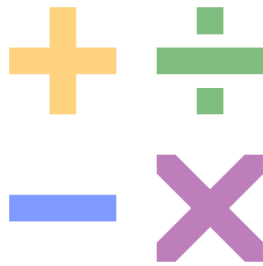
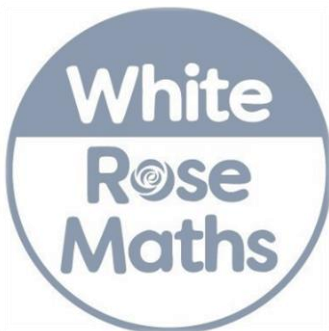




Castilion Primary School Maths Policy



Date of Issue: September 2023

Issued by: J.Allen

Review Date: September 2024

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 for 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.

The National Curriculum 2013

At Castilion Primary School we want to encourage everyone to grow in confidence within mathematics to achieve their full potential. We wish to give our children fluency in skills to be able to apply these to any problem so that they are ready to tackle any situation which they may face.

Mathematics teaches children how to make sense of the world around them through developing their ability to use number, calculate, reason and solve problems. It helps children to understand relationships and patterns in both number and space in their everyday lives. Our curriculum is bold, provides breadth and balance and be relevant and differentiated to suit the needs of all children in the modern world. It should be flexible, motivating all pupils, thus encouraging success at all levels.

At Castilion Primary School, we aim 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, recognising relationships, making generalisations and developing an argument, justification or proof using mathematical language
- can **solve problems** by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions

We aim to place problem solving and investigative skills at the heart of our mathematics teaching. We recognise that collaboration and communication are crucial life skills and should be developed in our mathematics teaching.

Purpose of mathematics in our school is to develop

- ❖ a positive attitude towards mathematics and an awareness of the relevance of mathematics in the real world.
- ❖ competence and confidence in mathematical knowledge, concepts and skills.
- ❖ an appreciation of mathematical pattern and the ability to identify relationships.
- ❖ an ability to solve problems, to reason, to think clearly and logically with confidence and to work systematically and accurately.
- ❖ an understanding of mathematics through a process of enquiry and experiment.
- ❖ initiative and an ability to work both independently and in cooperation with others.
- ❖ an ability to communicate mathematics verbally and in written form.
- ❖ an ability to use and apply mathematics across the curriculum and in real life.

Our pupils should:

- ❖ have a well-developed 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
- ❖ calculate accurately and efficiently, both mentally and in writing and paper, drawing on a range of calculation strategies
- ❖ recognise when it is appropriate to use a calculator and be able to do so effectively
- ❖ make sense of number problems, including non-routine/'real' problems and identify the operations needed to solve them
- ❖ explain their methods and reasoning, using correct mathematical terms in oral and written form
- ❖ 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

Implementation of Maths Policy

Foundation Stage

Our Foundation Stage teachers use the White Rose Early Years Curriculum to support their teaching of Mathematics. The children have the opportunity to talk and communicate in a widening range of situations and to practise and extend their range of vocabulary and mathematical skills. The children explore, enjoy, learn about and use Mathematics in a range of personalised situations. Mathematics is planned on a weekly basis and assessed using the criteria from Development Matters. Mathematics is taught both as a discrete subject and within the whole Early Years Curriculum as part of continuous provision to give children opportunities to use their mathematical skills in real life situations. Daily counting, songs and rhymes form part of our daily routines.

Within our daily continuous provision there are lots of opportunities for children to explore, develop and consolidate their mathematical understanding. This is based around topics, often based on books, or to support the development of particular areas identified. Tapestry holds information from nursery to reception. Evidence of children's progress is gathered through photographs, pictures and recordings of their mathematical play, as well as formal examples of adult led maths tasks.

The National Curriculum for Mathematics

Teachers plan according to the New National Curriculum Programme of study and the Primary Mathematics Framework. Teachers use this guidance, along with the White Rose Maths Hub, for their year group to produce planned units of work outlining objectives to be covered and expected outcomes for each lesson.

The National Curriculum sets out the statutory entitlement to learning for all pupils in each Key Stage. The programmes of study sets out what children should be taught. There is a balance of **fluency**, **reasoning** and **problem solving** within math lessons based on the principles of mastery

KS1	<ul style="list-style-type: none">▪ Number (Place Value, Calculations and Fractions)▪ Measurements▪ Geometry (Properties of Shapes and Position and Direction)▪ Statistics (Year 2)
Lower KS2	<ul style="list-style-type: none">▪ Number (Place Value, Calculations and Fractions)▪ Measurements▪ Geometry (Properties of Shapes and Position and Direction)▪ Statistics
Upper KS2	<ul style="list-style-type: none">▪ Number (Place Value, Calculations and Fractions)▪ Measurements▪ Geometry (Properties of Shapes and Position and Direction)▪ Statistics▪ Ratio and Proportions▪ Algebra

In Year 1, children are taught in their classes, with children being taught against the age appropriate Stage, unless the children are identified as SEN.

In Year 2-6, children are taught in streamed sets, to allow teaching and learning to be differentiated to best match the needs of the class and the individuals within it, using concrete, pictorial and abstract representations.

Strategies for Delivering Mathematics:

Please refer to our Calculation policy or the Amadeus Primary Academies Trust YouTube Channel.
<https://www.youtube.com/@amadeusprimaryacademiestru9797/videos>

Teaching Approaches

Teachers use a range of teaching strategies to engage the children in maths and ensure progress is made by all children within a class; no set formula is used. A week's maths lessons would include:

- Regular counting both within and outside a maths lesson.
- Learn its (based on Big Maths structure) and fact families
- Mental/oral starter
- New Learning - Both teaching input and pupil activities
- A balance between whole class, guided grouped and independent work, (groups, pairs and individual work
- Modelling with an adult
- Effectively differentiated activities/objectives and appropriate challenge.
- Embedded reasoning and problem solving using a range of resources such as STOPS, enrich, White Rose Hub, NCETM resources.
- Continual self-assessment
- Maths homework sent home for children to learn and tested weekly. Children move onto the next set of facts within the structure once they have mastered them for 2-3 weeks.

The focus on the development of pupil's spoken language is a crucial element in every mathematics lesson. In order to become able mathematicians, children need to develop the ability to discuss and justify mathematical strategies and concepts in both verbal and written form. Children need to be able to communicate and explain their reasoning as well as use the correct mathematical vocabulary appropriately. Teachers summarise and define key mathematical vocabulary to be used within the lesson to promote mathematical development. Teachers are expected to model and promote the use of mathematical vocabulary, thus allowing pupils to develop their own mathematical vocabulary and reasoning skills. Pupils should be able to read and spell mathematical vocabulary, at a level consistent with their word reading and spelling knowledge.

Assessment

Formative Assessment

Teachers integrate the use of formative assessment strategies such as effective questioning, clear learning objectives, the use of success criteria and effective feedback and response in their teaching. Within each lesson

Summative Assessment

Using half termly tests, pupils are assessed against the relevant NC objectives every half term. The school's progress tracking system, SONAR, is updated regularly. Progress meetings are held on a half term basis – refer to the Assessment Policy.

End of year tests are used at the end of KS1 and 2; teachers use past and sample papers to inform their assessments as they prepare pupils for these assessments.

All assessments and teaching informs teachers understanding of a child's ability in maths and this is recorded on Classroom Monitor.

Marking

Please refer to our school' Effective Feedback and Marking Policy.

Cross curricular

Opportunities are used to draw mathematical experiences out of a range of activities in other subjects, such as in PE, Science and Geography, to enable children to apply and use Mathematics in both real life and academic contexts and make links.

Inclusion

All children receive quality first teaching on a daily basis and activities are differentiated accordingly. Where identified, some pupils are considered to require targeted support to enable them to work to age appropriate objectives through Narrow the Gap (NtG) time. This should be clearly identified in the children's book. Intervention strategies are mentioned on Personal Learning Plan's and discussed with parents. Able pupils are planned for in line with our policy for teaching more able pupils. The needs of children with English as an additional language will be met through planning and support. This is supported by our EAL Policy.