



**Astrea Academy Trust**

**Greengate Lane Academy**

## **Maths Policy**

Name of school	Greengate Lane Academy
Date of policy	September 2023
Member of staff responsible	Helena Gibson
Link Governor	Simon Merrywest (Curriculum)
Review date	September 2024

## Introduction

The value of a high-quality mathematics education is well recognised for its importance both to the individual and to society. Being competent in mathematics is key for functioning within a community and being a productive part of the workforce. The study of mathematics reaches beyond this and ‘provides a foundation for understanding the world, the ability to reason mathematically, appreciation for the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject.’ (National Curriculum). At Atlas Academy we intend for our pupils to make sense of the mathematics they are learning; that they will have more memorable and enjoyable experiences that are more likely to be remembered in the long term. They will also be able to do more as they understand how to push the boundaries of what they know and apply it to solve problems.

## The aims of Maths

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## Maths Content

	Autumn	Spring	Summer
FS1	Unit 1: Number songs Unit 2: Colours Unit 3: Matching Unit 4: Sorting	Unit 5: Comparing amounts Unit 6: Compare size, mass and capacity Unit 7: Simple Shapes Unit 8: Understanding number (identify representations of 1, 2, 3) Unit 9: Measure (weight)	Unit 10: understanding number (identify representations of 1, 2, 3) (count on and back to 4) Unit 11: Measure (length and height) Unit 12: Understanding number (to count forwards and backwards to 5) Unit 13: 1 more and 1 less Unit 14: Shape Unit 15: My day Unit 16: Measure (capacity) Unit 17: Positional language
FS2	Unit 1: Early Mathematical experiences Unit 2: Pattern and Early Number	Unit 3: Numbers within 6 Unit 4: Addition and subtraction within 6 Unit 5: Measures Unit 6: Shape and sorting Unit 7: Numbers within 10 Unit 8: Calendar and time Unit 9: Addition and subtraction within 10 Unit 10: Grouping and Sharing	Unit 11: Number patterns within 15 Unit 12: Doubling and halving Unit 13: Shape and pattern Unit 14: Securing addition and subtraction fact Unit 15: Number patterns within 20 Unit 16: Number patterns beyond 20 Unit 17: Money Unit 18: Measures Unit 19: Exploration of patterns within number
Year 1	Unit 1: Numbers to 10 Unit 2: Addition and subtraction within 10 Unit 3: Shape and patterns	Unit 4: Numbers to 20 Unit 5: Addition and subtraction within 20 Unit 6: Time Unit 7: Exploring calculation strategies within 2 Unit 8: Numbers to 50	Unit 9: Addition and subtraction within 20 (comparison) Unit 10: Fractions Unit 11: Measures: Length and mass Unit 12: Numbers 50 to 100 and beyond Unit 13: Addition and subtraction (applying strategies) Unit 14: Money Unit 15: Multiplication and division Unit 16: Measures: Capacity and volume
Year 2	Unit 1: Numbers within 100 Unit 2: Addition and subtraction of 2-digit numbers Unit 3: Addition and subtraction word problems	Unit 4: Measures: Length Unit 5: Graphs Unit 6: Multiplication and Division Unit 7: Time Unit 8: Fractions Unit 9: Addition and subtraction of 2-digit numbers (regrouping and adjusting)	Unit 10: Money Unit 11: Faces, shapes and patterns: lines and turns Unit 12: Numbers within 1000 Unit 13: Measures: Capacity and volume Unit 14: Measures: Mass Unit 15: Exploring calculation strategies and place value Unit 16: Multiplication and division: 3 and 4
Year 3	Unit 1: Number sense and exploring calculation strategies Unit 2: Place Value Unit 3: Graphs	Unit 4: Addition and subtraction Unit 5: Length and perimeter Unit 6: Multiplication and division Unit 7: Deriving multiplication and division facts Unit 8: Time Unit 9: Fractions	Unit 10: Angles and Shape Unit 11: Measures Unit 12: Securing multiplication and division Unit 13: Exploring calculation strategies and place value
Year 4	Unit 1: Reasoning with 4-digit numbers Unit 2: Addition and subtraction	Unit 3: Multiplication and division Unit 4: Interpreting and presenting data Unit 5: Securing multiplication facts Unit 6: Fractions Unit 7: Time	Unit 8: Decimals Unit 9: Area and perimeter Unit 10: Solving measure and money problems Unit 11: 2-D Shape and Symmetry Unit 12: Position and direction Unit 13: Reasoning with patterns and sequences Unit 14: Reasoning with patterns and sequences
Year 5	Unit 1: Reasoning with large whole numbers Unit 2: Problem solving with integer addition and subtraction Unit 3: Line graphs and timetables	Unit 4: Multiplication and division Unit 5: Perimeter and area Unit 6: Fractions and decimals Unit 7: Angles Unit 8: Fractions and percentages Unit 9: Transformations	Unit 10: Converting units of measure Unit 11: Calculating with whole numbers and decimals Unit 12: 2-D and 3-D shape Unit 13: Volume Unit 14: Problem solving
Year 6	Unit 1: Integers & Decimals Unit 2: Multiplication and division Unit 3: Calculation problems Unit 4: Fractions Unit 5: Missing angles and lengths	Unit 6: Coordinates and shape Unit 7: Fractions Unit 8: Decimals and measures Unit 9: Percentages and statistics Unit 10: Proportion problems Unit 11: Using and applying	Unit 11: Using and applying

## How is Maths organised in this school?

The Ark Curriculum gives pupils a deep and conceptual understanding of subjects adopting a mastery approach to teaching mathematics across all year groups. The programme is the natural next step in developing teaching expertise and improving learning outcomes across our school. The programme is built in-line with national primary education principles, but it is also fully flexible and adaptable to meet the needs of individuals.

## Stages of understanding within each key construct

The framework sets out guidance for the characteristics that pupils might show at different stages in their learning. Development of these characteristics within content areas of mathematics indicates progress within that area, and

can demonstrate progress without accelerating pupils to content specified for older pupils. The framework focuses on the expected stage of developing understanding within a KC. Guidance has been given for teachers on strategies to support pupils whose understanding is not yet at the expected depth and strategies to deepen pupils' understanding still further beyond age expectations

Pre - assessments are completed before teaching a unit to allow teachers to understand pre-requisites for the unit, as indicated by the Unit Narrative. Post-assessments are completed after the completion of the unit to inform further teaching of specific concepts.

Maths at Greengate Lane is taught for an hour every day, alongside daily timetable teaching and maths meetings.

### **Adaptation/SEN**

Maths Mastery is written as a universal core curriculum provision for all children. Inclusivity is part of its philosophy. Teachers will tailor each unit to meet the needs of the children in their classes. To support this, teachers are required to complete a unit adaptation to inform the delivery of lessons after the pre-assessment has been completed. A post-assessment will be completed to inform teachers of learning that still requires consolidation and to identify children who still require additional support. Teachers will plan for these gaps in learning and these will be addressed during daily Do Now's and Maths Meetings. If needed, rapid interventions will be planned for.

### **Assessment**

Teachers are eager to ensure children are making progress with their learning throughout their Maths. Therefore, each unit has built-in assessment. This assessment is the formal opportunity for teacher assessment of the children's knowledge of that unit. This stand-alone evidence is used in conjunction with other evidence such as records of discussions and annotations from other lessons within the unit to assist the teacher in assessing whether a child is working at the expected level or towards or beyond it. Children are assessed over three aspects of learning:

The assessment is built around three strands, which, considered together, can demonstrate security in understanding:

- Facts and techniques
- Conceptual understanding
- Problem solving.

Assessing the depth to which pupils can demonstrate these three elements provides an opportunity to show the progress in depth of understanding pupils are making. These are tracked throughout the planning stage so that teachers can utilise the appropriate evidence accordingly.

### **Recording and tracking progress**

To support the teacher in tracking each child's progress throughout the year, there is an overview sheet for each unit on which to record the progress of the whole class. This supports teacher overview and facilitates subject leader monitoring and moderation.

### **Reporting to Parents/Carers**

The assessment process described above helps teachers report to parents/carers. Ark Mastery give teachers meaningful evidence to cite in reports.

### **Monitoring and evaluation**

The Maths leader monitors delivery of the curriculum through observation and discussion with teaching staff, as well as discussions with children and scrutiny of their written work to ensure consistent and coherent curriculum provision.

Evaluation of the programme's effectiveness is conducted on the basis of:

- Pupil and teacher evaluation of the content and learning processes
- Staff meetings to review and share experience
- Monitoring of assessment to ensure progression throughout the school.

## **The Learning Environment**

Working walls are used **to support children in their current learning and enable independence**: The working walls are built with the children at the point of teaching. They are used in lessons as a reference point for both teachers and children.

## **Training and support for staff**

All staff benefit from training in order to enhance their delivery of Maths. Opportunities are provided for staff to identify individual training needs on a yearly basis and relevant support is provided.

In addition to this, support for teaching and understanding Maths is incorporated in our staff INSET programme, drawing on staff expertise and/or a range of external agencies.

## **Dissemination**

This policy is available on our school website where it can be accessed by the community. Training is regularly delivered to staff on the policy content. Copies are available from the school office on request from parents/carers.

## **Policy Review**

This policy is reviewed **annually**.

	Signed Headteacher	Signed Chair of Governors
Date of review:		
Date of next review:		