



Ark Ayrton Maths Offer 2020/21

Overall Aims

At Ark Ayrton, our aim is to ensure that all children become highly skilled mathematicians, working at or above the National Standard, with the confidence to solve mathematical problems in a range of contexts. We follow the Maths Mastery scheme and fully support the ethos of 'depth before breadth' so that our children are able to solve, reason, apply and explain their learning in a range of ways.

Assessment of Maths

Tracking the progress through the Maths Curriculum is built around Key Performance Indicators (KPIs), which link directly to the National Curriculum expectations. KPIs are based around many dimensions of the National Curriculum including number and place value, fractions and percentages, geometry and statistics. We use a variety of approaches to teach these dimensions within both whole class maths lessons and daily maths meetings. In order to make an age related judgement of a child, teachers take into account a variety of evidence – Pre and Post unit tests, PUMA test outcomes, arithmetic outcomes, exit passes, KPI tasks and the evidence we have of daily work in class books. Teachers track what children can and can't do against the KPIs, which allow them to target children effectively to narrow gaps. Each year group's KPIs have key assessment questions for teachers to use, in order to assess all areas of maths.

Whole Class Maths

At Ark Ayrton, we follow the six-part maths approach of Maths Mastery. Within whole class Maths lessons, children are encouraged to physically represent mathematical concepts. Objects and pictures are used to demonstrate and visualise abstract ideas, alongside numbers and symbols. Mathematical concepts are explored in a variety of representations and problem-solving contexts are provided in order to give pupils a richer and deeper learning experience. Ark Ayrton understands the importance of children using the correct mathematical vocabulary within the lesson. Therefore, opportunities to use and develop mathematical language are provided in every lesson.

Arithmetic

At all ages, it is vital that children have the basic fluency skills to be able to apply their learning in a range of ways. Therefore, In addition to maths lessons, children are also taught arithmetic on a daily basis. These lessons last 15minutes and focus on many areas of the National Curriculum including all 4 operations, fractions, percentages, patterns within numbers and the order of operations in mathematical equations. We believe that daily practise of these skills increase confidence and resilience in Maths making our children strong mathematicians.

Maths across the Curriculum

At Ark Ayrton we believe that Maths should be seen in all areas of the curriculum. Therefore, in addition to daily Maths lessons and arithmetic meetings, all children have the opportunity to develop and apply skills learnt during the afternoon. Our Horizons Curriculum provides opportunities for children to solve mathematical problems within real life contexts including organising class visits, taking into account ratio and budget; using knowledge of measure and conversions when making structures; making proportional changes to recipes when cooking and showing their understanding of shape and space in design and technology.

Support for Maths

We believe that every child regardless of mathematical ability should have the opportunity explore Maths in a range of ways, otherwise the gap widens and children begin to not see themselves as mathematicians. Therefore, we will never take children out for Maths intervention during Maths time. We provide additional time for Maths interventions either after school where children attend tuition with a class teacher or through dedicated Maths interventions which are delivered by a Senior LSA at some point in the afternoon.

Homework

In addition to daily maths lessons, children will be set weekly maths homework. This will vary between arithmetic, application of learning and practise of skills that have already been taught.