



“Show me your way, Lord teach me your paths.” Psalms (25.4)

POLICY STATEMENT - MATHEMATICS

Intent:

At Almondsbury CE Primary School, we believe that mathematics is for everyone. Our intent is to develop confident, resilient and curious mathematicians who can apply their understanding fluently and flexibly in a range of contexts.

Our teaching is underpinned by the belief that all children can succeed in mathematics through high-quality teaching, appropriate support and challenge. This reflects the mastery approach promoted by White Rose Maths.

- All pupils can succeed in mathematics.
- A positive, growth mindset towards mathematics is cultivated.
- Depth is prioritised over acceleration.
- Collaborative learning and professional dialogue drive high-quality teaching.

Culture:

We promote a mathematics culture where:

- Mistakes are valued as opportunities to learn, encouraging perseverance, concentration and diverse thinking. This promotes the importance of sharing and development of mathematics in everyday life.
- Mathematical talk and discussion through the use of ‘Talk like a Mathematician’ vocabulary and sentence stems is expected and scaffolded.
- Enjoyment and enthusiasm are developed.
- Representations and structures reveal mathematical relationships.
- Challenge is provided through depth rather than premature acceleration.
- Pupils develop the ability to solve problems through decision-making and reasoning in a range of contexts.
- Pupils are encouraged to ask questions, try different approaches and search for patterns in their work.
- Pupils are encouraged to work independently when appropriate and to devise their own ways of checking and recording results.
- Special needs in all areas of mathematics are recognised and that all pupils, regardless of race, gender, class, culture or disability have equal opportunity to develop their full potential in all areas of the mathematics curriculum.

Equity

Equity in mathematics ensures that support is proactive, responsive and rooted in evidence-informed practice. We are committed to equitable mathematics provision. This means:

- Setting high expectations for every child.
- Removing barriers to learning through timely and targeted support.
- Closing gaps through structured interventions rather than narrowing curriculum access.
- Ensuring no child is excluded from high-quality first teaching.

Progression in Mathematics

Mathematics is a core subject in the National Curriculum, and we use the 2014 National Curriculum for Mathematics as the basis for implementing the statutory requirements of the programme of study for mathematics.

Our mathematics curriculum is coherently sequenced to ensure that knowledge builds cumulatively over time. Progression is carefully mapped from Early Years to Year 6 so that pupils develop secure foundations before moving to more complex concepts. We prioritise depth, connection and retention over acceleration. Our long-term planning is informed by the schemes and small-step structures of White Rose Maths and uses the prioritisation curriculum from NCETM. These frameworks support coherent sequencing, intelligent variation and a focus on the most critical mathematical content. Staff planning is kept on the teachers shared drive and reviewed by the subject team.

It is the class teacher who completes the weekly plans for the teaching of mathematics. These weekly plans list the specific learning objectives for each lesson (WALT and WILF) and give details of how the lessons are to be taught.

We follow the school's calculation policy to ensure there is progression throughout the school.

The School has implemented a whole-school mental calculations system, Mastery Mathematics Attack, which is shared with parents to enable pupils to develop their skills through practise both in school and at home.

Principles of Progression

Progression in our school is underpinned by the following principles:

- **Small, connected steps:** concepts are broken down into manageable components to secure understanding before new layers are added.
- **Rich in oracy:** the use of 'Talk like a Mathematician' and sentence stems allows the children to talk mathematically to support recall of facts and new content taught.
- **Readiness before new content:** Pupils move forward when secure, not simply when a unit ends.
- **Representation to abstraction:** Progression follows a CPA pathway, so pupils move from concrete experience to pictorial representation and then to abstract generalisation.
- **Depth before breadth:** Pupils explore patterns, relationships and structures before encountering new procedural complexity.
- **Cumulative review:** Previously taught content is revisited regularly to strengthen long-term retention.

EYFS to KS1

Progression begins with strong number sense in EYFS, focusing on:

- Subitising and counting principles.
- Composition and decomposition within 10.
- Comparison of quantities and measures.

In KS1, this develops into:

- Secure understanding of place value within 100.
- Fluency in addition and subtraction.
- Early multiplicative thinking through grouping and arrays.

KS2 Development

In KS2, progression ensures pupils:

- Extend place value understanding to larger numbers and decimals.
- Develop formal written methods rooted in conceptual understanding.
- Build multiplicative reasoning, including fractions, ratio and proportion.
- Apply knowledge flexibly in multi-step problem solving.

The NCETM prioritisation guidance supports us in identifying the most critical concepts that unlock later learning, ensuring gaps are addressed systematically and foundational knowledge is secure before introducing dependent content.

Equity Through Progression

Our progression model supports equity by:

- Identifying prerequisite knowledge for each unit.
- Using pre-teaching where prior knowledge is insecure.
- Providing same-day intervention when misconceptions arise.
- Ensuring no pupil is accelerated beyond conceptual readiness.

Careful sequencing ensures that all pupils access ambitious mathematics while being supported to succeed. Progression is therefore not simply about coverage, but about secure, connected and retained mathematical understanding over time.

In all classes, there are pupils of differing mathematical ability. We recognise this fact and provide suitable learning opportunities for all. We achieve this through a range of strategies – in some lessons through support, use of deepening activities, through scaffolding, use of manipulatives and by organising the pupils to work in pairs on open-ended problems or games. We use support staff to assist pupils throughout their lessons and for pre and post teaching sessions.

3. Early Mathematics (EYFS & KS1 Foundations)

Our early mathematics curriculum is aligned with the principles of Mastering Early Number, supporting strong foundations in number sense, subitising, counting, composition and comparison.

We ensure that:

- Number is prioritised daily.
- Concrete and visual representations are consistently used.
- Mathematical language is explicitly taught and modelled.
- Children develop deep understanding of number relationships within 10 before moving beyond.

Equitable Early Provision

- Early diagnostic assessment identifies gaps quickly.
- Structured small-group targeted interventions are implemented.
- Additional adult-guided practice sessions are provided.
- Same-day intervention addresses misconceptions promptly.

4. Maths Mastery in KS1 and KS2

The Mastery Approach

- Teaching in small, coherent steps.
- Depth before breadth.
- Intelligent practice to expose mathematical structure.
- Reasoning and problem solving for all pupils.

CPA (Concrete–Pictorial–Abstract)

- Concrete: Manipulatives such as counters, base ten and place value charts.
- Pictorial: Bar models, number lines, part–whole models and arrays.
- Abstract: Formal written methods and symbolic representations.

Equitable Mastery Provision

- Same-day intervention.
- Pre-teaching of vocabulary and key concepts.
- Adaptive teaching without lowering expectations.

5. Declarative Knowledge & Fluency

Declarative knowledge includes number bonds, key arithmetic facts and mathematical vocabulary.

Fluency is developed through:

- Daily retrieval practice.
- Intelligent variation.
- Spaced practice.
- Low-stakes quizzing.

Equitable Fluency Provision

- Pre-teaching of key facts.
- Small-group intervention.
- Use of manipulatives.
- Structured rehearsal opportunities.

6. Teaching Mathematics to Pupils with Special Educational Needs

At our school we teach Mathematics to all pupils, whatever their ability. Mathematics forms part of the school curriculum policy to provide a broad and balanced education to all pupils. Through our Mathematics teaching we provide learning opportunities that enable all pupils to make progress. We do this by setting suitable learning challenges and responding to each pupil's different needs. Assessment against the National Curriculum allows us to consider each pupil's attainment and progress against expected levels.

When progress falls significantly outside the expected range, the pupil may have special educational needs and we need to take additional or different action to enable the pupil to learn more effectively. This ensures that our teaching is matched to the pupil's needs.

Intervention through School Action and School Action Plus will lead to the creation of a Learning Plan for pupils with special educational needs. The Learning Plan may include, as appropriate, specific targets relating to Mathematics.

We enable pupils to have access to the full range of activities involved in learning Mathematics.

7. Times Tables

We use Times Tables Rock Stars (TTRS) to motivate and track progress, alongside wider strategies including:

- Teaching multiplicative structures explicitly.
- Use of arrays and area models.
- Rhythm-based practice and chanting.
- Pattern recognition across tables.
- Structured small-group support.

Equity is ensured through targeted interventions, scaffolded practice and access to school-based digital opportunities.

8. Contribution of Mathematics to teaching in other curriculum areas

English – Mathematics contributes significantly to the teaching of English in our school by actively promoting the skills of reading, writing, speaking and listening. For example, we encourage pupils to read and interpret problems in order to identify the mathematics involved. The pupils explain and present their work to others during plenary sessions. Younger pupils enjoy stories and rhyme that rely on counting and sequencing. Older pupils encounter mathematical vocabulary, graphs and charts when using non-fiction texts.

Science – Mathematics contributes to the teaching and recording of science within our school, by further developing knowledge of number and data handling.

Computing – Pupils use and apply mathematics in a variety of ways when solving problems using digital technologies. Younger pupils use digital technologies to communicate results with appropriate mathematical symbols. Older pupils use it to produce graphs and tables when explaining their results or when creating repeating patterns, such as tessellations. When coding, pupils use standard and non-standard measures for distance and angle. They use simulations to identify patterns and relationships.

Wider curriculum – Pupils are able to apply their learning in mathematics to many different areas of the curriculum such as Geography when investigating mapping skills and use of co-ordinates; use of measure and accuracy in Design and Technology, investigation of shape in Art and sculpture. These are examples of a wide range of mathematical links to the wider curriculum.

Personal, social and health education (PSHE) and citizenship – Mathematics contributes to the teaching of personal, social, health education and citizenship. The work that pupils do outside their normal lessons encourages independent study and helps them to become increasingly responsible for their own learning. The planned activities that pupils do within the classroom encourage them to work together and respect each other's views. We present older pupils with real-life situations in their work on the spending of money.

Spiritual, moral, social and cultural development – The teaching of Mathematics supports the social development of our pupils through the way we expect them to work with each other in lessons. We group pupils so that they work together, and we give them the chance to discuss their ideas and results.

9. Assessment for Learning in Mathematics

Assessment is continuous, responsive and integral to teaching. Our approach is informed by Barak Rosenshine's principles of explicit instruction, including:

- Daily review.
- Small-step teaching with frequent checks for understanding.
- Guided practice before independent work.
- High participation through questioning.

Activation of Prior Knowledge

- Retrieval of previous concepts.
- Vocabulary rehearsal.
- Representation recall.
- Linking prior learning to new content.

Hinge Questions

- Designed to expose misconceptions.
- Require responses from all pupils.
- Inform immediate teaching adjustments.

Mini-Quizzes and Low-Stakes Assessment

- Assess fluency and declarative knowledge.
- Identify misconceptions early.
- Strengthen memory through retrieval.
- Inform same-day intervention.

Equity in Assessment

- Regular checking for targeted pupils (informed by assessment).
- Rapid identification of gaps.
- Informing pre-teaching and small-group support.
- Preventing widening attainment gaps.

We take medium-term assessments to measure progress against the key objectives, and to help us plan the next unit of work.

We make long-term assessments using Arbor three times a year and we use these to assess progress against school and national targets. We can then set targets for the next school year and make a summary of each pupil's progress before discussing it with parents. We pass this information on to the next teacher at the end of the year, so that s/he can plan for the new school year. We make the long-term assessments using teacher assessment and information from end-of-year tests. We use the national tests for Year 6.

10. Wider Mathematics Strategy

Working with Parents

- Parent workshops such as EYFS mathematics, Year 4 Multiplication Tables Check and Year 6 SATs.
- Guidance on supporting children at home with their mathematics, including clear communication of methods, e.g. Mastery Mathematics Attack.
- Supporting children with mathematics homework set in Year 4, Year 5 and Year 6.
- Support with online platforms such as Times Tables Rockstars and Numbots.
- Inviting parents into school twice yearly to discuss the progress of their child.
- Inviting parents into school in the summer term to look at their child's work.

Monitoring and Review

Monitoring of the standards of the pupils' work and of the quality of teaching in Mathematics is the responsibility of the Mathematics subject team. The work of the Mathematics subject team also involves supporting colleagues in the teaching of Mathematics, being informed about current developments in the subject, and providing strategic leadership and direction for the subject in the school. The Mathematics subject team creates an annual action plan each year which is reviewed and shared with the Headteacher, governors and staff. The Headteacher allocates management time to the team so that they can review samples of pupils' work and undertake lesson observations of Mathematics teaching across the school. A named member of the school's governing body is briefed to oversee the teaching of mathematics.

Conclusion

Our mathematics curriculum is ambitious, inclusive and equitable. We are committed to ensuring every child develops fluency, reasoning and confidence in mathematics.