



Maths Rationale

Reviewed September 2026

Mathematics at Birdlip

Why do we teach this? Why do we teach it in the way we do?

Curriculum Intent

In line with the National Curriculum, which states that *"Mathematics is an interconnected subject in which pupils need to be able to move fluently between representations of mathematical ideas"*, our intent at Birdlip is to provide a **coherent, inclusive and ambitious mathematics curriculum for all pupils**.

We aim for **every child**, regardless of starting point, background or need, to:

- become fluent in the fundamentals of mathematics
- reason mathematically with confidence
- solve problems with increasing independence and sophistication

Our curriculum is designed so that pupils *"make rich connections across mathematical ideas"*, enabling them to develop deep conceptual understanding rather than superficial knowledge.

Mathematics at Birdlip is viewed as both a **core life skill and a creative discipline**. We want pupils to experience the **beauty, power and enjoyment of mathematics**, developing curiosity, confidence and a belief that **everyone can succeed**. We actively promote positive learning behaviours and a growth mindset, underpinned by our shared message: *"We can all do maths."* This is also highlighted in our monthly maths assemblies where we celebrate how mathematics occurs in daily life and is not just an explicit lesson. We also promote our class WAGOLs where these expectations are achievable by every single student and can be honoured in front of the entire school. In addition to this, Timestables Rockstars engagement and effort is also highlighted within these assemblies through the creation of competition to promote active mathematical participation.

Inclusion and Equity

We believe that **all children can achieve highly in mathematics**. Our curriculum and teaching are designed to remove barriers, ensure access and promote equity. High expectations apply to all pupils, including those with SEND, disadvantaged pupils and those working at greater depth.

Examples of how this achieved are:

- Mathematic vocabulary being introduced at the beginning of every topic with definitions provided so the children can understand the words in context. The vocabulary is put on the classroom vocabulary wall and builds up throughout the topic.
- The curriculum is sequenced in a way knowledge gaps can be filled through targeted starters, pre-scaffolding and our vigorous intervention of Numberstacks. Any children that misunderstand the objective will then be targeted within the next lesson with personalised questions and teacher feedback.
- Children with SEN and disadvantaged children are supported through assistance from class TAs. Teachers will have carefully gone through the lesson before and adapted the powerpoints, starters and questions to ensure the children can achieve their full potential. Handouts of core information will also be given to those that require. Technology is also used through 1-to-1 tablets providing children in upper KS2 to allow them to work at their own pace.

Learning is broken down into **carefully sequenced, manageable steps**, ensuring concepts are secure before progression. Pupils are given sufficient time to revisit, practise and apply learning so that knowledge moves into long-term memory. Mistakes and misconceptions - 'marvellous mistakes' - are valued as part of the learning process and used diagnostically to inform teaching.

As a small school with mixed-age classes, pupils are taught content from **both year groups within their class**. From September 2026, a **new White Rose Mixed-Year curriculum** will be implemented, with both year groups receiving the same core teaching input, adapted appropriately to meet the expectations of each year group. This flexible approach allows:

- recap and consolidation where needed through targeted, thorough starters
- challenge and extension when pupils are ready
- opportunities for pupils to become true "masters" of content

This approach supports inclusion while maintaining ambition and challenge.

Curriculum Implementation – Teaching and Learning

Our mathematics curriculum follows the **National Curriculum (2014)** and is underpinned by the **White Rose Maths scheme**, adapted carefully for our mixed-age classes. This ensures progression, coherence and repetition of key knowledge and skills across year groups.

Teaching is characterised by:

- **High-quality modelling and questioning**
- A strong emphasis on **mathematical talk and reasoning**
- Lessons designed to actively engage all pupils

We use a **concrete–pictorial–abstract (CPA)** approach to support understanding, ensuring that pupils can access learning at an appropriate level and build secure mental models. A wide range of manipulatives (including Dienes, place value counters and Numicon) are used purposefully to support conceptual understanding, particularly for pupils who need additional scaffolding.

Lessons are typically taught for **one hour, four days a week**, and are structured around clear learning intentions (WALT). All pupils begin learning together, with adaptive teaching strategies used to support, scaffold or extend learning as required. Challenge is provided through depth, reasoning and problem-solving rather than acceleration alone.

We have recently introduced Timestables Rockstars due to times tables knowledge being vital foundational knowledge for the rest of the children's mathematical career.

EYFS – Early Mathematical Development

In EYFS, mathematics is taught in line with the **revised EYFS Framework**, with a strong emphasis on:

- playing and exploring
- active learning
- creating and thinking critically

The curriculum focuses on **Number** and **Numerical Patterns**, ensuring children develop secure foundations in number sense. Learning is delivered through a balance of purposeful play, adult-led teaching and child-initiated activities. Staff carefully design environments and experiences that promote confidence, talk and exploration in mathematics.

Assessment is observational and ongoing, with evidence gathered through photos, notes, adult recordings and children's written work where appropriate. Parents are actively involved through shared observations on *Evidence Me*, strengthening home-school partnerships.

Assessment and Impact

Assessment in mathematics is used to **support learning, not just measure it**. Teachers use ongoing formative assessment, alongside termly summative assessments, to identify strengths, gaps and misconceptions. This informs planning, responsive teaching and timely intervention.

We track progress through:

- Teacher assessment recorded on Insight
- NFER assessments
- Statutory assessments at KS1 and KS2
- The Year 4 Multiplication Tables Check

Pupils receive regular verbal and written feedback.

Curriculum Impact

By the time pupils leave Birdlip, we aim for them to:

- be fluent in the fundamentals of mathematics
- demonstrate deep conceptual understanding
- reason mathematically using precise language

- solve problems independently and in unfamiliar contexts

This impact is evident through:

- confident, engaged learners who enjoy mathematics
- strong attainment and progress, in line with or above national averages
- pupils who can articulate their thinking and apply learning flexibly
- children who are well prepared for the next stage of their mathematical journey

Leadership and Quality Assurance

The mathematics curriculum is led by **James Pugh and Alanah Willmott**, who are responsible for curriculum design, monitoring, evaluation and improvement. Monitoring includes lesson observations, learning walks, book scrutiny, data analysis and pupil voice.

Ongoing CPD ensures staff have the subject knowledge and pedagogical expertise required to deliver high-quality, inclusive mathematics teaching for all. The subject lead then feeds back through staff meetings to ensure all staff are up to date with recent mathematical developments.
