

Maths

'I like maths that is tricky but I always believe I can do it'

Year 3 pupil interview

*We are all part of God's vine and are rooted in His rich soil.
We are nurtured and supported so that we may grow and spread out into the world
to love and to serve.*

CURRICULUM STATEMENT

Our intention at Goring Church of England Primary School is to engage, inspire and challenge pupils mathematically to calculate and solve problems across a variety of contexts whilst becoming fluent and accurate with efficient strategies. Children are able to use the relevant mathematical vocabulary when discussing problems and explain the process they have used.



OUR KEY AIMS

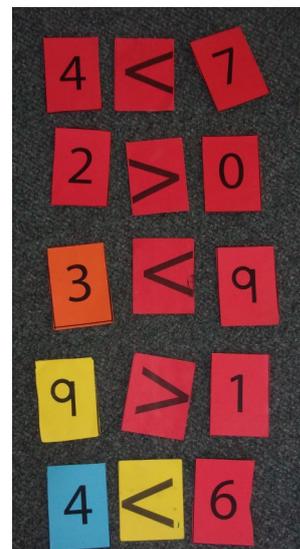
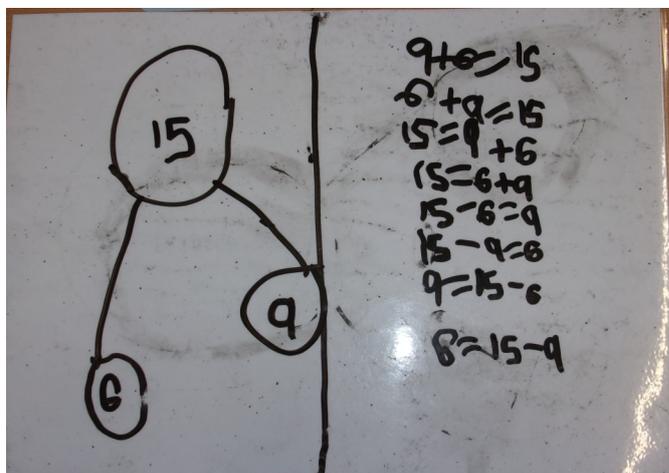
- To make learning meaningful and memorable for all children.
- Fluent knowledge and recall of number facts and the number system.
- Fluency in performing written and mental calculations and mathematical systems.
- The ability to show initiative in problem solving in a wide range of contexts, including the new or unusual.
- An understanding of mathematical vocabulary, the important concepts and an ability to make connections within mathematics.
- The ability to think independently and to persevere when faced with challenges and learn from mistakes.

MATHS

At Goring Church of England Primary School, we have a passion for maths. We recognise the value that being a confident mathematician can have on a child's life.

We follow the White Rose Maths scheme which we supplement with additional high quality resources. The scheme builds on concepts each year, developing in complexity and reinforcing previous learning. Topics covered include:

- place value
- four operations (addition, subtraction, multiplication and division)
- fractions, decimals and percentages
- measurement and calculation of perimeter, area and volume
- shape, position and direction
- algebra.

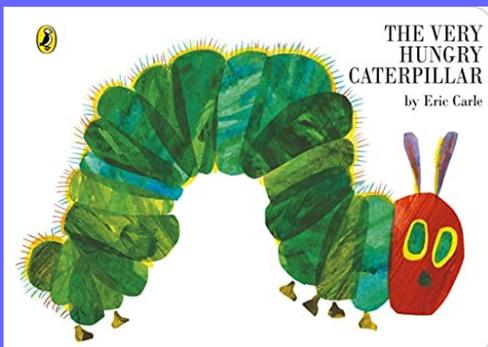
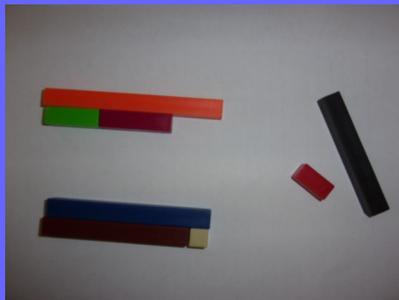
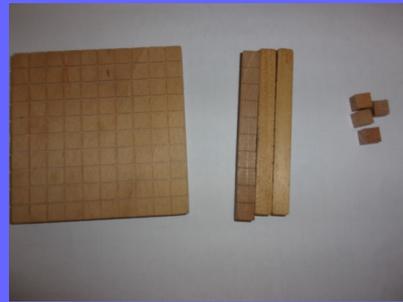
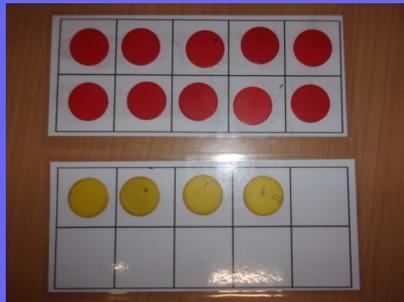


CONCRETE, PICTORIAL, ABSTRACT APPROACH

- Concrete—using physical objects to solve maths problems
- Pictorial—using drawing and pictures to solve maths problems
- Abstract— solving maths problems using only numbers

Concrete manipulatives are a fundamental part of maths teaching to enable a deep understanding of mathematical concepts. Children use concrete resources to investigate and develop their understanding. They move on to pictorial representations of concrete resources before solving calculation using just the abstract ideas. Stories are used to explain mathematical concepts where appropriate.

RESOURCES USED TO SUPPORT TEACHING

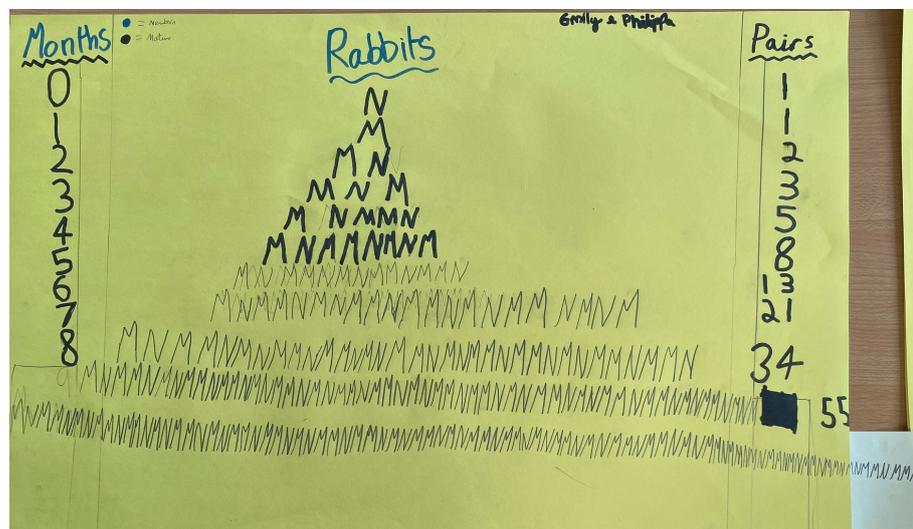
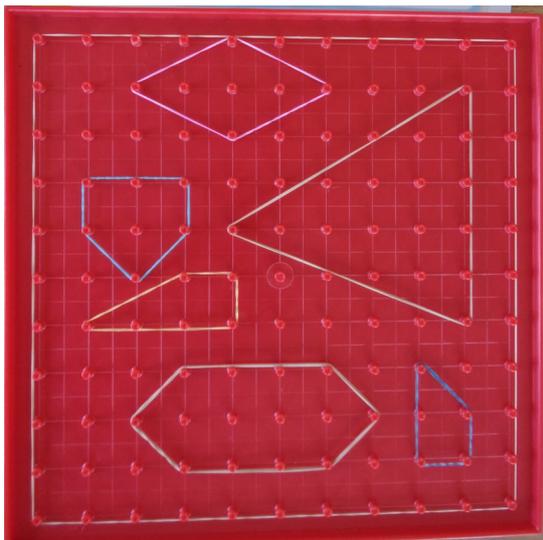


FLUENCY, REASONING AND PROBLEM SOLVING

We teach fluency for each concept to ensure children understand and have time to practice their skills. They learn key mathematical facts and are able to recall facts accurately and quickly.

Reasoning allows children to take the skills they have learned and apply them to solve problems. It teaches them to apply logical thinking to find the best problem solving strategy for a question and then to find the solution.

Problem solving is a skill in itself, which is taught within maths lessons. It allows the children to use the mathematical knowledge and skills already learned to solve problems which are unfamiliar.



WHAT DOES THIS LOOK LIKE?

Our children:

- Take pride in their work and their maths is clearly and neatly laid out.
- Are able to select the most efficient calculation methods to answer the questions.
- Make use of self-marking to assess understanding during the lesson.
- Transfer their mathematical knowledge to solve problems in other areas of the curriculum.

Our learning environment:

- Maths displays show mathematical vocabulary and topic related information.
- Working walls show teacher and pupil modelled solutions to problems.
- Pictorial displays provide resources to support calculations.
- Concrete apparatus to support current maths topic is available to all children in all lessons.

Our children's Maths books:

- Demonstrate excellent presentation skills with a date and learning objective written at the start of each piece of work.
- Demonstrate clear evidence of learning over time and show that learning is suitably challenging.
- Show evidence of fluency, problem solving and reasoning in all areas of maths.
- Show that children are given opportunities to correct calculations and are given support to understand any misconceptions.

ENRICHMENT OPPORTUNITIES

Goring Church of England Primary School has a diverse enrichment offering for all children. Classes go on a range of trips and visits which encourage the children to use and apply their mathematical thinking, including in the contexts of coding and problem solving.

Every year we take part in National Numeracy Day and a locally organised maths competition.

We host Maths INSET training to provide all our staff with ideas and inspiration to support their teaching.



CONTRIBUTING TO THE WIDER WORLD

We believe that everybody plays an essential role in their community and it is important that we teach children how to contribute. In maths, children learn to show initiative in solving problems, including the new and unusual, and to think independently and show perseverance.

ASSESSMENT, MONITORING & MEASURING IMPACT

MARKING AND FEEDBACK

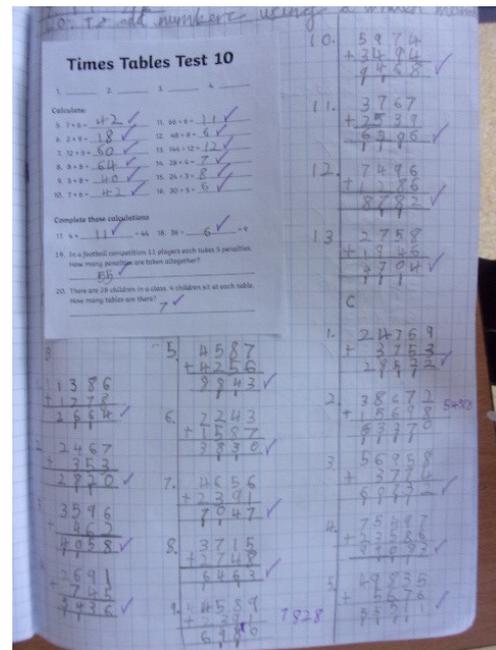
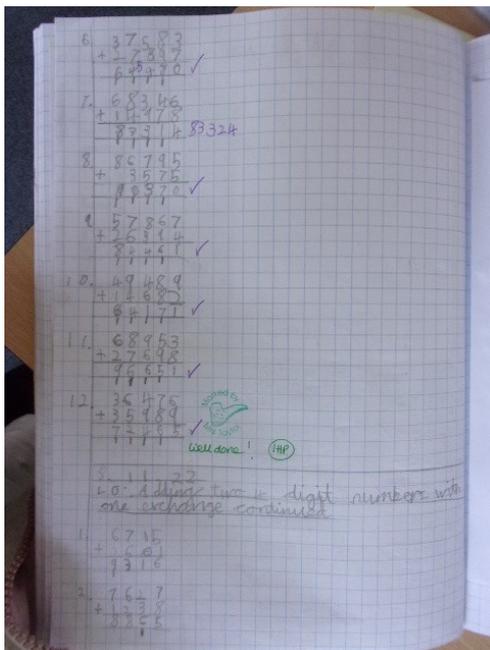
Children are given regular and meaningful written and verbal feedback. When written feedback is given, children are given time to respond so that they are clear about their next steps.

ASSESSMENT FOR LEARNING OPPORTUNITIES

Teachers make use of differentiated questioning and mini and end-of-lesson plenaries to gauge individual and whole class understanding.

SELF AND PEER ASSESSMENT

When appropriate, children make use of self and peer assessment. Children will regularly mark their own work and make corrections using purple pen. Children are encouraged to reflect on their learning and understanding at the end of lessons or maths units.



BOOK MONITORING

Children's maths books are looked at regularly by all teachers during staff meetings. This allows teachers time to reflect on their practice and to learn from one another. The senior leadership team takes this opportunity to ensure outcomes are in line with expectations and that there is consistency across the school.

DEEP DIVES

The maths co-ordinator completes regular deep dives. These provide an opportunity to observe lessons, talk to children, review planning and teaching and review strengths and areas for improvement across the school. After a deep dive is completed, a report is written and shared with staff and governors. Any actions that are required are then implemented in a timely fashion.

DATA

Summative data is collected three times a year. This data is analysed in order to identify any trends or actions needed. National Statutory Assessments (Reception Baseline, Year 4 Times Table Test, KS1 and KS2 SATs) also provide valuable summative data which is shared with parents.

