Mathematics

Vision Statement

The goal of education in Aston Rowant C†E Primary School is to enable our children be curious in their approach to learning, to be courageous and critical in their attitude to learning, to be empowered to work both independently and collaboratively, to understand the impact their learning has had on them so far and be inspired to keep learning.

It is our aim that children leave us as confident and resilient mathematicians, who understand that mathematics is an integral part of everyday life. We will give children real-life learning experiences and opportunities to ensure that they are confident to use their mathematical knowledge in new and unfamiliar situations.

Mathematics is fundament to all aspects of life and with this in mind we strive to ensure that our children develop a healthy and enthusiastic attitude and a deep understanding, which will stay with them for life. We aim that our children will not be afraid to make mistakes, but will thrive as the prospect of conquering a challenge.

Intent

The aims of the National Curriculum are central to Maths teaching at Aston Rowant, to ensure that all pupils:

- become fluent in the fundamentals of mathematics;
- reason mathematically;
- can solve problems by applying their mathematics.

We are currently on a journey to a fully integrated 'Mastery Approach' to teaching Mathematics, supported by a Growth Mindset approach throughout the school. In order to help children at Aston Rowant have the best chances of high attainment in Maths, all school staff work together ensure that every single child has a rich and deep understanding of mathematical concepts. In addition, links with real life are drawn out wherever possible in our teaching. We aim to make it clear to all pupils that a good understanding of Mathematics will afford them opportunities later in life and give them all an equal chance to participate fully and fruitfully in society as adults.

Implementation

Planning

In planning Mathematics, all teachers refer to White Rose Maths documents. Maths is taught in mixed-age classes and end of year expectations are mapped so they can be taught together whenever possible. Teacher have flexibility to adapt the White Rose Long term progression in order to meet the needs of the children at Aston Rowant. When planning specific blocks, teachers begin with children's starting points, identify possible misconceptions and develop ways to tackle them. They develop challenges and opportunities for real-life contexts, reasoning and problem-solving. Teachers plan to introduce new learning using the Concrete-Pictorial-Abstract approach, scaffolding learning and allowing children to create and draw on useful representations mentally. As part of their planning, teachers will also return to skills previously taught, in order to keep them fresh in children's minds.

Teaching

Maths is taught as daily sessions throughout Key Stage 1 and 2, lasting an hour. In addition, each class also has a further daily 'maths meeting' of 15 minutes. The focus of this session is developing fluency. Children count in progressively more challenging steps, as well as practising mental calculation and key facts. Lessons are delivered in a variety of structures; including whole class sessions, split input and peel away sessions. This enables teachers to target pupils with the correct learning, spend quality time with all pupils and ensure all children are learning all of the time.

Having identified key concepts in each unit, teachers expose them using a variety of representations, problems and questions; including higher order questioning. Children are required to use precise mathematical vocabulary and speak in full sentences. Teachers expose and reinforce links between different areas of mathematics and activate children's prior knowledge by referring to what they already know and showing how they are building on it in their new learning.

In EYFS, sessions build up to daily inputs which are followed by adult led focus groups. Children also have opportunities and stimulus to explore mathematics in their play through a maths rich environment. Planning is based on individual children's starting points and interests.

All classes have access to a bank of physical resources and manipulatives that are used purposefully to expose the structure of mathematical ideas and concepts.

Formative Assessment

- Teachers mark work following the school's own Marking Policy. This marking ideally takes place within the lesson or shortly after, ensuring that children's progress is constantly monitored. In this way, we can ensure that children are challenged sufficiently and that any misconceptions are tackled as soon as possible. This 'Hot Marking' also enables teachers to plan in immediate intervention sessions, where small groups can work with the teacher or TA later in the day.
- While teacher will produce weekly planning this is constantly adapted based on assessment from each session.
- Teachers use 'I wonder…?' questions to extend learning and to keep an enquiring mind
- Regular verbal feedback is given.
- All children are provided with the opportunity to reflect on their marked work and develop the independence to respond to teachers written next steps, with an aim to improve their understanding.

Impact

- Pupils will enjoy maths and realise its worth in the 'real world'.
- Pupils of all abilities will be able to succeed in all maths lessons because work will be appropriately scaffolded.
- Pupils will be able to talk about the maths they are using, and how they have solved a problem
- Pupils will have a resilient attitude towards challenging mathematical problems, recognising that there are different ways to solve a problem.
- The % of pupils working at ARE within each year group will be at least in line with national averages.
- The % of pupils working at Greater Depth within each year group will be at least in line with national averages
- The will be no significant gaps in the progress of different groups of pupils (e.g. disadvantaged vs nondisadvantaged)