Mathematics

Purpose and Aims

The maths curriculum provides children with a foundation for understanding the world, the ability to reason mathematically and a sense of enjoyment and curiosity about the subject. Through varied and increasingly complex problems, children learn that mathematics is a creative and inter-connected discipline that encourages enquiry, depth of thought and perseverance.

As mathematicians, pupils at the end of key stage two will be able to:

- Work fluently and accurately with the fundamentals of mathematics.
- Reason mathematically to develop a coherent justification of their ideas using relevant mathematical language.
- Solve problems with increasing levels of sophistication by breaking them down into a series of simpler steps.
- Approach unfamiliar concepts with a positive mindset, determination and the confidence to learn from mistakes.

For our Maths policy click here – Policies | Longwood Primary Academy and Nursery

Planning and Assessment

Short term planning follows a series of incremental 'small steps' based on the White Rose scheme of learning. Planning is adapted within each cohort in order to meet and challenge the varying needs of learners working at a range of levels.

Formative assessments include daily calculation lessons and completion of recap and recall tasks. The outcome of these encourages children to reflect upon the progress they are making alongside the areas they can develop further in the future.
Children are encouraged to view learning as an ongoing process and not an event.

Termly summative assessments are used to track children's progress. This is enhanced with gap analysis tools to allow subsequent lessons to be planned based on children's areas for development.

Organisation

The curriculum follows the EYFS Statutory Framework and the National Curriculum objectives.

Learning follows a series of 'small steps' designed to build conceptual knowledge incrementally across each Key Stage.

From EYFS upwards, mathematics is taught conceptually to develop a deeper level of understanding; not just the application of algorithms or memorisation of facts.
Spiralling within the curriculum allows opportunities to apply and refine concepts in new contexts and subject specific vocabulary builds and extends within and across units.

LTP and MTP

	Autumn	Spring	Summer
EYFS	Number (subitising, counting and composition) Comparing quantities Geometry: 2D shapes	Number (subitising, counting and composition) Number bonds Addition/Subtraction Measurement: Mass and capacity Doubles Odd and even Patterns Geometry: 3D shapes	Number (subitising, counting and composition) Number bonds Sharing/halving Measurement: Length and height Measurement: Time Geometry: Position Measurement: Money
Year 1	Number (Place value within 10) Addition and subtraction (within 10) Geometry: Shape	Number (Place value within 20) Addition and subtraction (within 20) Number (Place value within 50) Measurement: Length and height Measurement: Mass and volume	Multiplication and division Fractions Geometry: Position and direction Number (Place value within 100) Measurement: Money Measurement: Time
Year 2	Number (Place value) Addition and subtraction Geometry: Shape	Measurement: Money Multiplication and division Measurement: Length and height Measurement: Mass, capacity and temperature	Fractions Measurement: Time Statistics Geometry: Position and direction
Year 3	Number (Place value) Addition and subtraction Multiplication and division	Multiplication and division Measurement: Length and perimeter Fractions Measurement: Mass and capacity	Fractions Measurement: Money Measurement: Time Geometry: Shape Statistics

Year 4	Number (Place value) Addition and subtraction Measurement: Area Multiplication and division	Multiplication and division Measurement: Length and perimeter Fractions Decimals	Decimals Measurement: Money Measurement: Time Geometry: Shape Statistics Geometry: Position and direction
Year 5	Number (Place value) Addition and subtraction Multiplication and division Fractions	Multiplication and division Fractions Decimals and percentages Measurement: Perimeter and area Statistics	Geometry: Shape Geometry: Position and direction Decimals Negative numbers Measurement: Converting units Measurement: Volume
Year 6	Number (Place value) Addition, subtraction, multiplication and division Fractions Measurement: Converting units	Ratio Algebra Decimals Fractions, decimals and percentages Measurement: Area, perimeter and volume Statistics	Geometry: Shape Geometry: Position and direction Themed projects and problem-solving

*For more detail on objectives and sequencing please contact the school to look at the small steps documents for each term.

Enrichment

Units of learning in all year groups aim to follow a 'concrete, pictorial, abstract' approach to reveal concepts using a variety of resources, images and contexts that appeal to a range of learning styles.

Maths lessons are designed to be interactive and encourage children to be active learners through discussion, collaboration and refinement of their ideas.

Where appropriate, online tools are used to enhance knowledge both in school and as homework activities.

Children are encouraged to apply numerical, statistical, measuring and geometric skills through cross curricular links during lessons in other curriculum areas.