



Godolphin Primary School Maths Policy

2022 - 2023

Equality Impact Assessment

| | |
|---|---|
| The EIA has not identified any potential for discrimination or adverse impact and all opportunities to promote equality have been taken.* | ✓ |
| The EIA has not identified any conflict with the Trust's co-operative values and the Church Schools' values. | ✓ |
| Adjust the policy to remove barriers identified by the EIA or better promote equality. | ✓ |

*Inclusive of protected characteristics

| Provenance | Date |
|----------------|---------------|
| Implementation | November 2022 |

| Review Date |
|----------------------------|
| Next review: November 2023 |

Intent

We understand that our learners come from a wide variety of backgrounds with varying exposure to mathematical concepts and practical experience. As a result, they require robust and clear progression through mathematical concepts and support with learning. The goal of our Maths teaching is to deliver the core aims of the National Curriculum - both in the mathematics lessons and across the curriculum as a whole. Our children will be taught to be confident, successful and proficient mathematicians who can apply their Maths to other contexts and situations. We want our children to leave Primary school 'Secondary ready', with excellent foundations for future learning.



Implementation

Mathematics at Godolphin 2022-2023

At Godolphin Primary School, we use White Rose Maths schemes of learning, and a modified version of their resources in order to provide a comprehensive and expertly designed journey through the world of Mathematics. At Godolphin Primary School we have adopted a Mastery approach to Maths and follow the White Rose maths curriculum and long-term plan, using additional lesson resources, including Deepening Understanding and Nrich, to consolidate learning.

White Rose is based on a small steps approach that keeps all learners together. By using the resources across the school we can ensure consistency of the mathematical elements and comprehensive coverage of the curriculum. We believe that this approach will facilitate consistent delivery of Mathematics across the school and across the inevitable ability range within year groups. It is also designed to support mathematicians who require more time and visual representation to grasp fundamental concepts and those who require challenging further to achieve Greater Depth.

Teachers follow the school's Calculation Policies and consider which pupils would benefit from a Concrete, Pictorial, or Abstract approach in each lesson, either through instruction for all pupils, or as a scaffold or support for some. Teachers plan for the introduction of specific mathematical vocabulary. Teachers keep a record of curriculum coverage and ensure that all objectives are covered.

White Rose Resources support us to provide:

- CPA (Concrete / Pictorial / Abstract) representations.
- Variation (Procedural / Conceptual).
- Logical and effective small steps.
- Vocabulary.
- Manipulative usage.

White Rose resources support:

- All learners through a whole class learning approach.
- EYFS stage learning.
- Visual representation designed to show concepts clearly.
- Re-visiting concepts.
- Bar models and PPW models for problem solving.
- Clear progression of calculation.
- Fluency of calculation and concept with 'Flashback 4' questions

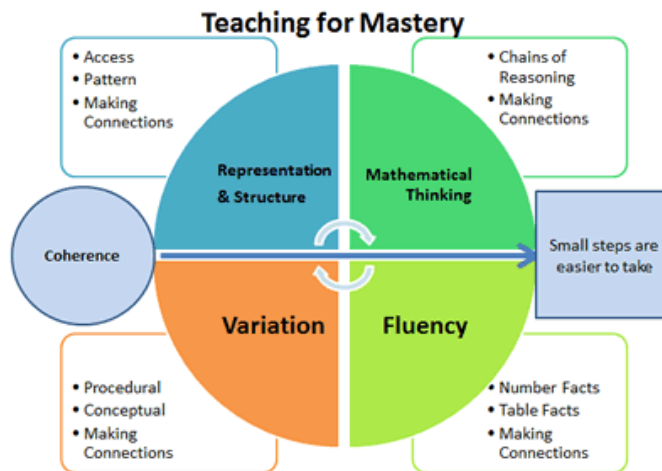
Manipulatives are:

- Used purposefully and appropriately.
- They are available for appropriate lessons – this builds a mental picture of a mathematical concept.



- Manipulative use develops through concepts as the learner moves from EYFS to Y6.

White Rose uses the Teaching for Mastery model as illustrated below. This has been developed by the NCETM.




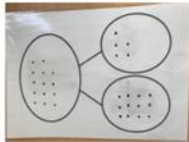
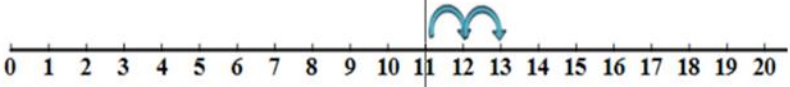
Concrete – Pictorial – Abstract teaching strategy

Children are encouraged to solve problems each day through the use of concrete resources, pictorial representations and abstract thinking. (Outlined below)

Concrete is the ‘doing’ stage, using concrete objects to solve problems. It brings concepts to life as children have the opportunity to be hands-on and use physical objects to aid them in developing their understanding.

Pictorial is the ‘seeing’ stage, where representations of the objects are used to support learning. This stage encourages children to make a mental connection between the physical object and abstract levels of understanding, by drawing or looking at pictures, circles, diagrams or models which represent the objects in the problem.

Abstract is the ‘symbolic’ stage, where children are able to use abstract symbols to model and solve Maths problems.

| Concrete | Pictorial | Abstract |
|---|---|--|
|  <p>Using resources to investigate the creation of numbers up to 20. First steps to bridging.</p> <p>Using place value - counting on in ones, using a number line, bead string and 100 square etc.</p> | <p>Drawing images to reflect concrete representations</p>  <p>Start with the larger number and count on.</p> | <p>Writing the number sentences to support pictorial</p> <p>$9 + 5 = 14$</p>  |



Other elements

Fluency -Number facts

It is critical that children know the number facts in line with their year group and the maths they are learning. Without secure number facts, learners have to spend too much processing time calculating rather than investigating and practising new concepts. Subsequent years build on that experience. At Godolphin Primary School, we use several teaching approaches and resources to support the learning of mental strategies including One Minute Maths (White Rose), Times Table Rock Stars/Num Bots, Interactive Resources and 99 Club.

EYFS

EYFS follow White Rose – principally securing the representations of numbers up to 10 and recognising numbers to 20. Children are encouraged to spot patterns and identify differences through variation. EYFS children begin their fluency journey by noticing and recalling numbers up to 20. EYFS practise is predicated on exploration and discovery with songs and repetition to secure foundational knowledge.

Impact

Through the White Rose learning journey and the clear small steps approach, the teachers, support staff and the pupils assess their learning continuously throughout the lesson.

Assessment for Learning is fundamental to raising standards and enabling children to reach their potential. Assessment in Mathematics takes place daily using a range of strategies such as marking and feedback of work and verbal discussions with children.

Assessment of learning is formally completed through a pre and post assessment created by the White Rose Maths Hub for every teaching block. At the end of the term an assessment is also completed which reviews the whole term's objectives. Teachers use assessment information to inform their future planning.

Children's progress is monitored using our tracking system. This data is used by the class teacher, Mathematics subject leader, SENCO and Headteacher to review children against Age Related Expectations based on their Key Stage starting points. Children who are not on track or are vulnerable to falling behind are identified during Pupil Progress meetings. Barriers to learning are identified, targets are set focusing on next steps, and interventions are planned and delivered.

The Maths Subject Leader is responsible, alongside the Headteacher, in delivering the Maths action plan and relevant sections of the School Development Plan. The Governing Body will appoint a Link Governor who is responsible for monitoring progress against the action plan and reporting to the Governing Body.