

Our maths curriculum

- Follow White Rose scheme of learning, whilst taking into account the needs of the learner
- Be ambitious & have high expectations of all pupils

- Teach a balance of fluency, reasoning and problem solving explicitly to all learners
- Number facts focus
- Place value
- Concrete to abstract

Developing independence and celebrating success

Assessment and CPD

Using the White Rose scheme of work, staff at the schools in the Fair Acres Federation are able to plan well-sequenced units of work, which follow a basic pathway of: fluency reasoning and problem solving. Each unit is built upon prior learning in earlier year groups, which is briefly revisited before introducing new knowledge in line with curriculum expectations. Planning is always amended to meet the needs of each individual cohort, and so staff are not bound by the objectives within a unit of work. New concepts and ideas are introduced using either a: concrete, pictorial or abstract approach as we understand that each child is unique and learn in different ways

Knowledge Focused

In order to equip pupils with a good mathematical knowledge and understanding, the teaching of Maths is carefully considered and sequenced. By dividing key ideas into small units of work, pupils have the chance to develop a level of automaticity within the subject, enabling them to build upon existing skills throughout their school career. This approach ensures that children can make links between topics, apply skills to various scenarios and deepen their knowledge of the subject.

Vocabulary

Upon each working wall, staff will display key vocabulary relating to the current unit of work being taught. Key words are introduced at an age appropriate level & links made with previous vocabulary, so that by the end of KS2, children leave HGPS with a rich mathematical vocabulary

Revisiting and Retrieving

We aim for strong subject fluency— automaticity within the subject lends itself to children then being able to reason and problem solve with confidence. To help achieve this, classes in KS2 begin lessons with an arithmetic starter which tests children on key concepts already taught. Repetition ensures keys skills are continually practiced and become embedded within the long term memory. Cold maths books are used weekly to provide evidence of independent recall of calculation and problems solving skills

Fluency, Reasoning and Problem Solving

There is emphasis on the teaching of fluency, reasoning and problem solving throughout the curriculum. Staff sequence each new topic so that the fluency aspect of the unit is delivered first. Being fluent with a set skill is fundamental and underpins a child's ability to apply that knowledge to more complex reasoning and problem solving skills later on. Children who struggle with the fluency aspect of the curriculum will be offered additional support to ensure they have a good understanding of the fundamentals of a topic. Once children show a proficiency in their fluency, they will then be challenged to apply their skills in more demanding tasks. As topics are revisited throughout the year, reasoning and problem solving become much more of a focus, as children will already have the necessary understanding that can be applied. Pre-learning is used as an intervention to support pupils with particular difficulties.

Number facts focus

Pupils in KS1 are given the opportunity to practice their understanding and rapid recall of number bonds in a number of creative and fun ways, including technology. Similarly, children within KS2 are able to develop their recall of multiplication facts through the 'TT Rockstars' program (both within school and at home).

Place Value

The concept of Place Value underpins all mathematical understanding. Being fluent with place value ensures that children can develop a sound knowledge of other curriculum areas. As such, at the beginning of each academic year, teachers deliver a place value unit (from the White Rose scheme of learning). This provides staff with the opportunity to revise key concepts with pupils and intervene early (where needed), allowing children to develop a strong foundation on which the rest of the Maths curriculum can then be built upon

A practical approach to Maths is important to children throughout school, though its importance in introducing key concepts and ideas early on cannot be underestimated. In EYFS and KS1, there is a particular emphasis on using concrete resources to embed understanding. Though use of practical resources is encouraged throughout school, we are aware that concepts become more abstract as the years progress and as such, children then need to apply their prior knowledge and fluency skills to an increasing number of pictorial and abstract concepts and tasks.

Both individual and class achievements are celebrated within assemblies each week, with children being awarded certificates for attainment and progress.

Maths homework is set every other week

During the year, pupils have the opportunity to further develop their mathematical experiences in various ways. Pupils in Year 5 & 6 are invited to visit the local secondary school. This allows pupils to experience maths at a higher level.

The maths subject leaders in the federation collaborate each year on a maths project designed to involve pupils in parallel year groups. Pupils from both schools taken part in these challenges. It is also an opportunity for teachers to collaborate and moderate outcomes.

Teachers continually assess children throughout each lesson (AfL) and will intervene immediately where a child demonstrates difficulty in understanding. This could be through immediate support, 1:1 or group intervention, or time spent with a TA to revisit particular areas of learning. Summative assessments take place termly, through Rising Stars tests and past SAT papers (Years 2 and 6). Combined with AfL, teachers then use the data collected to make judgements on progress which are then discussed in pupil progress meetings with senior leaders.

Teachers take part in moderation meetings with other small schools in the area.

Training with Maths specialists has taken place, looking at and refreshing ideas of varied fluency and mastery.

Teachers took part in the 'Lincolnshire project' over the past year which had sessions specifically focused on maths and resources which are available to prompt fluency and confidence in problem solving - Nrich