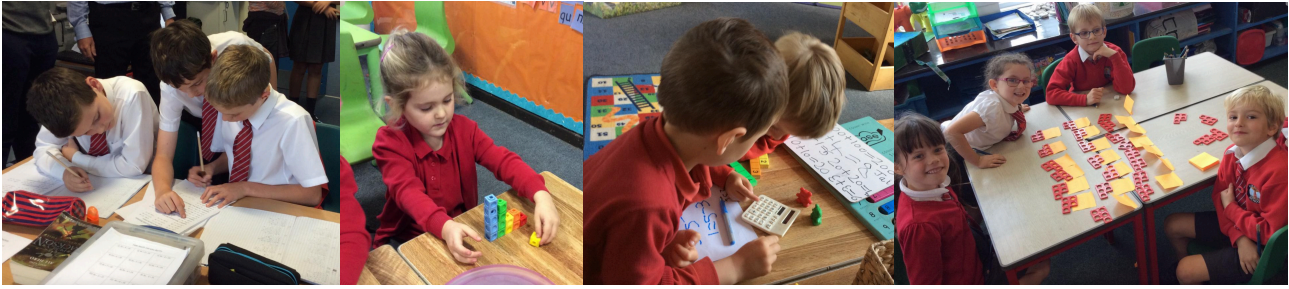


Mathematics Curriculum Statement



The Golden Thread that runs through our Maths curriculums is that we want children to feel confident and happy learning maths and be able to apply the skills they have mastered, making the required mental links between arithmetics and reasoning to successfully choose methods to solve problems. We want them to move onto secondary school seeing maths as a subject that they “Can Do”.

Intent

The 2014 National Curriculum for Maths aims to ensure that all children:

- Become fluent in the fundamentals of Mathematics
- Are able to reason mathematically
- Can apply their maths skills to Science and other subjects
- Can solve problems by applying their Mathematics

At Alverton, these aims are embedded within Maths lessons and developed consistently over time. We are committed to ensuring that children are able to recognise the importance of Maths in the wider world and that they are also able to use their mathematical skills and knowledge confidently in their lives in a range of different contexts. We want all children to enjoy Mathematics and to experience success in the subject and through this, acquire the ability to reason mathematically.

Following Covid-19, we increased our focus on basic skills and meeting any learning “gaps”; our intent is to provide whatever support each child needs to make the utmost progress.

Implementation

At Alverton, we follow the National Curriculum in teaching sequences designed to develop children's knowledge and understanding of mathematical concepts from the Early Years through to the end of Year 6.

We believe that whilst lessons throughout the school should be based on the same principles and contain certain key elements, the way mastery is achieved evolves as the children move through the school. With this in mind, throughout EYFS and KS1, a mastery approach is adopted with an early emphasis on the use of concrete and pictorial manipulatives; this introduces children to and consolidates concepts that will be invaluable in their maths journey. In LKS2, a greater concentration on written methods begins although concrete and pictorial methods are used for certain topics and certain children at the teacher's discretion. In UKS2, children are set to allow them to be taught at a pace that matches their current ability. Children in the same year group will all study the same curriculum, but some may move through it more quickly and receive a greater degree of challenge whereas others may move more steadily with more reinforcement of basic

principles. Over Years 5 and 6, the curriculum follows blocked spiral approach with much more opportunity for revisiting concepts taught earlier in the phase.

Our approach throughout the school will have certain key characteristics:

- Teachers have an expectation that all children are capable of making excellent progress from their starting points.
- The large majority of children in a class or group progress through the curriculum content at the same pace.
- Those children who encounter a barrier to learning, will receive intervention and support in understanding that concept as soon as possible.
- Children who have shown their understanding at a deep level within the lesson or unit, will have opportunities to apply these skills in greater depth activities.
- The importance of declarative knowledge, especially times tables, is emphasised throughout the school. Tables are practised outside the maths lesson and key vocabulary is introduced, explained and revisited.
- Consolidation of prior learning is imperative to ensure retention of knowledge and skills and all lessons will start with an element of this.
- Thorough practice of new methods and skills is vital. Lessons will, when possible, incorporate sufficient time to meet and solve calculations presented in a variety of ways.
- Teachers are aware of challenges and misconceptions the children will encounter during the lesson and incorporating this knowledge in their questioning to address issues and recognise those requiring further input.
- Children with additional needs are included in whole class lessons and teachers adapt lessons, provide scaffolding and relevant support as necessary. For those children who are working outside of the year group curriculum, individual learning activities are provided to ensure their progress.
- Through our teaching we continuously monitor pupils' progress against expected attainment for their age, making formative assessment notes where appropriate and using these to inform our teaching. Summative assessments are completed at the end of each term; their results form discussions in termly Pupil Progress Meetings and update our assessment tracker. The main purpose of all assessment is to always ensure that we are providing excellent provision for every child.
- The calculation policy is used within school to ensure a consistent approach to teaching the four operations over time.

In Alverton Nursery and EYFS, the Maths Curriculum is directly linked to the steps in Development Matters. We use Number blocks as the basis of our early number teaching and fit in the other non-number objectives in around this. For sequencing, we loosely follow the White Rose but this year have made a few changes and moved some objectives to earlier in the year as we feel it is more appropriate. Progression is ensured by our adherence to the documents published by the NCETM which is also the inspiration for many of the activities used in our continuous provision.

In KS1 in Alverton School, the White Rose scheme is used as we believe the emphasis on use of manipulative and pictorial representations is essential at this stage for children to gain an understanding of what number is and what addition, subtraction etc actually look like. The different topics are broken down into small steps so the teaching sequence is clear and allows children to build their knowledge logically

The Alverton Maths Curriculum in KS2 is designed to allow children, whatever their starting points, to enjoy, engage with and succeed in Maths. The sequencing of topics is now, in essence, very similar to the White Rose curriculum which over the years has built in elements of the spiral

curriculum alongside the mastery programme. The White Rose curriculum blocks are what our curriculum is based on alongside the progression documents in procedural knowledge from the NCETM. It is designed with two principles in mind - to support children to perform simpler tasks first so they can move onto more complex tasks and secondly, to allow children to build confidence and resilience in the use of mathematical procedures before they attempt more complicated reasoning problems. We have studied the White Rose Small Steps and used them as a basis for our own building blocks. In some cases we have added extra steps in where we feel the jump was too big. Reasoning will be introduced when a procedure has been taught but only at the point when the teacher feels that the children have the procedural skills to attempt it. White Rose resources are often used in UKS2, alongside resources made by the teacher or sourced elsewhere. The Small Steps are constantly reviewed, changed and re-ordered as the teacher moves through the year. When teachers are in doubt as to planning or approaches to certain topics they approach colleagues and the Maths Lead.

We ensure that we regularly allow time to reinforce and develop basic age-appropriate key skills in arithmetic, such as times tables, as well as revisiting objectives from previous years as necessary and providing an increased range of interventions where needed across the school.

We provide teacher-led 1:1 intervention for Maths in Year 6 and have used additional funding to provide small group teaching in Year 2. In all other year groups, additional time / sessions / support staff are used to increase the frequency of Maths interventions.

Supporting Pupils with SEND in Maths

At Alverton, teaching and learning is structured to support all pupils, including those with SEND, to progressively build on identified core knowledge to know, do and remember more. To achieve this, we adapt our curriculum in every subject to remove barriers to learning for pupils with SEND according to their individual needs and make subject-specific adaptations as appropriate.

Impact

The impact we are aiming for is manifested in a variety of ways. Firstly, we want the children to feel confident and happy learning maths. We want them to see its value in society and in their own lives and to confidently apply the skills they have acquired. We want them to move onto secondary school seeing maths as a subject that they "Can Do". In measurable terms we want them to make expected or better progress from their starting points knowing that any mistakes they make along the way are opportunities for learning. We want them to appreciate that feeling less confident about a subject is fine but to understand that it is possible, with the right support and no little determination, to change that. If, along the way, we can also make them see that maths is fun... then we would be very happy.

Following Covid-19, we continued with our range of assessments ensuring, in particular, that regular assessment in relation to intervention ensured that these are accurately focused on the correct pupils, enabling maximum progress to be made.

We have different ways of assessing the impact of our Maths teaching:

- **Pupil Voice** - Through discussion and feedback, children talk enthusiastically about their maths lessons and speak about how they enjoy learning about maths. They can articulate the context in which maths is being taught and relate this to real life purposes. Children show confidence and believe they can learn about a new maths area and apply the knowledge and skills they already have.

- **Evidence in Knowledge** - Pupils know how and why maths is used in the outside world and in the workplace. They know about different ways that maths can be used to support their future potential. Children demonstrate a quick recall of facts and procedures. This includes the recollection of times tables. Children have mastered the use and application of the mathematical skills they have been taught, making the required mental links between arithmetics and reasoning enabling them to successfully choose methods to solve problems.
- **In Skills** - Pupils use acquired vocabulary in maths lessons. They have the skills to use methods independently and show resilience when tackling problems. Children show pride in the presentation and understanding of the work. They enjoy demonstrating what they know.
- **Outcomes** - At the end of each year, we expect the children to have made the expected amount of progress or more. This is evaluated by termly tests and teacher discussions. In Key Stage 2, our data was well above local and national data for the percentage of pupils achieving EXS and GDS.