



Little Houghton CEVA Primary School
Curriculum Statement for the Teaching and Learning of Mathematics

Our Vision for Little Houghton CE Primary School

‘Learning for Life’

Through:

- ❖ **Growth – realising our potential**
 - ❖ **Community – sharing and contributing**
 - ❖ **Spirituality – reflecting and thinking deeply**
 - ❖ **Environment – appreciating local and global environments**
- So that each child can flourish – like a flower of the field (Psalm 103:15)**

Our curriculum vision is reflected in the mathematics curriculum through the key concepts of:

Fluency

Reasoning

Problem Solving

Fluency refers to the combined ability to recall mathematical facts and concepts without thinking and can be linked with our focus on **Growth** (realising our potential) and **Environment** (using what is available locally to support thinking and understanding).

Reasoning refers to the process of applying logical thinking to a situation to derive the correct problem-solving strategy and can be linked with our focus on **Community** (sharing and contributing through group discussion).

Problem-Solving refers to the mathematical process that requires a ‘solution’, which is the whole process of solving a problem, including the method of obtaining an answer and the answer itself. This can be linked with our focus on **Spirituality** (reflecting and thinking deeply).

Intent

At Little Houghton CEVA Primary School, we believe that our maths curriculum will create enthusiastic, creative and articulate mathematicians. Through a varied and inspiring curriculum, we aim to develop the children’s problem solving, resilience and reflective skills – skills that can easily transferrable across the curriculum.

Our intent is to develop a culture of deep understanding, confidence and competence in maths through ensuring that all children:

1. Become fluent in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that children develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.

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

3. 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. Mathematics is an interconnected subject in which children need to be able to move fluently between representations of mathematical ideas.

We build our mathematics around our four key curriculum drivers:

- ❖ Growth
- ❖ Spirituality
- ❖ Community
- ❖ Environment

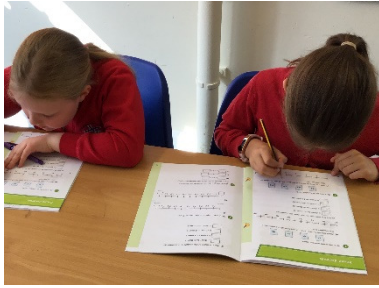


All children are encouraged to develop deep thinking and question the way in which the world works, promoting their spiritual growth. In maths lessons, children are always encouraged to delve deeper into their understanding of mathematics and how it relates to the diverse world and the community around them. Sequences, patterns, measures and ultimately the entire study of mathematics was created to make more sense of the world around us and our aim is to enable all of our children to use maths as a tool to explore these possibilities through the use of rich, inspiring and challenging mathematical tasks, within the indoor and outdoor environments.

Children are encouraged to discuss and share their mistakes in a safe and supportive environment. They are supported to discuss these misconceptions with their peers and staff alike in order to grow as mathematicians. Here at Little Houghton CEVA Primary School, we place oracy at the heart of our learning through shared work and class discussions. Use of appropriate vocabulary is modelled throughout lessons by both staff and children, allowing everyone to 'talk like a mathematician'. Once a child can articulate their understanding of a concept, they can truly begin to make connections within their learning and the wider world, enabling them to flourish.

Implementation

To help structure and plan our lessons, we use White Rose Maths schemes of learning to ensure firm foundations and sequence our learning, through the key concepts of fluency, reasoning and problem-solving.

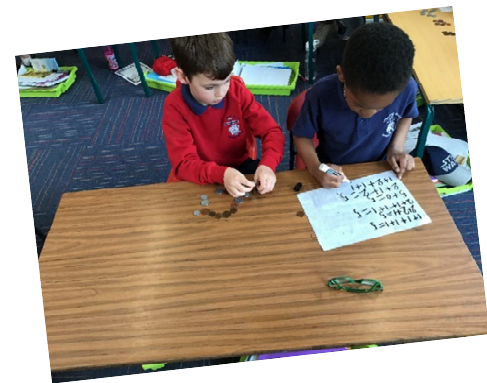
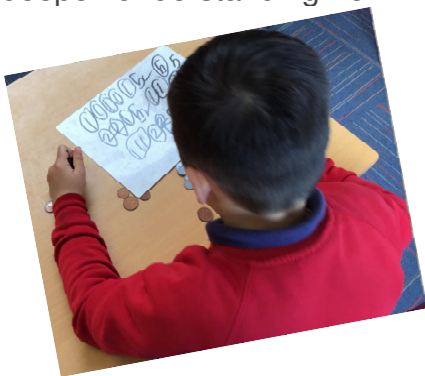


There is a distinct focus on number work. Children who have an excellent grasp of number make better mathematicians. Spending longer on mastering key topics will build a child's confidence and help secure understanding. We look to reinforce number fluency throughout the year. This is done as mental and oral starters or in additional maths time during the day.



Reasoning and problem solving are integral to the schemes and to our approach. We expect each lesson to have an element of applying knowledge and skills. It is through such activities that children see the real purpose of maths, and gain the most enjoyment and satisfaction.

Alongside the SOL, we use a range of rich resources to enhance our lessons and deepen understanding from websites such as NCETM and Nrich.



To supplement our learning here at Little Houghton, children have access to various learning platforms including Times Table Rock Stars.

By Year 4, children should be able to recall their multiplication facts up to 12×12 . To help them develop these skills, children can log on to Times Table Rock Stars using their username and password.

On Times Table Rockstars, children can practise their tables. They are then able to improve their Rock Speed and climb the Rockstar ranks! The online games reward children with virtual coins for each correct answer, which they enjoy spending on upgrading their personal rock avatar.

Children access this both at home and in school.

Impact

Teachers use formative assessment to evaluate the learning during a lesson. They may ask questions to check understanding, or scrutinise independent work in order to identify common misconceptions or share thinking. Such assessment allows teachers the flexibility to intervene in a lesson to remind, redirect or reteach children as required.

Regular marking of independent work allows teachers greater understanding of whether a concept has been grasped, and gives them the opportunity to feedback to children, to reinforce learning and to praise. It also allows them to reflect on the success of their own approach to delivering the lesson. In UKS2, children frequently self-mark and self-assess, thereby receiving immediate feedback on their learning.

Formal termly summative assessments, allow teachers to evaluate how individuals, groups and the class as a whole are progressing compared to national expectations. They also give an excellent opportunity to see what concepts may need to be given additional time, and to adjust planning accordingly. The data generated from these assessments, together with book looks, interviews with the children and learning walks gives the Maths Leader, Head teacher and governors the opportunity to see where strengths and weaknesses lie, where additional support may need to be focused and what training requirements there are.

Children that are more able have also had the opportunity to collaborate with other children at one of our feeder secondary schools after school on a weekly basis, which has provided excellent transition and the opportunity to be stretched and challenged alongside a new and wider peer group.

The combination of all of these systems, through the key concepts of **fluency**, **reasoning** and **problem-solving**, allows us to evaluate the impact of the maths curriculum in our school and facilitate further improvements in our curriculum.



