



My Thinking and Learning – Mathematics Policy

Vision:

Mathematics is essential to everyday life, it is a tool for pupils to use in order to equip themselves with the basic knowledge essential to understand and change the world.

At Acorns we aim to provide a high-quality mathematical education that gives pupils the foundation for understanding their world and the ability to reason mathematically.

The aims of Mathematics within Acorns School are:

- To promote enjoyment and enthusiasm for learning through practical activity, exploration and discussion.
- To develop logical thinking and reasoning skills through a natural curiosity and investigative approach.
- To promote confidence and competence so that pupils are 'proud' of their achievements.
- To develop a thorough knowledge and understanding of numbers and the number system.
- To develop the ability to solve problems through decision making and reasoning in a range of contexts.
- To develop a practical understanding of the ways in which information is gathered and presented.
- To develop a practical understanding of shape and space and develop measuring skills in a range of contexts.
- To develop knowledge of money and how to use it as well as the knowledge and skills associated with budgeting and saving.
- To encourage the use of current mathematical language.
- To understand the importance of functional mathematics and its application in everyday life.

Early Years Mathematics

In the early years, mathematics follows the EYFS statutory framework.

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/974907/EYFS_framework_-_March_2021.pdf

See for details of EYFS statutory framework.

The pupils are provided with mathematical opportunities through an 'enabling environment' and work towards ELGs at the end of the foundation stage.

Pre-Subject Specific Learners

Pupils with PMLD or complex ASD are Pre subject specific learners (P1-4). Maths forms an integral part of their understand of the world and their sense of self. The pre formal maths curriculum focuses on the prerequisite skills needed to engage with formal mathematics. Bsquared is used to assess progress while Evidence for learning is used along with quality observation to track their progress in relation to their EHCP outcomes. The engagement model is also used to ascertain progress against indicators.

Key Stage 1 & 2 -Semi Formal Curriculum.

Semi formal mathematics is taught under the banner “My thinking and learning” Pupils are introduced to mathematical concepts and ideas and learn largely through exploratory and practical activities linked to a class theme. Individual mathematical targets are linked to a pupils EHCP outcomes and assessed formatively through B Squared and a summative assessment against pre key stage standards.

As of January 2022, mathematics in Acorns comes under the banner of My Thinking and Learning, this encompasses other subject areas that compliment mathematics. As a school we broadly follow the aims described within the National Curriculum Programme of Study for Mathematics and ensure that the Pre key stage standards are worked towards however, all lessons are differentiated to meet the needs of our special learners with all pupils being taught mathematics at a level appropriate to their ability and an individual numeracy target set out in their EHCP's under cognition and learning. We have the flexibility to introduce content at an earlier or later stage than set out in the Programme of study, though we endeavor to cover most content that is applicable to their development by the end of their school journey.

Reference: DFE National Curriculum Primary Mathematics Programme of Study as set out year by year for Key Stage 1 & 2 September 2016

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/335158/PRIMARY_national_curriculum_-_Mathematics_220714.pdf for details of DFE Programme of Study.

Planning

Planning is based on having a thorough understanding of the pupils' needs, gained through effective and rigorous observations through EFL. Teacher assessment and tracking is done through Bsquared, combined with high expectations and the ambition for all children to achieve.

We carry out curriculum planning in mathematics within several timeframes: long-term, medium-term and short-term.

For our more formal learner (currently in Upper KS2) The National Curriculum Programme of Study gives a detailed outline of what is to be taught each term and this constitutes our long-term plans with us working towards end of Key stage 1 expectations.

Our medium-term plans, which are adopted from the Programmes of study, give details of the main teaching objectives for each term and details of what is to be taught. (*see table below*)

Class teachers complete weekly plans for the teaching of mathematics. These give specific learning objectives for each lesson and details of how the lesson will be taught, how support staff will be utilised and how differentiation will take place within the lesson in order to support pupils' IEP targets.

We endeavor at all times to set work that is challenging, motivating and which encourages the pupils to talk about what they are learning.

Method of Delivery

Each teacher is responsible for the delivery of mathematics in their class, supported by a TA3 and two TA2s. The school uses a variety of teaching and learning styles in mathematics lessons. Daily mathematics lessons offer the opportunity for:

- Whole class teaching
- Group work
- Paired work

- Individual teaching
- Experiential and sensory work

Pupils engage in:

- Development of mental strategies
- Practical work
- Investigative work
- Problem solving
- Mathematical discussion
- Written methods
- Consolidation of basic functional skills

At Acorns School we recognise the importance of establishing a secure foundation in practical and mental mathematics and the recall of number facts before standard written methods are introduced. Where appropriate, we offer opportunities for pupils to apply and develop their mathematical skills across the whole curriculum through the provision of quality, concrete, active experiences, e.g. multi-sensory experiences, structured play, environmental visits etc, this will allow pupils to revisit, practise and consolidate different areas of mathematics and apply them within different contexts.

Teachers' expectations will ensure that all tasks have clearly identified learning outcomes and are matched to pupils' abilities and individual mathematics targets.

Classroom Organisation

Classroom organisation is determined by several factors:

- the individual needs of the pupils
- the number of pupils
- the nature of the activity
- the diverse range of resources available [human and physical eg standing frames, wheelchairs, etc]
- Streaming may occur based on the individual ability of that child (so year 4 may go to year 6 and visa versa) this ensures challenge and progress.

A multi-disciplinary approach is adopted when the needs of the pupils are such that input from the Speech and Language Therapist, Occupational Therapist and/or Physiotherapist is required.

Peripatetic teachers support a small number of pupils with a hearing and/or visual impairment.

Assessment

Assessment occurs throughout the lesson through questioning, observation of pupils at work and marking of work. Daily assessment by the teacher in consultation with TA staff enable weekly plans to be adjusted if required; these short-term assessments are closely matched to the teaching objectives and pupil's progress towards meeting their EHCP targets. EFL is sometimes used as a method to record practical or functional Maths lessons. This allows pictures or videos to be linked to those aspects of maths (like shape or Number or time etc.) It also allows us to link EHCP targets that may have been written with a mathematics focus to be linked as well. This allows for a more cohesive approach when documenting progress in our children.

Teachers make long-term assessments towards the end of the school term using Bsquared and Evidence for learning used to support judgements against Pre Key Stage standards . Pupils are tracked, and data is produced to show the progress made year on year. The percentage gain in attainment is set by the GLD primary forum whereby progress can be measured with other GLD primary schools and national benchmarks.

In the Early Years Foundation Stage, teachers assess using 'Development Matters'. This has been incorporated into BSquared, with Evidence for learning used to support some decisions. Children within EYFS are also baseline assessed at entry and exit of EYFS with the data being sent to the DFE.

Acorns School attends regular GLD moderation forums to ensure the accuracy of our internal assessment. Internal moderation also takes place across Key Stages throughout the school year.

Every pupil at Acorns School has an annual review of their 'Education, Health and Care Plan'. The class teacher is responsible for assessing the past year's targets, reporting on these targets and setting new individual targets for the coming year. Mathematics is reported within cognition and learning.

Reporting and Recording

A record of progress in mathematics is provided by:

- Ongoing classroom assessment evidenced in the pupils' work, teacher comments and verbal feedback
- BSquared formative and summative assessment
- Summative assessment against pre Key stage standards
- Close monitoring throughout the year by the Deputy Head Teacher in conjunction with classroom teacher for pupils that are RAG/CIOC/PP
- EFL, within the mathematics folder (class specific) and the subject leader monitoring file
- EYFS age-related assessment
- Regular contact with parents through EFL, in addition to via parents' evening, the pupils annual review and end of year report
- Ongoing assessment against EHCP
- Annual report provided to Governing Body. The Assessment Governor is encouraged to look at the BSquared and Evidence for learning observations to discuss individual pupil's progress.

Parents can, at any time make an appointment with the Head teacher, Deputy Head Teacher or class teacher to discuss their child's progress in mathematics.

Contribution of Mathematics to teaching in other Curriculum areas

Communication and language

Mathematics contributes to the teaching of Communication in our school by promoting the skills of speaking and listening, reading and writing. We encourage pupils to talk about their mathematical activities, to use mathematical vocabulary and to question and explain their mathematical findings. Communication aids are also used to enable learners to show understanding or to explain language that can't be comprehended by certain children. Children enjoy stories and rhyme that rely on counting and sequencing as well as encountering vocabulary, graphs and charts when using non-fiction texts.

Information and communication technology

Pupils use and apply mathematics in a variety of ways when solving problems using ICT. Pupils have access to iPads, tablets, PC and whiteboard as well as a range of switches to activate ICT devices. We have a range of software designed to help develop skills in each of the areas of mathematics.

PHSE

Mathematics contributes to the teaching of personal, social and health education and citizenship. Children are encouraged and given opportunities to become increasingly independent in their own learning. The planned activities that pupils do within the classroom encourage them to work together and respect each other's views. We also present pupils with the opportunities to experience and learn in 'real life' situations e.g. shopping and spending money, mini enterprise activities.

Governing Body

The Governors' curriculum committee regularly looks at the implementation of mathematics across the key stages. They are invited to attend relevant school inset training and to observe the teaching of mathematics lessons.

Each class has an allocated link governor, with whom they have regular contact.

Reporting to Parents

Parents are welcomed into school to discuss their children's work with the class teacher. Parent's evenings are held in the summer term which enables parents to discuss their child's achievements and progress. Each pupil has an Annual Review to which parents are invited to attend and discuss their child's achievements and progress and to contribute to the setting of Annual Review Targets. Parents receive an Interim progress report sent home early in the Spring term and Annual Report at the end of each Summer Term this details the work covered by each pupil and the attainment target specific to their son / daughter.

Equal Opportunities

The Governors and staff are committed to provide the full range of opportunities for all pupils regardless of gender, disability, ethnicity, social, cultural or religious background. All pupils have access to the curriculum and the right to a learning environment which dispels ignorance, prejudice or stereotyping.

Mathematics Co-ordinator

Specific responsibilities (carried out in consultation with the Headteacher and in co-operation with colleagues and Governors):

1. To have shared responsibility for the development of numeracy across the EYFS, Key Stages 1 and 2 and maintaining/improving standards.
2. Successfully implement the My Thinking and Learning Action Plan.
3. Be responsible for the regular review of whole school maths policy in consultation with staff and Head teacher.
4. Advise and work alongside colleagues in the classroom, to support, monitor and develop numeracy.
5. Organise INSET on numeracy for staff.
6. Advise about useful numeracy activities, resources, courses and reading.

7. Attend INSET training and keep up with current developments in primary numeracy.
8. Liaise with other GLD schools on numeracy matters.
9. Liaise with teachers on assessment in numeracy.
10. Organise and review resources and advise staff on their use and storage.
11. To analyse assessment data to measure children's progress in numeracy.

TO WHOM RESPONSIBLE:

Head teacher
Governors

Level 1 or below Mathematics Overview 2022-2023

Autumn 1st	Counting, partitioning, calculating Securing number facts, understanding shape, handling data and measures. Counting, matching, adding, subtracting, doubling, halving, shape recognition, patterns, estimating, position.
Autumn 2nd	Calculating, measuring and understanding shape, securing number facts, relationships and calculating. Problem solving, adding, doubling, halving, time, money.
Spring 1st	Counting, partitioning, calculating Securing number facts, understanding shape, handling data and measures. Comparing and ordering numbers, counting, problem solving, more/less, patterns and relationships with numbers, time, masses and balance.
Spring 2nd	Calculating, measuring and understanding shape, securing number facts, relationships and calculating. Counting, solving problems, 2D shapes, weight, measures and comparisons.
Summer 1st	Counting, partitioning, calculating Securing number facts, understanding shape, handling data and measures. Counting, number recognition, addition, subtraction, pairs, diagrams, time.
Summer 2nd	Calculating, measuring and understanding shape, securing number facts, relationships and calculating. Counting, doubles, halves, quarters, problems, estimating, position.

For pupils working at or above level 1 Cycle 1(2022-2023) Cycle 2 (2023-2024)
Mathematics Overview

	Autumn cycle1	Autumn cycle 2	Spring cycle 1	Spring cycle 2	Summer cycle 1	Summer cycle 2
Week 1+ 2	Number and Place value	Sequencing and Sorting	Number and Place value	Length and Mass/weight	Number and Place value	Time
Week 3 +4	Number and Place value	Statistics	Mass/weight	Addition and Subtraction	Addition and Subtraction	Multiplication and Division
Week 5 +6	Length and Mass/weight	Fractions Capacity and Volume	2-D and 3-D Shape	Fractions	Capacity and Volume	Statistics Subtraction - difference
Week 7 +8	Addition and Subtraction	Money	Counting and Money	Position and Direction	Fractions	Measurement
Week 9+ 10	Addition and Subtraction	Time	Multiplication	Time	Position and Direction Time	Sorting
Week 11 +12	2-D and 3-D shape	Assess and review week	Division	Assess and review week	2-D and 3-D shape	Assess and review week

Only difference to level 1 is the addition of Statistics

Early Years

Mathematics is presented through play, exploration, active learning and creativity. The pupils learn mathematics through number, shape, space and measure at this stage.

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/974907/EYF_S_framework_-_March_2021.pdf