

# Ashmole Primary School



## Mathematics Policy

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<b>14.01.16</b>	<b>Adding notes on open sessions and maths café for parental involvement.</b>

## **1. INTRODUCTION**

Mathematics equips pupils with the uniquely powerful set of tools to understand and change the world. These tools include logical reasoning, problem solving skills and the ability to think in abstract ways.

Mathematics is important in everyday life. It is integral to all aspects of life and with this in mind we endeavour to ensure that children develop a healthy and enthusiastic attitude towards mathematics that will stay with them.

The National Curriculum order for mathematics describes what must be taught in each key stage and states that teachers should use every relevant subject to develop pupils' mathematical fluency. Confidence in numeracy and other mathematical skills is a precondition of success across the national curriculum.

Teachers should develop pupils' numeracy and mathematical reasoning in all subjects so that they understand and appreciate the importance of mathematics. Pupils should be taught to apply arithmetic fluently to problems, understand and use measures, make estimates and sense check their work. Pupils should apply their geometric and algebraic understanding, and relate their understanding of probability to the notions of risk and uncertainty. They should also understand the cycle of collecting, presenting and analysing data. They should be taught to apply their mathematics to both routine and non-routine problems, including breaking down more complex problems into a series of simpler steps.

Ashmole Primary School follows the National Curriculum for England, which provides detailed guidance for the implementation of the National Curriculum for mathematics. This ensures continuity and progression in the teaching of mathematics. In early years the curriculum is guided by the Early Learning Goals.

## **2. RATIONALE**

All school policies form a corporate, public and accountable statement of intent. As a primary school it is very important to create an agreed whole school approach of which staff, children, parents, governors and other agencies have a clear understanding. This policy is the formal statement of intent for mathematics. It reflects the essential part that mathematics plays in the education of our pupils. It is important that a positive attitude towards mathematics is encouraged amongst all our staff, parents, and pupils in order to foster self-confidence and a sense of achievement. The policy also facilitates how we, as a school, meet the legal requirements of recent Education Acts and National Curriculum Requirements.

### **3. PRINCIPLES**

The principles of Ashmole Primary School for mathematics are:

- policy and provision are evaluated and reviewed regularly
- resources of time, people and equipment are planned, budgeted for and detailed when appropriate in the School Development Plan.
- cross curricular links will be highlighted where appropriate
- planning of mathematics ensures continuity and progression across all year groups and key stages

### **4. AIMS**

#### **4.1 General**

- We aim to provide the pupils with a mathematics curriculum, with values that are built on the conventions for the rights of the child (CRC) and will produce individuals who are literate, creative, independent, inquisitive, enquiring and confident. We also aim to provide a stimulating environment and adequate resources so that pupils can develop their mathematical skills to their full potential. We want to instil a sense of meaningful maths to students so they can recognise the integral role maths plays in life outside of school.

#### **4.2 Specific**

Our pupils should

- have a sense of the size of a number and where it fits into the number system
- know by heart number facts such as number bonds, multiplication tables, doubles and halves
- use what they know by heart to support mathematical reasoning.
- calculate accurately and efficiently, both mentally and in writing and paper, drawing on a range of calculation strategies
- recognise when it is appropriate and be fluent in the use formal written methods of calculations
- make sense of number problems, including non-routine problems, and recognise the operations needed to solve them
- explain their methods and reasoning using correct mathematical terms.
- judge whether their answers are reasonable and have strategies for checking them where necessary
- suggest suitable units for measuring and make sensible estimates of measurements
- explain and make predictions from the numbers in graphs, diagrams, charts and tables
- develop spatial awareness and an understanding of the properties of 2d and 3d shapes

## **5. PROVISION**

Staff, as duty bearers, ensure that pupils are provided with a variety of opportunities to develop and extend their mathematical skills in and across each phase of education. Staff should support and facilitate learning at all times.

Lessons follow Ashmole Primary Mathematics curriculum format with a mental/oral starter, a main teaching activity and a plenary session. The teaching of mathematics at Ashmole Primary School provides opportunities for:

- group work
- paired work
- whole class teaching
- individual work

Pupils engage in:

- the development of mental strategies
- written methods
- practical work
- investigational work
- problem solving
- mathematical discussion
- consolidation of basic skills and number facts

At Ashmole Primary School we recognise the importance of establishing a secure foundation in mental calculation and recall of number facts before standard written methods are introduced. The designed curriculum is used when planning to help determine the appropriate terminology, strategy and model to use in teaching. Children are expected to use appropriate mathematical vocabulary in their verbal and written explanations.

Mathematics contributes to many subjects and it is important the children are given opportunities to apply and use Mathematics in real contexts by problem solving in a variety of situations.

We endeavour at all times to set work that is challenging, motivating and encourages the pupils to talk about what they have been doing.

### **5.1 Early Years**

See Curriculum Guidance for the Foundation Stage (Early Learning Goals)

## **5.2 Key Stage 1**

See KS1 Ashmole Primary Curriculum programme which includes a yearly breakdown of covered objectives.

See Number Masters Programme which includes a yearly breakdown of covered objectives.

## **5.3 Key Stage 2**

See KS2 (Years 3 – 6) Ashmole Primary Curriculum programme which includes a yearly breakdown of covered objectives.

See Ashmole Primary's Mental Maths Programme of Study which includes a yearly breakdown of mental maths strategies, models and arithmetic methods.

## **6. ASSESSMENT**

Assessment is regarded as an integral part of teaching and learning and is a continuous process. It is the responsibility of the class teacher to assess all pupils in their class. Assessment for learning strategies underpins our approaches to ensure effective teaching and learning.

In our school we are continually assessing our pupils and recording their progress. We see assessment as an integral part of the teaching process and strive to make our assessment purposeful, allowing us to match the correct level of work to the needs of the pupils, thus benefiting the pupils and ensuring progress.

Information for assessment will be gathered in various ways: by talking to the children, observing their work, marking their work, etc. Furthermore, weekly and termly assessments are carried out based on the curriculum content covered in each term. A baseline test for mental maths is carried out at the start of each term and then repeated at the end of a term. This allows continuous data for progress and attainment to be monitored. Teachers will use these assessments to plan further work.

## **7. ROLE OF SUBJECT LEADER**

The mathematics subject leader is responsible for co-ordinating mathematics through the school. This includes:

- ensuring continuity and progression from year group to year group
- providing all members of staff with guidelines and a scheme of work to show how aims are to be achieved and how the variety of all aspects of mathematics is to be taught
- advising on in-service training to staff where appropriate, in line with the needs identified in the Development Plan (Performance Management document) and in the Subject Leader's current Action Plan, within the confines of the school budget
- advising and supporting colleagues in the implementation and assessment of mathematics throughout the school through meetings etc.
- assisting with requisition and maintenance of resources required for the teaching of mathematics, within the confines of the school budget
- lead implementation of school, LEA, DFE- led mathematics initiatives
- Develop, implement, and evaluate a monitoring, evaluation and review cycle.

## **8. ROLE OF CLASS TEACHER**

- to ensure progression in the acquisition of mathematical skills with due regard to the National Curriculum for mathematics.
- to develop and update skills, knowledge and understanding of mathematics.
- to identify inset needs in mathematics and take advantage of training opportunities.
- to direct the other supporting adults in their classrooms to make additional impact with the children.
- to keep appropriate on-going records.
- to plan effectively for mathematics), liaising with the subject leader when necessary.
- to inform parents of pupils' progress, achievements and attainment.

## **9. PERFORMANCE INDICATORS**

Performance Indicators, which are the criteria for success of the school's mathematics policy at Ashmole Primary School are:

- At KS2 ( 85% at or above ARE )
- At KS1 ( 85% at or above ARE )
- children enjoy mathematics
- children talk confidently about what they are doing in mathematics

## **10. EQUAL OPPORTUNITIES**

We incorporate mathematics into a wide range of cross-curricular subjects and seek to take advantage of multicultural aspects of mathematics ensuring that the mathematics curriculum develops each child's personality, talents and abilities to the fullest (RRSA article 29).

All children have equal access to the curriculum regardless of their gender as all children have the right to a primary education (RRSA article 28). This is monitored by analysing pupil performance throughout the school to ensure that there is no disparity between groups.

## **11. PARENTAL INVOLVEMENT**

At Ashmole Primary School we encourage parents to be involved by:

- inviting parents into school to discuss the progress of their child.
- inviting parents into school in the summer term to discuss the annual report.
- inviting parents to curriculum events or circulating information via half termly newsletters when significant mathematical events have taken place in the form of enrichment.
- Inviting parents and carers into classrooms to see maths lessons and work directly with their children.
- holding maths expectation workshops for parents and providing guidance on supporting at home.
- Providing a weekly maths café which is age specific where parents can watch a short mathematical teaching session and the complete an activity with their child based on the teaching.

## **12. GOVERNING BODY**

At Ashmole Primary School we have an identified governing body who views termly summaries in Numeracy.