy documents and provide maths schemes if appropriate.
- Advise colleagues and help develop expertise, whether this be to support staff or teachers.
- Use the maths budget concisely to provide appropriate resources and equipment.
- To be involved in maths across the borough.
- To contribute to staff development of mathematics in the school.

Monitoring and review:

Monitoring of children's progress begins with performance review meetings but continues with the subject leaders evaluating further evidence to ensure children are making progress. This monitoring happens through examination of work in books, pupil interviews, analysis of assessment results (Target Tracker) and the assessments used, and through other means - depending on what information needs to be studied. Following monitoring activities feedback is given to staff about how they can strengthen their practice and CPD (continuous professional development) opportunities built in where it would be deemed important. These might take the shape of inputs during staff meetings or by a variety of other means. Where specific initiatives have been put in place through action planning for school development, these are monitored by the subject leaders in order to evaluate their impact. Findings are reported to the Principal and Governors through the termly 'Subject Leaders' Report'. The success of interventions is also monitored by the Senior Management Team and this informs future planning of interventions.