



Maths at Bardsey Primary School

Vision

Here at Bardsey, we believe that our Maths curriculum will create enthusiastic, creative and articulate mathematicians. Through a varied and inspiring curriculum, we aim to develop the children's problem solving, resilience and reflective skills – skills that can easily transferrable across the curriculum.

Our approach to maths is both skills and knowledge based. In order for children to develop into well rounded and passionate mathematicians, we aim to encourage the children's understanding of the world around them and arm the children with the skills to approach everyday problems.

Photos



Introduction

We provide an ambitious, connected curriculum accessible to all pupils in school right through from Reception to the end of Year 6 through the White Rose Maths Hub that ensures there is appropriate breadth and depth throughout the children's' learning. Children develop resilience and self-confidence in applying their learning skills.

Mathematics is an interconnected subject in which pupils need to be able to move fluently between representations of mathematical ideas. The programmes of study are, by necessity, organised into apparently distinct domains, but pupils should make rich connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems. They should also apply their mathematical knowledge to science and other subjects.

The expectation is that the majority of pupils will move through the programmes of study at broadly the same pace. However, decisions about when to progress are based on the security of pupils' understanding and their readiness to progress to the next stage. Pupils who grasp concepts rapidly are challenged through being offered rich and sophisticated problems before any acceleration through new content. Those who are not sufficiently fluent with earlier material consolidate their understanding, including through additional practice, before moving on.

EYFS Curriculum

Please see the Mathematical Development for EYFS in the attached document below.

<https://www.foundationyears.org.uk/files/2012/03/Development-Matters-FINAL-PRINT-AMENDED.pdf>

Key Stage 1 and Key Stage 2 National Curriculum

The National Curriculum for maths in Primary Document can be found using the links below. This highlights the programme of study both statutory and non-statutory for each Key Stage.

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/335158/PRIMARY_national_curriculum_-_Mathematics_220714.pdf

A progression of skills map for each Year group can be found later in this document.

Intent

Our Maths curriculum intends to:

- Ensure our children have access to a high-quality Maths curriculum that is both challenging and enjoyable.
- Provide our children with a variety of mathematical opportunities, which will enable them to make the connections in learning needed to enjoy greater depth in learning.
- Recall key number facts with speed and accuracy and use them to calculate and work out unknown facts.
- Ensure children are confident mathematicians who are not afraid to take risks.
- Fully develop independent learners with inquisitive minds who have secure mathematical foundations and an interest in self-improvement.
- Gives each pupil a chance to believe in themselves as mathematicians and develop the power of resilience and perseverance when faced with mathematical challenges.



Implementation

We use White Rose Maths Hub schemes of learning to ensure firm foundations and sequence our learning. Alongside the SOL, we use a range of rich resources to enhance our lessons and deepen understanding from websites such as NCETM and Nrich.

Key Vocabulary

Maths vocabulary is explicitly taught throughout each block of learning and is shared visibly in each classroom. Children embed mathematical vocabulary that is effectively transferred across other areas of the curriculum e.g., science, DT and PE.

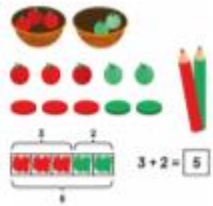
Skills

The National Curriculum for Mathematics (2014) aims for pupils to:

- become **fluent** in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils have conceptual understanding and are able to recall and apply their knowledge rapidly and accurately to problems
- **reason mathematically** by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language
- **solve problems** by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

Practical Work

At Bardsey, we recognise the importance for children to gain 'real life' experiences through 'hands on' practical work. We ensure this through the use of concrete, pictorial and abstract approaches. Children are encouraged to use a wide range of mathematical resources to strengthen and broaden their understanding of concepts and skills. The outside environment is effectively used to apply mathematical skills and learning e.g. angles, measuring, direction and position.



Curriculum Enhancements

Children get the opportunity to participate in weekly Maths challenges/competitions both across year groups and the school through our supporting subscriptions to Mathletics, Times Table Rockstars and Edshed, where we recognise achievement in weekly assemblies and school newsletter/website.

Independent Learning

In Maths, children are encouraged to use a range of methodical strategies to become fluent mathematicians, then applying these skills into more complex reasoning and problem-solving challenges.

High Quality Resources

Children have access to engaging and stimulating online resources to support Maths learning at home and in school. We have invested in an array of concrete supporting resources to enable all children across the school to access curriculum content.

CPD

Staff meeting time is used effectively to ensure progression and make adjustments to teaching to enhance pupil engagement. Subject leader frequently engages in up-to-date CPD.



Impact

The impact and measure of our History curriculum is that pupils are:

- Children demonstrate a quick recall of facts and procedures. This includes the recollection of the times table.
- Children show confidence in believing that they will achieve.
- Each child achieves objectives (expected standard) for year group.
- The flexibility and fluidity to move between different contexts and representations of maths.
- The chance to develop the ability to recognise relationships and make connections in maths lessons.
- Mathematical concepts or skills are mastered when a child can show it in multiple ways, using the mathematical language to explain their ideas, and can independently apply the concept to new problems in unfamiliar situations.

- Children show a high level of pride in the presentation and understanding of the work.

Leadership, Assessment and Feedback

- The Maths leader has a clear role and overall responsibility for the progress of all children in Maths throughout school. Working with SLT, key data is analysed and regular feedback is provided, to inform on progress and future actions.
- Feedback is given on children's learning in line with our feedback policy. Formative assessment within every lesson helps teachers to identify the children who need more support to achieve the intended outcome and who are ready for greater stretch and challenge through planned questioning or additional activities.
- Frequent and progressive assessment of Maths is carried out after each unit block of work across the school. There is also termly assessment that encompass all learning throughout the term. These are sent to subject leader and SLT who analyse data and feedback with next steps and intervention requirements to teaching staff.
- There is a weekly times table check which is introduced in Y2 to monitor children's progression in times table knowledge. There is a Y4 multiplication check covering up to 12 x 12.
- Frequent quizzes and flashbacks are incorporated into the class timetable so equip children with frequent short knowledge bursts.

Our Curriculum Sequencing

Reception

	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	Getting to know you (Take this time to play and get to know the children!)			Just like me!			It's me 1, 2, 3!			Light and Dark		
Spring	Alive in 5!			Growing 6, 7, 8			Building 9 and 10			Consolidation		
Summer	To 20 and Beyond			First, then, now			Find my Pattern			On the Move		

Year 1 Year 2 Year 3 Year 4 Year 5 Year 6

	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)		Consolidation
Spring	Number: Addition and Subtraction (within 20)				Number: Place Value (within 50)			Measurement: Length and Height		Measurement: Weight and Volume		Consolidation
Summer	Number: Multiplication and Division			Number: Fractions		Geometry: Position and Direction	Number: Place Value (within 100)		Measurement: Money	Measurement: Time		Consolidation

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6						
	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		
Spring	Number: Multiplication and Division		Statistics		Geometry: Properties of Shape			Number: Fractions		Measurement: Length and Height	Consolidation	
Summer	Geometry: Position and Direction			Problem solving and efficient methods		Measurement: Time		Measurement: Mass, Capacity and Temperature		Investigations		

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
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	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			Consolidation	
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	

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
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	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		Consolidation	
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 1	Year 2	Year 3	Year 4	Year 5	Year 6
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	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		Consolidation	
Spring	Number: Multiplication and Division			Number: Fractions					Number: Decimals and Percentages		Consolidation	
Summer	Number: Decimals				Geometry: Properties of Shape		Geometry: Position and Direction	Measurement: Converting Units		Measurement: Volume	Consolidation	

- Year 1
- Year 2
- Year 3
- Year 4
- Year 5
- Year 6

	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	Consolidation
Spring	Number: Decimals		Number: Percentages		Number: Algebra		Measurement: Converting Units	Measurement: Perimeter, Area and Volume		Number: Ratio		Consolidation
Summer	Geometry: Properties of Shape		Problem Solving			Statistics		Investigations				Consolidation

Progression Maps

<https://whiterosemaths.com/wp-content/uploads/2019/SoLs/RECEPTION/Reception-Autumn.pdf>

Progression links for EYFS can be found at the above link.

<https://whiterosemaths.com/wp-content/uploads/2019/11/National-Curriculum-Progression-Primary.pdf>

Progression links for all Y1-Y6 can be found at the above link.