

Maths Policy 2022 - 2023

“The study of mathematics, like the Nile, begins in minuteness but ends in magnificence.” – Charles Caleb Colton

“Without mathematics, there’s nothing you can do. Everything around you is mathematics. Everything around you is numbers.” – Shakuntala Devi

Intent

At Pearson Primary School, we aim to ensure that all children:

* are capable of, and expected to, achieve high standards in Mathematics;
* become fluent in the fundamentals of Mathematics;
* are able to reason mathematically; and
* can solve problems by applying their Mathematical fluency and reasoning skills.

At Pearson Primary, these skills are embedded within Maths lessons and developed consistently over time. We are committed to ensuring that children are able to recognise the importance of Maths in the wider world and that they are also able to use their mathematical skills and knowledge confidently in their lives in a range of different contexts. We want all children to enjoy Mathematics and to experience success in the subject. We are committed to developing children’s curiosity about the subject, as well as an appreciation of the beauty and power of Mathematics.

Whilst we ensure children are taught the full breadth and balance of the mathematics curriculum, calculation and arithmetic skills are a key focus at our school. We ensure that all children are given an opportunity to practise these skills daily through the use of a ‘quick start’ activity.

Implementation

Every maths lesson at Pearson begins with a ‘quick start’. The purpose of these ‘quick starts’ is to develop rapid recall of basic number skills and calculation strategies.

All children are taught a mathematical skill using concrete, pictorial and then abstract presentation, progressing through each representation as appropriate. Our calculation policy ensures consistent use of language and a progressive approach. Children are assessed throughout lessons and re-grouped according to their need.

Teachers effectively model application of skills to the reasoning or problem solving activity so that any children that are secure with the fluencymove immediately on to applying their skills to reasoning and problem-solving activities. Children demonstrate that they have mastered the learning objective through the independent creation of new problem solving and reasoning questions for others in the class.

Those children who are not yet secure in the fluency, work alongside an adult to become secure at these skills but also access some of the reasoning and problem-solving tasks with the support of the adult or a peer. The expectation is that all children are taught to solve reasoning and problem solving mathematics at their academic level.

In the Foundation Stage, the White Rose planning documents are used to identify learning objectives. The objectives are then matched to a variety of activities to allow the children to achieve the objective, over a weekly period. Children record one activity per week in a mathematics book to support the assessment of mathematics and the progression of their number formation. Within the provision, fluency activities are provided in the maths area, and application activities are provided for reasoning and problem-solving within different areas of learning. These will cover either the current learning objective or previously taught objectives. As the year progresses, the children are supported to access maths challenges and discuss their reasoning with an adult, in readiness for Key Stage One.

In Key Stages One and Two, through quality first teaching, we aim to develop the principles underpinning the 2014 Mathematics curriculum. Our long-term plans follow the White Rose Hub units of study with adaptations made to the teaching order of the units. Teachers provide students with opportunities to develop fluency, reasoning and problem solving across the mathematics’ curriculum.

These following components characterise the Pearson approach to Mathematics and convey how the curriculum is implemented:

* The large majority of children progress through the curriculum content at the same pace.
* Differentiation is achieved by emphasising deep knowledge or through individual support and intervention.

It is an expectation that all children will reason, and problem solve, within the overwhelming majority of learning objectives. We ensure that children have access to concrete resources, pictorial representations, and abstract thinking in their fluency, reasoning and problem-solving. This helps children tackle concepts in a tangible and more confident way. Teachers use careful questions and sentence stems to draw out children’s discussions and their reasoning. Class teachers explicitly teach children how to apply their mathematical fluency and reasoning skills to solve mathematical problems. Children are equipped with sentence stems to support their verbal reasoning.

Impact

It is the responsibility of the subject leader to ensure that all staff implement the teaching sequences. This will be monitored through formal lesson observations, book looks, learning walks and formal assessments. Alongside this, the role of the subject leader also includes:

* To lead the development of Mathematics at Pearson Primary
* To raise standards in Mathematics through monitoring of the sequences of learning
* To prepare, organise and lead CPD for staff
* To work collaboratively with the SENDCO and SLT
* To maintain high quality teaching resources to support mathematical learning
* To keep up to date with new developments in mathematics
* To keep parents informed about any changes to the mathematical curriculum

Assessment

Formative assessment is used regularly within maths lessons and throughout sequences of learning. Pre-assessments and QLA’s for teaching units ensure sequences of learning are matched to the specific needs of the cohort. Assessment within lessons is used to accurately match work to the ability of the pupil. Teachers continue to assess during the lesson to allow for fluid grouping of children based on their needs. Termly assessments are used to track progress and retention across units of learning. The QLA’s for these are then used to identify children requiring further support or intervention so that all children make rapid progress toward their targets across the year.