



## Alderman Cogan's CE Primary Academy:

### Maths Policy 2022/23

#### Alderman Aims

At Alderman Cogan's we want to give all our children the best possible start in life academically, as citizens and as lifelong learners. Above all, we want them to be highly literate and able to have all the learning necessary to help them to thrive in a complex, changing and competitive world.

We want all our students to be ambitious for themselves and about their futures. We will provide the pathways and support for them to realise their ambitions, 'through a Christian lens'.

Our ambitious and aspirational curriculum is underpinned by our strong Christian Values through our 'Cogan Learning Goal'. It is through living out these values within our curriculum and everyday life that our children "work together to follow His example and be the best people we can be."

We are committed to providing an education of the highest quality within the context of Christian belief and practice. We encourage an understanding of the meaning and significance of faith, and promote Christian values through the experience we offer to all our pupils.

*"For I know the plans I have for you", declares the Lord, "plans to prosper you and not to harm you, plans to give you hope and a future." Jeremiah 29, v11*

#### **Alderman Cogan's CE Primary Academy believes that:**

Mathematics is a creative and highly interconnected discipline that has been developed over centuries, providing the solution to some of history's most intriguing problems. It is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. A high-quality mathematics education therefore provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject.

In line with the national curriculum for mathematics, Alderman Cogan's aims are to ensure that all pupils:

- 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.
- reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language



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- can 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.

Our aims for all children are:

- ALL pupils access a broad and balanced maths curriculum
- To present maths as an exciting, challenging, creative and applicable subject
- To ensure that all children can achieve their full potential in mathematics
- Develop strong foundational knowledge of mental strategies to enhance their reasoning and problem solving skills
- Ensure that pupils become resilient and reflective learners

Our Maths aims are supported by our Key Development Priorities on our School Development Plan.

SECTIONS	SUMMARY EVALUATION
KEY DEVELOPMENT PRIORITIES	<p><b>Strategic Priority One:</b> For all children to receive a consistent and ambitious, sequentially planned curriculum ensuring sufficient knowledge and skills for future learning and meet the needs of all learners</p> <p><b>Strategic Priority Two:</b> A culture of high expectations for all learners' behaviour, attendance and conduct ensures that positive attitudes and commitment to learning are consistently demonstrated</p>

#### Alderman Intent

Alderman Cogan's Church of England Primary Academy is committed to following the principles outlined by the National Centre for Excellence in the Teaching of Mathematics (NCETM). Our goal is to provide a high-quality mathematics education that fosters a deep understanding and love of the subject among our pupils. To achieve this, we:

- Ensure a Mastery Approach: We have adopted a mastery approach to teaching mathematics, which means providing all pupils with the opportunity to achieve a deep understanding of mathematical concepts, skills, and processes. This will be achieved through careful sequencing of topics, regular assessment, and providing extra support for those who need it. We use the 5 big ideas of Coherence, Fluency, Mathematical Thinking, Variation and Representation and Structure as vehicles to learning.
- Encourage Mathematical Thinking: We encourage our pupils to develop a positive attitude towards mathematics and to think flexibly, critically and creatively. We use open-ended questions and activities to stimulate their curiosity and to help them to develop reasoning and problem-solving skills.
- Use Real-life Contexts: We ensure that the mathematics taught in our school is rooted in real-life contexts so that our pupils can see the relevance and importance of the subject. We provide opportunities for pupils to apply their mathematical knowledge and skills to real-life



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situations and to use technology to enhance their understanding. We provide opportunities for pupils to work collaboratively, as well as independently, to develop their communication and team-working skills.

- **Coherent Curriculum:** Our inclusive, sequential curriculum ensures all pupils can access lessons which are appropriately scaffolded to meet the individual needs of learners through adaptive teaching (including pupils with SEND). This ensures that each child is challenged and supported to achieve their full potential.
- **Develop Fluency:** We develop our pupils' fluency in the foundational knowledge of mathematics, including number, geometry, measurement and statistics. We ensure that our pupils have a solid foundation in these areas, which will enable them to tackle more complex mathematical concepts in the future.

By following these principles, our primary school's mathematics program will provide our pupils with a rich and rewarding mathematical education, one that prepares them well for the challenges of secondary school and beyond.

### Foundational Fluency

#### Foundational Fluency Sessions

- These are 10 minute sessions taught separately to the main Mathematics lesson.
- Daily foundational fluency sessions give pupils the opportunity to learn foundational knowledge to automaticity.
- **Alderman Cogan's CE Primary Academy: RTP and Foundational Fluency Facts: Y1-6**

EYFS	Mastering Number (4x a week)	In EYFS, children learn the composition of numbers within 10
KS1	Mastering Number (4x a week)	In KS1, children learn the composition of numbers within 20 and the structures of addition and subtraction, to develop a good 'sense of number' through the NCETM Mastering Number Programme.
LKS2	Additive Facts and Times Tables (5x a week)	In LKS2, children learn times tables to automaticity. <i>(The conceptual understanding of knowledge practised in these sessions has been taught previously in main maths lessons, with the aim in these sessions to learn declarative facts to reduce cognitive overload whilst accessing further concepts.)</i>
UPKS2	Targeted procedural fluency practice and revision of prior knowledge.	In UPKS2 children learn derived additive and multiplicative facts, and apply these within procedures to build automaticity.



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- Planning for long term memory also includes regular spaced, interleaved retrieval tasks such as 'Fluent in 5' – a series of questions taken from previous learning, and NCETM 'Ready to Progress Criteria' to embed strategies or link learning from previous year groups to the new learning.

#### Homework

At Alderman Cogan C E Primary Academy, homework is actively encouraged to be completed in small, manageable steps. In Mathematics, we require pupils to complete 2x 10 minute practices a week:

EYFS and Key Stage 1 - Counting (booklets provided)

Years 3 & 4 - Times Tables practice (booklet or TT Rockstars)

Years 5 & 6 - Times Tables or Arithmetic practice (booklet or Sumdog)

In Key Stage 2, pupils may complete this practice electronically **or** in booklets provided by the teacher.

#### SEND/ Inclusion

Alderman Cogan's C E Primary Academy is an inclusive school that allows pupils of all learning styles and needs to access the curriculum. Teachers carefully plan lessons to accommodate pupils with special educational needs or disabilities so that the pupil(s) develop confidence in Mathematics and foster a love of learning. Support staff are deployed effectively to assist pupils who require additional support and our range of representative structures cater to a variety of learning styles.