

**Maths**

## Intent, Implementation &amp; Impact

At Wingrave Church of England School, our aim is that all learners should become fluent in the fundamentals of mathematics and should be able to reason mathematically and solve problems by the application of their mathematical understanding. We endeavour to ensure that children develop an enthusiastic and creative attitude towards mathematics that will stay with them throughout their lives.

Through a Mastery approach, we aim to:

- develop mathematical competency and skills and understanding across key concepts,
- develop fluent mathematicians who are confident and able to apply their mathematical knowledge to a variety of problems,
- develop pupils' ability to reason about mathematical concepts and make connections within the mathematics programme of study, the whole school curriculum and the wider world,
- develop independent problem solvers who perseveres, take risks in their learning, and challenge themselves,
- foster an enjoyment of mathematics and create critical thinkers

By building confidence, resilience and a passion for maths, we can show that whatever their prior experience or preconceptions, maths is an exciting adventure that everyone can enjoy, value and master!

Maths is taught in line with the National Curriculum following the White Rose Scheme of Learning. We teach Maths for Mastery so that pupils develop a deep and adaptable understanding of the subject. Mastery implies being able to use one's knowledge appropriately, flexibly and creatively and to apply it in new and unfamiliar situations.

Through careful planning and preparation, we aim to ensure that children are given opportunities for:

- practical activities and mathematical challenges,
- problem solving,
- individual, group and whole class discussions and activities,
- open and closed tasks,
- a range of methods of calculating e.g. mental, pencil and paper and using a calculator.

We encourage our pupils to become independent learners and to take responsibility for their own learning. Children are always encouraged to challenge themselves, understanding that we learn from mistakes. In Upper Key Stage Two, it is regular practice for pupils to mark their own work and are expected to identify where and how mistakes have been made. Across the school, all children have regular opportunities to explain their reasoning verbally.

At the point in which children have secured their expectations in certain areas of the Maths Curriculum, their thinking is challenged and extended through open ended, higher order questioning and problem-solving activities.

To underpin our Maths curriculum, we use the White Rose Maths resources which correlate with our views around the important of problem solving, reasoning and appropriate challenge. In this way we can monitor expectations and progress of both skills & knowledge within mathematical elements across the whole school whilst using other materials and resources as appropriate to enhance learning further.

These elements are:

- Place Value – Use & compare, problems & rounding
- Addition & Subtraction – Recall, represent & Use, Calculations, Solving Problems
- Multiplication & Division - Recall, represent & Use, Calculations, Solving Problems, Combined Operations
- Fractions – Recognise & Write, Compare, Calculations, Solve Problems
- Decimals - Recognise & Write, Compare, Calculations & Problems
- Fractions, Decimals & Percentages
- Ratio & Proportion
- Algebra
- Measurement – Using, Money, Time, Perimeter/Area/Volume
- Geometry – 2D Shapes, 3D Shapes, Angles & Lines, Position & Direction
- Statistics – Present & Interpret, Solve Problems,

### **Impact**

Through first quality teaching, guidance and effective feedback, children at Wingrave school will be able to:

- Clearly explain their reasoning and justify their thought processes
- Have the flexibility and fluidity to move between different contexts and representations of mathematics
- Have the ability to recognise relationships and make connections in mathematics
- Quickly recall facts and procedures
- Develop a positive view of maths due to learning in an environment where maths is promoted as being an exciting and enjoyable subject in which they can investigate and ask questions; they know that it is reasonable to make mistakes because this can strengthen their learning through the journey to finding an answer.
- Recognise that maths is a vital life skill that they will rely on in many areas of their daily life.
- Leave Wingrave school at the end of KS2 prepared for the next step in their mathematical education.

“The Kingdom of Heaven is like a tiny mustard seed planted in a field. It is the smallest of all seeds but becomes the largest of plants, and grows into a tree where birds can come and find shelter.”

**Matthew 13:31-32**

Summative assessments take place at the end of each term (PUMA and KS1/2 SATs in May) and children's progress and attainment is discussed with senior leaders in termly pupil progress meetings.

Formative assessment takes place daily and teachers adjust planning accordingly to meet the needs of their class.

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	Autumn Term	Spring Term	Summer Term
EYFS			
1	Number: Place Value (within 10) Number: Addition and Subtraction (within 10) Geometry: Shape	Number: Place Value (within 20) Number: Addition and Subtraction (within 20) Number: Place Value (within 50) Measurement: Length and Height Measurement: Mass and Volume	Number: Multiplication and Division Number: Fractions Geometry: Position and Direction Number: Place Value (within 100) Measurement: Money Measurement: Time
2	Number: Place Value Number: Addition and Subtraction Geometry: Shape	Number: Money Number: Multiplication and Division Measurement: Length and Height Measurement: Mass, capacity and temperature	Number: Fractions Number: Time Statistics Geometry: Position and Direction
3	Number: Place Value Number: Addition and Subtraction Number: Multiplication and Division	Number: Multiplication and Division Measurement: Length and Perimeter Number: Fractions Measurement: Mass and Capacity	Number: Fractions Measurement: Money Measurement: Time Geometry: Shape Statistics
4	Number: Place Value Number: Addition and Subtraction Measurement: Area Number: Multiplication and Division	Number: Multiplication and Division Measurement: Length and Perimeter Number: Fractions Number: Decimals	Number: Decimals Measurement: Money Measurement: Time Geometry: Properties of Shapes Statistics Geometry: Position and Direction
5	Number: Place Value Number: Addition and Subtraction Number: Multiplication and Division Number: Fractions	Number: Multiplication and Division Number: Fractions Number: Decimals and Percentages Measurement: Perimeter and Area Statistics	Geometry: Properties of Shape Geometry: Position and Direction Number: Decimals Number: Negative numbers Measurement: Converting Units Measurement: Volume
6	Number: Place Value Number: Addition, Subtraction, Multiplication and Division Number: Fractions A and B Measurement: Converting units	Ratio Algebra Number: Decimals Number: Fractions, Decimals and Percentages Measurement: Perimeter, Area and Volume Statistics	Geometry: Properties of Shape Geometry: Position and Direction  Themed projects, consolidation and Problem Solving

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