



Maths Policy

Our Vision

In our school our Christian vision shapes all we do.

Challenge, Creativity, Compassion: Create a pure heart in me – Psalm 51:10

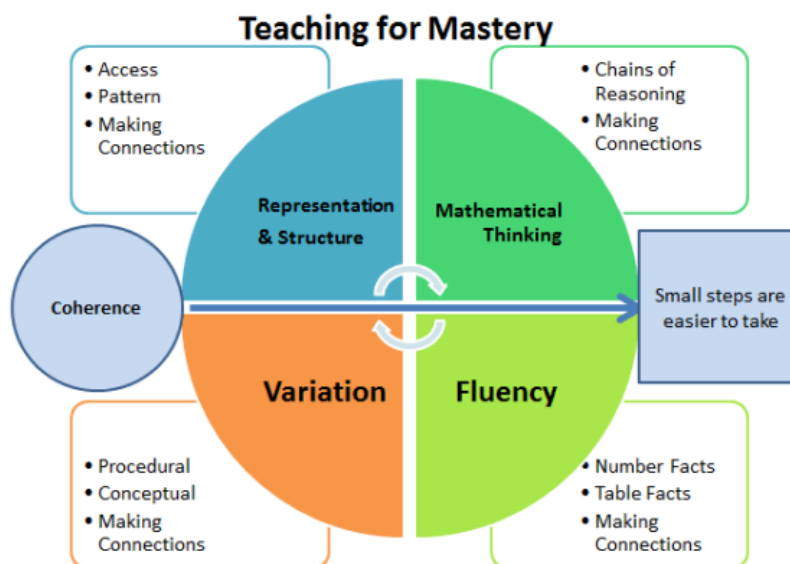
Our School Vision Statement reflects this commitment as children and staff are taught to challenge inequality, prejudice, bullying and harm; to respond with compassion and sensitivity to individual need and to respect the rights of all individuals to be safe and nurtured within God's world.

We encourage children to respond creatively to internal and external challenges in life, with compassion for others, including consideration for creation and the planet itself. Thus we show how to live justly and with a pure heart, reflecting the teachings of Jesus and God's love within our school environment

Intent

Mathematics is an important skill in everyday life. At Cavendish CofE Primary school our aim is for every child to develop their mathematical skills through a teaching for mastery curriculum. Our curriculum enables children time to practise fluency skills as well as every child having the opportunity to challenge themselves through being able to solve problems, to reason, to think logically and to work systematically and accurately. New mathematical concepts are introduced using a 'Concrete, Pictorial and Abstract' approach, enabling all children to experience and discover using hands-on learning. This method also allows children to have clear models and images to aid their understanding of key mathematical skills.

We embed the Five Big Ideas for Mastery into our maths learning.



Our Teaching for Mastery is underpinned by the NCETM's Five Big Ideas.

- Opportunities for Mathematical Thinking allow children to make chains of reasoning connected with the other areas of their mathematics.

- A focus on Representation and Structure ensures concepts are explored using concrete, pictorial and abstract representations, the children actively look for patterns and generalise whilst problem solving.
- Coherence is achieved through the planning of small, connected steps to link every question and lesson within a topic.
- Teachers use both procedural and conceptual variation within their lessons and there remains an emphasis on fluency with a relentless focus on number and times table facts.

Implementation

The maths curriculum is implemented through:

- Daily Maths lessons follow the White Rose planning tool and embed the five big ideas of mastery
- 5-10 minute Mini Maths meetings 2/3 times a week to practise essential knowledge and consolidate fluency skills
- Learning builds on prior knowledge from previous lessons and key stages, and ensures children have opportunities to embed these skills and progress further in their fluency, reasoning and problem solving
- Lessons include fluency, reasoning and problem-solving opportunities.
- Vocabulary is introduced by teachers and children are encouraged to use the correct vocabulary in their questioning and explanations.
- Problem solving is planned into lessons to enable children opportunities to find out for themselves.
- Lessons follow a concrete, pictorial and abstract approach.
- Resources are readily available to children in all classes.
- Every child consolidates maths learning on RM Maths 2/3 times a week in school and home access available to all children
- Children in KS1 and KS2 have My Maths homework to consolidate maths learning in class.
- Opportunities to apply mathematical knowledge and skills to real life contexts.
- Consistent use of mathematical models used in EYFS, KS1 and KS2.

Impact

As a result of the teaching for mastery approach adopted by teachers, children will be able to:

- Be engaged in their maths learning
- Take on challenges in their learning
- Talk about Maths and their learning and the links between mathematical topics.

The impact of the maths curriculum will be measured through:

- Individual responses to reasoning and problem-solving tasks
- Problem-solving investigations in maths lessons
- Formative assessment against subject statements on Target Tracker.
- Termly Puma assessments
- End of key stage summative assessment
- End of key stage formative assessment using the Interim framework

Enrichment

Our school aims to provide children with a wide range of maths enrichment opportunities both within the daily maths lessons and cross-curricular activities. Each year, we celebrate our Maths curriculum through participating in International Maths Day and Maths Week England. Each class participates topic-based cooking activities each term which enables them to apply key knowledge of measurement, ratio and proportion.,

Cultural capital

Within the school curriculum, children have opportunities to learn about different mathematicians and their contributions to the development of this key subject area. This exploration of mathematicians allows children to recognise the universal nature of mathematics across different cultures. As well as supporting the development of positive attitudes towards maths, participating in national and international maths days enables children to develop their understanding of maths as a global subject. Our maths curriculum aims to prepare children for future success through the application of maths to real-life contexts, including money. Within various school councils, children are given budgets where they are able to take ownership of researching items, finding the best value and price before purchasing items.

Inclusion

It is expected that individual children will be at different stages in their maths learning. Within EYFS, KS1 and KS2 teachers follow a small steps approach to learning that offers concrete, pictorial, abstract opportunities for learning. All children have concrete resources readily available to support them in their learning and children are free to choose which resources would best support them in their learning. The school has a consistent approach in the resources and methods taught in maths thus allowing children to draw on prior knowledge to support new learning. In line with the national curriculum for maths, all children are offered opportunities to engage in fluency, reasoning and problem-solving activities with differing levels of support available to ensure all children can access their learning activities.

Cross-curricular links

Understanding of maths reasoning and sequential thinking supports children in English with formal writing and reasoned arguments. Syllable structure for poetry

Within Geography lessons, children have many opportunities to apply mathematics when developing their map skills. This includes reading scales, keys, compass point orientation and grid references.

Our history based topics support children to apply their understanding of time and chronology through exploring and developing timelines, and applying their knowledge of statistics through interpreting charts and data. A key focus in Early Islamic Culture is the development of mathematical and scientific knowledge.

PSHE provides many opportunities to apply mathematical knowledge into real life contexts. There are opportunities to consider the use of money in earnings, savings, spending and setting budgets. Across the school year, various charity fundraising events taken place where children can also consider giving money and the benefits their contribution might have on others.

Within Design and Technology, every child participates in a cooking lesson each term. Within these lessons, children are able to apply their knowledge of measure and ratio & proportion when following recipes. In the designing and building elements of DT, children are able to apply measuring, cutting & 3D construction.

Forest School allows opportunities for 3D modelling in shapes and data recording (e.g. Bird Watch).

Within French lessons, children in KS1 sing songs, which involve counting and months of the year. When in KS2, children develop this understanding further by applying their knowledge of the English number and calendar system to their understanding of spoken and written French. This includes counting, months, days, ordinal and cardinal numbers and number composition.

Through scientific investigations, children further develop their maths knowledge by collecting data, creating graphs and charts and interpreting given or collected data to support them in their evaluations.

Children participate in score keeping, distance measuring and setting personal challenges (Bleep test) within PE lessons. Applying this mathematical knowledge, allows them to further challenge themselves to improve in physical education.

Within Computing lessons, children learn how to input and present data using a variety of different programmes. In KS1, children use their knowledge of chronology, compass points, left, right, forwards and backwards to program Beebots and in KS2, children apply this to various coding programs. UKS2 explore 3D modelling and ratio and proportion when creating 3D models on a screen. Every child also uses laptops and Ipads to access RM Maths in school and MyMaths at home.

Knowledge of patterns, counting, rhythm and timing are all applied within music lessons when children are listening to and learning about specific pieces of music and creating their own music.

Within RE lessons, children apply their knowledge of chronology, Roman numerals and the number system. Children also have opportunities to explore symmetry and reflection when looking at Rangoli patterns.

Chronology and the yearly calendar plays an important role within Collective Worship as children develop their understanding of the liturgical calendar.