Penshurst CE Primary School	
Mathematics Policy	
Date of Policy	October 2021
Review Date	August 2022

Mathematics is a creative and highly inter-connected discipline that has been developed over time. It is essential to everyday life, science, technology and engineering and necessary for financial literacy and most forms of employment.

Intent

At Penshurst CE Primary School, we provide a high-quality mathematics education, therefore providing a foundation for understanding the world, the ability to reason mathematically but also a sense of enjoyment and curiosity about the subject.

Using the National Curriculum for mathematics, we aim to ensure that all pupils:

- become fluent in the fundamentals of mathematics, 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, conjecturing relationships and 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

Scope of Mathematics

Mathematics is an interconnected subject in which pupils need to be able to move fluently between representations of mathematical ideas. At Penshurst CE Primary School, the maths curriculum is organised into distinct domains;

- Number and place value
- Addition and subtraction
- Multiplication and division
- Fractions, decimals and percentages
- Measures
- Geometry
- Statistics
- Algebra
- Ratio and proportion

Pupils are supported to make connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly challenging problems. Pupils have the opportunity to apply their mathematical knowledge to science and other subjects.

Implementation

The expectation at Penshurst CE Primary School is that most pupils in a class will move through the programmes of study at broadly the same pace having mastered each concept. The use of a 'concrete-pictorial-abstract approach' will facilitate this.

Decisions about when to progress will be based on the of pupils having a secure understanding and their readiness to progress to the next stage. Pupils who grasp concepts rapidly should be

challenged by being offered rich and sophisticated problems before any acceleration through new content. Those who are not sufficiently fluent with earlier material should have the time to consolidate their understanding, including through additional practice, before moving on.

Impact

We consider accurate and focused assessment as the cornerstone of high quality teaching. It allows learning to be planned and taught accurately as well as meeting the needs of the children and ensuring high levels of expectation and support.

The culture at Penshurst CE Primary School is one of continually using what we know in order to move on children's learning. This formative assessment happens all the time and may not necessarily be recorded. Teachers and other adults will use the information gathered through formative assessment to address gaps and to provide additional challenge for children as required and appropriate. This is most effective when done immediately and at the point of learning.

More formal summative assessments may take place at the end of a domain of work but always at the end of Terms 1, 3 and 5 to identify progress and attainment as well as gaps in learning. The end of term assessments should be conducted in examination conditions (if appropriate for the year group) to provide independent data.

Key Elements of Successful Teaching, Learning and Assessment In Mathematics:

- Work is planned around learning, not activities
- Teachers and other staff have consistently high expectations of what each pupil can achieve, including most highly attaining and disadvantaged pupils meaning that learning opportunities are maximised for all learners
- Teachers and other staff have a secure understanding of the age group they are working with and have relevant subject knowledge that is detailed and communicated well to pupils
- Assessment information is used to plan appropriate teaching and learning strategies, including to identify pupils who are falling behind in their learning or who need additional support, enabling all pupils to make good progress and achieve well
- Work is differentiated, demanding and challenging enough for all pupils
- The contribution of Teaching Assistants has a significant positive impact on children's progress
- Children demonstrate the characteristics of effective learning and positive learning behaviours
- Well-being and involvement in learning are high
- Progress over time is very good (in books and assessment information)
- Achievement is high overall and ensures that the school meets government baseline standards.
- High quality of work and presentation in books. There must be consistency in approach, expectation, standards, attainment and rates of progress.

Supporting Pupils with SEND

The maths curriculum is adapted and differentiated to meet the needs of all learners including those with SEND. Where a pupil has gaps in their learning they have a Personalised Plan which details the support and approach to learning to be implemented.