

# Maths Policy



## **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 skills 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 skills associated with budgeting and saving.
- To encourage the use of current mathematical language.
- To understand the importance of mathematics in everyday life.
- To provide meaningful experiences which reflect the DFE Mathematics Programme of Study at a level appropriate to the ability of the pupils.

### **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/596629/EYFS\\_STATUTORY\\_FRAMEWORK\\_2017.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/596629/EYFS_STATUTORY_FRAMEWORK_2017.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**

For children with PMLD or complex ASD, these children are Pre subject specific learners (P1-4). Maths forms an integral part of their understand of the world and their sense of self. Their curriculum looks very different due to the nature of their abilities and focuses on the prerequisite skills needed to engage with formal mathematics. Bsquared/Evidence for learning is used along with quality observation to track and assess the progress they make.

### **Programme of Study Key Stage 1 & 2**

We broadly follow the aims described within the National Curriculum Programme of Study for Mathematics, which sets out year-by-year areas of learning for key stage 1 and 2. However, all areas are differentiated to meet the needs of our special learners with all children being taught mathematics at a level appropriate to their ability and individual numeracy target. We have the flexibility to introduce content at an earlier or later stage than set out in the programme of study, though we endeavour to cover all content by the end of each key stage.

Reference should be made to **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](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 assessment and tracking, combined with high expectations and an ambition for all children to achieve.

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

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.

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. These medium-term plans are submitted to the senior management and governing curriculum panel for approval at the beginning of each term.

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 and is 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 skills

At Acorns school we recognise the importance of establishing a secure foundation in practical and mental maths 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, practice and consolidate different areas of mathematics and apply them within different contexts. Teachers' expectations will ensure that all tasks will 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 occurs based on an ability (so year 4 may go to year 6 and vice versa) which ensures challenge

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

## **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 IEP targets.

Medium term assessments measure progress against the medium term planning objectives and help teachers plan the next unit of work. We use termly assessments to assess pupils' progress towards achieving their IEP targets.

Teachers make long-term assessments towards the end of the school term using the BSquared/Evidence for learning assessment tool. Pupils are tracked, and graphs are 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 early years, teachers also assess using the Lancashire Tracker which is based on 'Development Matters', but this has been incorporated into BSquared/Evidence for learning.

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 has an annual review of their 'Educational Healthcare Plan' the class teacher is responsible for assessing the past years targets, reporting on these targets and setting new individual targets for the coming year. Maths is reported on within Learning and cognition.

## **Reporting and Recording**

A record of progress in Mathematics is provided by:

- Ongoing classroom assessment evident in the pupils' work, teacher comments and feedback.
- **BSQUARED – SUMMATIVE ASSESSMENT (Used at the beginning and end of year- this will end in July 2020)**
- Pupils that are RAG /CLA/PP are closely monitored throughout the year
- Progress in recorded P levels
- Progress is recorded in assessment and monitoring file.
- Early year's age related assessment bands. EYFS
- Reporting to parents is done on a biannual basis through an interim progress report and end of year report.
- 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.
- Ongoing assessment provides a clear picture of how the pupil is performing in his / her IEP and located on the unit document.
- Governors receive a yearly report outlining progress made in each subject area. The Assessment Governor is encouraged to look at the BSquared/Evidence for learning data and discuss individual pupils progress.
- School reports P level data to the local authority.

## **Contribution of Mathematics to teaching in other Curriculum areas**

### **English**

Mathematics contributes to the teaching of English 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. 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 I pads, 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.

## **Science**

During science lessons, pupils are given opportunities to apply their numeracy and data handling skills when recording, creating graphs or collecting scientific measurements. Whole class discussion of data also highlights the importance of clear recording of information. Pupils are also able to use a wide range of measuring devices in real-life context. Children are given the opportunity to use and read measuring cylinders, weighing scales and a variety of other instruments.

## **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 planning and 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 Mathematics Action Plan.
3. Be responsible for the regular review of whole school maths policy in consultation with staff and Head teacher.
4. Development of schemes of work to ensure continuity and progression of numeracy skills and knowledge from nursery to Year 6.
5. Advise and work alongside colleagues in the classroom, to support, monitor and develop numeracy.
6. Organise INSET on numeracy for staff.
7. Advise about useful numeracy activities, resources, courses and reading.
8. Attend INSET training and keep up with current developments in primary numeracy.
9. Liaise with other GLD schools on numeracy matters.
10. Liaise with teachers on assessment in numeracy.
11. Organise and review resources and advise staff on their use and storage.
12. To analyse assessment data to measure children's progress in numeracy.

### **TO WHOM RESPONSIBLE:**

Head teacher

Governors

### **Mathematics Policy – Reviewed January 2020**

## Level 1 or below Mathematics Overview 2019-2020

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

## For pupils working at or above level 1 Cycle 1 (2020-2021) Cycle 2 (2021-2022) Mathematics Overview

	Autumn cycle1	Autumn cycle 2	Spring cycle 1	Spring cycle 2	Summer cycle 1	Summer cycle 2
<b>Week 1+ 2</b>	Number and Place value	Sequencing and Sorting	Number and Place value	Length and Mass/weight	Number and Place value	Time
<b>Week 3 +4</b>	Number and Place value	Statistics	Mass/weight	Addition and Subtraction	Addition and Subtraction	Multiplication and Division
<b>Week 5 +6</b>	Length and Mass/weight	Fractions Capacity and Volume	2-D and 3-D Shape	Fractions	Capacity and Volume	Statistics Subtraction - difference
<b>Week 7 +8</b>	Addition and Subtraction	Money	Counting and Money	Position and Direction	Fractions	Measurement
<b>Week 9+ 10</b>	Addition and Subtraction	Time	Multiplication	Time	Position and Direction Time	Sorting
<b>Week 11 +12</b>	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/596629/EYFS\\_STATUTORY\\_FRAMEWORK\\_2017.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/596629/EYFS_STATUTORY_FRAMEWORK_2017.pdf)