Subject Leaflet for Maths

Vision Statement

Empowering children with confidence, curiosity, and the skills to excel in any mathematical challenge they encounter.

Intent – What we want

At Coppice Primary School, we aim to provide a curriculum rich Maths programme that embeds independence, confidence and competence. Maths Mastery being our school programme allows our children to develop mastery using at the heart of our curriculum. We aim to do this by supporting their understanding of Maths through our 3 dimensions of depth (mathematical thinking, language and communication and conceptual understanding).
At Coppice Primary School, if our pupils have a meaningful understanding of the maths they are learning, they will be able to represent it in different ways, use mathematical language to communicate related ideas and think mathematically with the concept. This will enable them to apply their understanding to a new problem in an unfamiliar situation.

Implementation – How we teach

At the centre of the mastery approach to the teaching of mathematics is the belief that all pupils have the potential to succeed. They should have access to the same curriculum content and, rather than being extended with new learning, they should deepen their conceptual understanding by tackling challenging and varied problems. Similarly, with calculation strategies, pupils must not simply rote learn procedures but demonstrate their understanding of these procedures through the use of concrete materials and pictorial representations.

Each Mathematics Mastery lesson is provided in a six-part lesson structure. The Dimensions of Depth underpin the six-part lesson. Each part provides opportunities to focus on conceptual understanding, language and communication and mathematical thinking for the mathematical concept being covered. The six-part lesson consists of:

- Do Now: This is a quick five-minute task that all pupils can access without any teacher input as an introduction to the mathematics lesson.
- New Learning: The New Learning segment introduces the lesson's main mathematical concepts.
- Talk Task or Let's Explore: The Talk Task or Let's Explore is a chance for all pupils to practise using mathematical vocabulary related to the lesson's concept.
- Develop Learning: This segment builds on the New Learning and develops a deeper understanding of the maths concepts of that lesson. It also addresses misconceptions or inaccuracies discovered during the preceding segment.
- Independent Task: The Independent Task provides pupils with the opportunity to practise the learning from that lesson. This may be independently and/or in pairs/small groups.
- Plenary: The Plenary segment recaps on the lesson, checking understanding and celebrating success

Progression of skills begins in EYFS and it's tracked all the way through to Year 6. EYFS complete a maths carpet session 4 times a week. They follow the 4 part model (excluding the plenary and develop learning) and they have a Maths focus every week. At the end of the half term, they have a Reflection week on all outcomes taught and consolidation on gaps in learning. Practical learning is evident in EYFS and they incorporate through the other 6 areas of learning. (Eg time, through art).

In KS1, as children are completing a 60-minute session, they do the whole 6 part lesson within that time. They begin to develop mastery skills by consolidating what they learned in EYFS and they continue to make concrete and pictorial representations of key concepts. By the time the children end Year 2, they should have a bank different representation that they can use as a foundation for more abstract techniques beginning in Year 3.

In LKS2, the progression then moves from concrete to pictorial and some abstract representations. This means that although children are able to use concrete representations, there is more of a focus on pictorial and then an application of abstract (written form).

By the time pupils get to UKS2 they have learned the progression from the 3 stages and this is where children start applying their learned representations into non-standard and unfamiliar contexts. Opportunities to consolidate learning is reinforced throughout the units and progresses from EYFS to Year 6. So that by the time children are at the end of UKS2, they are able to apply their skills to reasoning and problem solving questions.

Maths meetings are a vital part of the programme, used to consolidate key learning for 10-15 minutes 2/3 times a week outside of the maths lesson.
An important aspect of Mathematics Mastery is the daily Maths Meeting, which is used to consolidate key areas of mathematics in your class. Maths Meetings provide an opportunity to teach and revise 'general knowledge maths' which may not explicitly be covered during the maths lesson, and also allows the daily integration of maths into the surrounding environment. This means that pupils are practising concepts and skills on a regular basis, meaning they are continually building on their mastery of these concepts.

Impact – What we achieve

We gauge our impact in mathematics through several key indicators. Firstly, we monitor the academic progress of our students, tracking their improvement in mathematical concepts and problem-solving skills over time. This is through Target tracker and assessments all throughout the year. Assessments such as pre quizzes and post quizzes at the start and end of all Maths Units and then a formative written assessment at the end of each term.

Monitoring mathematics through book monitoring, pupil voice, and lesson observations provides invaluable insights into the impact of our teaching practices. By meticulously reviewing students' books, we can assess their understanding of mathematical concepts, identify areas of strength and weakness, and tailor our teaching strategies accordingly. We also provide bespoke interventions for children who are struggling with core concepts in Maths.

Pupil voice sessions allow students to express their thoughts, concerns, and preferences regarding their mathematics learning experience, enabling us to incorporate their feedback and enhance engagement.

Furthermore, through regular lesson observations, we can observe first-hand how pupils interact with mathematical content, assess their problem-solving approaches, and evaluate the effectiveness of instructional methods. These combined approaches not only help us measure progress and identify areas for improvement but also empower us to continuously refine our teaching practices, ensuring that every student at Coppice develops a strong foundation in mathematics and emerges as a confident and accomplished mathematician.

Rights Respecting

Article 13
Every child is free to say what they think as long as it is respectful and within the law.
Article 29
Education provides opportunities to develop every child's personality, talents and abilities to the fullest. It must encourage respect for human rights, different cultures and the environment.

Overview			
	Autumn	**Spring**	**Summer**
Reception	• Early mathematical experiences • Pattern and early number Numbers within 6 • Addition and subtraction within 6 • Measures • Shape and sorting	• Numbers within 10 • Calendar and time • Addition and subtraction • within 10 • Grouping and sharing • Number patterns within 15 • Doubling and halving Shape and pattern	• Securing addition and subtraction facts • Number patterns within 20 • Number patterns beyond 20 • Money • Measures • Exploration of patterns within number
Year 1	• Numbers to 10 • Addition and subtraction within 10 • Shape and patterns Numbers to 20 • Addition and subtraction within 20	• Time Exploring • calculation strategies within 20 • Numbers to 50 • Addition and subtraction within 20 • Fractions Measures: Length and mass	• Numbers 50 to 100 and beyond • Addition and subtraction Money Multiplication and division • Measures: Capacity and volume
Year 2	• Numbers within 100 • Addition and subtraction of 2-digit numbers • Addition and subtraction word problems • Measures: Length Graphs • multiplication and division	• Time Fractions • Addition and subtraction of 2-digit numbers • Money • Face, shapes and patterns; lines and turns	• Numbers within 1000 Measures: Capacity and volume • Measures: Mass Exploring calculation strategies • Exploring multiplicative thinking
Year 3	• Number sense and exploring calculation strategies • Place value • Graphs • Addition and subtraction • Length and perimeter	• Multiplication and division • Calculating with multiplication and division • Time • Fractions	• Angles and shape Measures • Applying multiplicative thinking • Exploring calculation strategies and place value
Year 4	• Reasoning with large numbers • Addition and subtraction • Multiplication and division • Discrete and continuous data	• Calculating with multiplication and division • Fractions • Time • Decimals • Area and perimeter	• Solving measures and money problems • Shape and symmetry • Position and direction • Reasoning with pattern and sequences 3-D shape

Year 5	● Reasoning with large whole integers ● Integer addition and subtraction ● Line graphs and timetables ● Multiplication and division Perimeter and area	● Fractions and decimals ● Angles ● Fractions and percentages ● Transformations	● Converting units of measure ● Calculating with whole numbers and decimals ● 2-D and 3-D shape ● Volume ● Problem solving
Year 6	● Integers and decimals ● Multiplication and division ● Calculation problems ● Fractions ● Missing angles and length	● Coordinates and shapes ● Fractions ● Decimals and measure ● Percentage and statistics ● Proportion problems	