



*Be watchful. Stand firm in your faith. Be strong. Be courageous. And let everything you do be done in love. 1 Corinthians 16: 1*

## Maths - July 2021

**Intention** Mathematics teaches children how to make sense of the world around them through developing their ability to calculate, reason, solve problems and use number. It helps children to understand relationships and patterns in both number and space in their everyday lives. The Mathematics curriculum provides breadth and balance and is relevant and differentiated to suit the needs of all children in the modern world. It should be flexible, motivate all pupils and encourage success at all levels.

### Aims and objectives

#### Aims:

For all pupils to develop:

1. A belief that they can achieve
2. An understanding of the importance of mathematical skills in everyday life.
3. A secure understanding of the important concepts and an ability to make connections within mathematics.
4. A fluent knowledge and recall of number facts and the number system.
5. The ability to think independently and to persevere when faced with challenges.
6. The ability to embrace the value of learning from mistakes.
7. The ability to reason, generalise and make sense of solutions.
8. A wide range of mathematical vocabulary.
9. Fluency in performing written and mental calculations and mathematical techniques.
10. The ability to use and apply mathematics across the maths and wider curriculum. .

#### Principles of learning:

1. Every child can be a mathematician.
2. The ability to succeed is not fixed and this is clear in both lesson design and class teaching.
3. A Concrete, Pictorial and Abstract (CPA) approach enables children to see the maths to understand it.
4. Depth of understanding before breadth.
5. Use of pre and post assessments to enable pupils to consolidate understanding and close the gap.
6. High expectations for all learners to succeed.

### Implementation

#### Implementation of the Mathematics Policy

#### Planning:

LTP's plot the sequence of learning throughout the year.

- Priorities for learning are identified for each term.

MTP's identify the sequence of learning for each unit of work:

- picking out the small cohesive step.
- identifying and planning for misconceptions.
- identifying key mathematical vocabulary.

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- planning in specific representations and structures.

Daily lessons:

- build on from what has previously been taught.
- Focus on one small step.
- identify the key questions to develop understanding

### **FS organisation**

Our Reception teachers follow the Early Years Foundation Stage Curriculum Objectives when teaching Mathematics.

### **National Curriculum for Mathematics**

Currently, our KS1 and KS2 teachers use the White Rose as a base for their LTP, which is aligned with the National Curriculum 2014, to support their planning and delivery of Mathematics teaching. This is then supplemented with Maths No Problem, Classroom Secrets, Twinkl, Nrich and the NCETM materials.

### **Organisation**

Children are taught Mathematics for a minimum of four 1 hour sessions in mixed ability class groups.

### **Calculation Policy**

Our teachers follow the models set out in the National Curriculum 2014. These have been discussed in a staff meeting and a record of the methods are available in the Whiterose Hub resources.

### **What learning looks like:**

1. Teaching whole class together enables all children to access the learning.
2. Children are not ability grouped as continuous AfL is used to identify strengths and need for support.
3. Small focus of learning for the lesson builds on prior learning.
4. Learning can start with a problem to contextualise the maths and to give it a purpose.
5. Precise and accurate mathematical language is used by both adults and pupils.
6. Questions are planned to challenge thinking and to develop understanding.
7. Children are encouraged to answer in full sentences to explain their thinking.
8. STEM sentences are used to support learning and expose connections.
9. Choral and rehearsing of key points help pupils to internalise learning.
10. Discussion plays a key part within lessons as pupils are given time to put into words their thinking to develop their reasoning.
11. Concrete – Pictorial – Abstract (CPA) representations are planned in carefully to ensure children can ‘see’ and therefore understand the math rather than just following a procedure.
12. A ping pong style lesson style allows knowledge to be developed under close support.
13. ‘I do’, ‘We do’, ‘You do’ approach is used to model and scaffold the learning.
14. Common misconceptions are addressed and planned for to draw attention to the key learning.
15. Conceptual variation ensure children can transfer skills from one context to another.
16. Procedural variation encourages children to look for connections in their learning.
17. Children are actively encouraged to seek for patterns and share what they notice within their learning.
18. Independent learning enables children to apply their new skills and knowledge
19. Children who understand the learning are encouraged to deepen their understanding.
20. Differentiation will either be through the level of adult support each child receives or through deeper challenges.
21. Children self-mark so that they can identify errors and self-correct or seek support within the lesson.

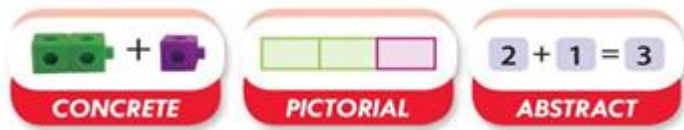
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## Resources

The use of Mathematics resources is integral to the concrete – pictorial – abstract approach and thus planned into our learning and teaching. We have a wide variety of good quality equipment and resources, both tangible and ICT based, to support our learning and teaching.



Teachers are also encouraged to use the school playground as an outdoor classroom when possible, for example, when teaching length, area or perimeter.

## Homework

Please refer to the School's Homework Policy.

## Impact

### Subject Leader

The role of the Subject Leader is to provide professional leadership and management in Mathematics in order to secure high quality teaching, effective use of resources and high standards of learning and achievement for all pupils. They will achieve this by affecting the following key areas: strategic direction and development; learning and teaching (including planning and marking and presentation); leading and managing staff; and efficient and effective deployment of staff and resources.

The Subject Leader has regular discussions with the Head Teacher and other senior leaders about learning and teaching in Mathematics. During the academic year the Subject Leader has specific allocated time for subject self- evaluation activities.

### Assessment, Record Keeping and Reporting

Please refer to the School's Teaching, Learning and Assessment Policy

### Inclusion

Please refer to the School's Inclusion Policy

### Monitoring and Review

The Head teacher, Senior Leadership Team and Mathematics Subject Leader will monitor the effectiveness of this policy on a regular basis. The Head teacher and Mathematics Subject Leader will report to the governing body on the effectiveness of the policy at least annually and, if necessary, makes recommendations for further improvements.

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### COVID-19 Addendum

During the pandemic, Maths work was delivered to all year groups daily using white rose maths through the Class Dojo platform, and engagement for maths was high, with the vast majority of the children completing the tasks set.

### Appendix – Long Term planning from White Rose

**Year 1**

Click into the relevant block below to access the resources

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number: Place Value (within 10)				Number: Addition and Subtraction (within 10)					Geometry: Shape	Number: Place Value (within 20)	
Spring	Consolidation	Number: Addition and Subtraction (within 20)			Number: Place Value (within 50)			Measurement: Length and Height		Measurement: Weight and Volume		Consolidation
Summer	Consolidation	Number: Multiplication and Division			Number: Fractions		Geometry: Position and Direction	Number: Place Value (within 100)		Measurement: Money	Measurement: Time	

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## Year 2

Click into the relevant block below to access the resources

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number: Place Value		Number: Addition and Subtraction					Measurement: Money		Number: Multiplication and Division		Consolidation
Spring	Number: Multiplication and Division			Statistics		Geometry: Properties of Shape			Number: Fractions			
Summer	Measurement: Length and Height	Geometry: Position and Direction		Consolidation and problem solving		Measurement: Time		Measurement: Mass, Capacity and Temperature			Consolidation	

## Year 3

Click into the relevant block below to access the resources

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number: Place Value		Number: Addition and Subtraction					Number: Multiplication and Division				
Spring	Number: Multiplication and Division		Measurement: Money	Statistics		Measurement: Length and Perimeter			Number: Fractions		Consolidation	
Summer	Number: Fractions		Measurement: Time			Geometry: Properties of Shape		Measurement: Mass and Capacity			Consolidation	

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## Year 4

Click into the relevant block below to access the resources

Due to recent events within the WRM team we will not be completing the Year 4 videos for the Autumn term. PowerPoint slides are available. Year 4 home learning videos will resume for activity week and the Spring term. Sorry for any inconvenience.

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number: Place Value			Number: Addition and Subtraction			Measurement: Length and Perimeter		Number: Multiplication and Division			
Spring	Number: Multiplication and Division		Measurement: Area	Number: Fractions				Number: Decimals		Consolidation		
Summer	Number: Decimals	Measurement: Money		Measurement: Time		Statistics	Geometry: Properties of Shape		Geometry: Position and Direction		Consolidation	

## Year 5

Click into the relevant block below to access the resources

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number: Place Value		Number: Addition and Subtraction		Statistics		Number: Multiplication and Division			Measurement: Perimeter and Area		
Spring	Number: Multiplication and Division		Number: Fractions				Number: Decimals and Percentages		Consolidation			
Summer	Consolidation	Number: Decimals		Geometry: Properties of Shape		Geometry: Position and Direction		Measurement: Converting Units		Measurement: Volume		

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## Year 6

Click into the relevant block below to access the resources

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number: Place Value		Number: Addition, Subtraction, Multiplication and Division					Number: Fractions			Geometry: Position and Direction	
Spring	Number: Decimals		Number: Percentages		Number: Algebra		Measurement: Converting Units	Measurement: Perimeter, Area and Volume		Number: Ratio		Consolidation
Summer	Statistics		Geometry: Properties of Shape			Consolidation and themed projects						

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