



# Maths

## INTENT, IMPLEMENTATION AND IMPACT

### What makes a Dore Primary mathematician?



### INTENT

At Dore Primary School, it is our intention that children develop solid mathematical foundations resulting in them becoming confident mathematicians. Children engage with daily, high quality mathematical experiences, which support their ability to make links and connections between mathematical concepts, develop their reasoning and problem solving skills and improve the fluency of their number fact recall. Mathematics is embedded across many foundation subjects allowing children to have a love and appreciation of how maths is a fundamental aspect of their lives both in and out of school.

As the children progress through school, their confidence with key mathematical concepts develops allowing them to be **creative** when solving different mathematical challenges. Children are given the independence and **resourcefulness** to support their understanding of Maths, using concrete, pictorial and abstract methods. Their experience of using manipulatives throughout all year groups in school underpins this level of independence.

We enable children to take pride in their learning and have the **resilience** to be active problem solvers, who understand that trial and improvement is an integral part of learning. By working collaboratively, children at Dore become empathetic teachers to their classmates demonstrating a level of **kindness** which in turn enhances their own understandings.

**At Dore Primary School, we aspire to help children develop into excellent mathematicians by building progressively each year on the following key concepts:**

1. **Know and use numbers**  
This concept involves understanding the number system and how they are used in a wide variety of mathematical ways.
2. **Add and subtract**  
This concept involves understanding both the concepts and processes of addition and subtraction.
3. **Multiply and divide**  
This concept involves understanding both the concepts and processes of multiplication and division.
4. **Use fractions**  
This concept involves understanding the concept of part and whole and ways of calculating using it.
5. **Understand the properties of shapes**  
This concept involves recognising the names and properties of geometric shapes and angles
6. **Describe position, direction and movement**  
This concept involves recognising various types of mathematical movements.
7. **Use measures**  
This concept involves becoming familiar with a range of measures, devices used for measuring and calculations.
8. **Use statistics**  
This concept involves interpreting, manipulating and presenting data in various ways.
9. **Use algebra**  
This concept involves recognising mathematical properties and relationships using symbolic representations.



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### IMPLEMENTATION

#### How do we implement our Maths curriculum?

1. Across the whole school, within our daily Maths lessons, Dore Primary use a combination of concrete, pictorial and abstract approaches, to develop the firm foundations.
2. White Rose Maths is used as a framework to provide clear progression and coverage of all key concepts as well as opportunities to use and apply their learning in a range of contexts.
3. Fluent knowledge and recall of number facts and the number system are given high priority. Each year groups has been assigned a set of non-negotiables relating to number fluency.
4. Just in Time intervention is accessed by all children as and when they need it, to support their understanding. This ensures that gaps in learning are addressed promptly, this usually includes the use of structured imagery to address misconceptions.
4. Times Table Rockstars is regularly used and celebrated across Key Stage 2. Teachers set appropriate Times Tables based on individual children's requirements.
5. Children are given the opportunity to select their own suitable level of challenge through the chilli challenge approach that we adopt in our Maths lessons. The ability to show initiative in solving problems in a wide range of contexts, including the new or unusual.
6. Dore Primary School's SPADE approach (Show It, Prove It, Apply It, Detect It, Explain It), provides the opportunity to develop high quality reasoning skills at all levels.
7. Teachers and parents access Dore Primary's Calculation Policy to allow consistent methods to be used throughout school.
8. Mathematical vocabulary is clearly displayed in all classrooms, teachers ensure that they plan for and use a wide range of vocabulary when teaching different strategies.
9. When planning for progression within the Foundation Subjects, consideration is always given to Maths, e.g. Geography, Science.
10. Dore Primary encourages resilience through appreciating the value of learning from mistakes and false starts. Children regularly use a red pen to correct their own learning.

P4C	Maths supports pupils' cultural understanding by developing an appreciation that mathematics, its language, symbols and thinking have developed, and continue to develop, from many different cultures around the world: e.g. Egyptian, Indian, Islamic, Greek and Russian roots.
TASC	The TASC model is embedded in the problem solving aspect of Maths. When approaching a new problem, children give consideration to prior learning, successful strategies and efficient methods to find the solution.
Outdoor Learning	Across all year groups, teachers will make explicit links between what is learnt in maths lessons and the world outside the classroom. To demonstrate and to allow the children to work out for themselves that Maths is a key part of everyday life - e.g. measurement, direction, being able to use knowledge of space, shape and measure.

### IMPACT

1. All children to achieve their potential and develop the confidence required to enjoy Maths.
2. All children to have an understanding of the important concepts and an ability to make connections within mathematics.



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3. A broad range of skills in using and applying mathematics.
4. Fluent knowledge and recall of number facts and the number system, reducing cognitive load and allowing children to focus on the bigger ideas in Maths.
5. The ability to show initiative and resilience in solving problems in a wide range of contexts, including the new or unusual.
6. The ability to think independently and to persevere when faced with challenges, showing a confidence of success.
7. The ability to embrace the value of learning from mistakes and false starts.
8. The ability to reason, generalise and make sense of solutions, in a clear and articulate manner.
9. Fluency in performing written and mental calculations and mathematical techniques.
10. Children are able to use and understand a wide range of mathematical vocabulary.