



KRISHNA AVANTI
Excellence · Virtue · Devotion

Mathematics at Krishna Avanti Primary School

Intent



At Krishna Avanti Primary School we believe that mathematics is a tool that equips the children to understand and change the world. To be fully integrated into society we all need to be able to communicate mathematically, which includes being able to reason, solve problems, and to think abstractly. The intention of our curriculum is to implement a mastery approach to teaching and learning which will provide all children with a rich, balanced, and progressive curriculum. Confidence, resilience and perseverance are encouraged to enable them to believe in themselves as mathematicians.

At the core of our curriculum is the concrete, pictorial, and abstract approach to maths. Our children are taught and encouraged to explain their choice of methods and develop their mathematical reasoning skills whilst recognising that mathematics underpins much of our daily lives.

Teaching is underpinned by methodical curriculum design and supported by carefully crafted lessons and resources to foster deep conceptual and procedural knowledge. Please view our calculation policy to see this in action. Mathematics is taught to whole classes, where the majority of the pupils' progress through the curriculum content at the same pace with opportunities to deepening their understanding and application.

Underpinning the journey for our young mathematicians is fluency, reasoning and problem solving. This journey plays a central role where learning is carefully designed to include variation, fluency development and key understanding of underlying mathematical concepts.

Implementation



At Krishna Avanti Primary School we follow a mastery approach to the curriculum, using the White Rose Maths Hub resources. Typically, you will see the following features to mathematics learning:

- Pupils will progress through the curriculum content at the same pace. Differentiation is achieved by emphasising deep knowledge and through individual support and intervention. The questioning and scaffolding individual pupils receive in class as they work through problems will differ and pupils who grasp concepts rapidly are challenged through more demanding problems which deepen their knowledge further.
- Practise and consolidation play a central role to mathematics learning. Carefully designed variation within this builds fluency and understanding of underlying mathematical concepts in tandem.
- Teachers use questioning in class to challenge pupil's conceptual and procedural knowledge as well as their problem solving and reasoning skills. This ensures early identification of pupils who may not make the expected progress without additional intervention.
- Teachers use the CPA approach (concrete, pictorial, abstract) to ensure that concepts are modelled to pupils using multiple representations. This ensures that procedural and conceptual understanding are developed simultaneously.
- Pupils are taught in mixed ability groups as we believe that all pupils can attain highly in mathematics and every pupil will have different strengths and development areas. Therefore, groupings within classes are fluid, based on good assessment for learning, and pupils will work in different groups dependent on their need.

Curriculum

Curriculum – EYFS- Mathematics within the EYFS is developed through purposeful, play-based experiences and will be represented throughout the indoor and outdoor provision. In Reception, the learning will follow the white rose curriculum in order to meet the requirements of the Early Years Framework. As the pupils' progress through, more focus is placed on representing their mathematical knowledge through more formal experiences. Pupils will be encouraged to record their mathematical thinking when ready and this will increase throughout the year.

Curriculum – Year 1 to 6 we follow the White Rose Maths Hub curriculum, with a structured curriculum map however, this is flexible to the needs of the pupils and therefore if most pupils have not grasped a concept thoroughly, there is flexibility to adapt the curriculum map and revisit concepts. Those pupils who grasp concepts more rapidly are given opportunities to deepen their knowledge further and improve their reasoning skills, through rich problems, rather than accelerating on to

new curriculum content. Pupils are challenged through sophisticated problem-solving tasks that encourage them to apply the concept to gain depth of understanding.

Lesson Design

Teachers follow a lesson structure, where a recap activity is implemented followed by teacher input, talk task is an opportunity to reason and use the correct mathematical language and address any misconceptions. The independent activity is chosen by the child or directed by the adults according to their needs.

Teachers use concrete apparatus and visual representations at every opportunity to reinforce the concept and ensure deep and meaningful understanding. Pupils have the opportunity to practise the new skills using carefully crafted and varied questioning and talk will be used regularly to allow the pupils the opportunity to demonstrate their reasoning skills.

Adapted and Responsive Teaching

Adapted and Responsive Teaching methods will be used to support pupils working on differing complexities of problems within the same objective called challenges which involve, fluency, varied fluency, problem solving, and reasoning ensure that they continue to make progress and to deepen their understanding of the concept.

There will be some pupils who are using practical equipment for longer in order to support learning.

Interventions

Using formative assessment gathered through the practise tasks, teacher questioning and other formative assessment methods, any pupils who have not grasped the concept or who have misconceptions should have a rapid intervention to ensure that they are ready for the next step of learning. Where possible, this will occur on the same day (or during the maths lesson) to ensure that gaps are rapidly plugged, ready for the next steps.

The contribution of mathematics to other curriculum areas

Generally, mathematics will be taught discretely to ensure that links are not tenuous, however where there is a clear link to another subject e.g. data handling within science, mathematics skills should be applied to this subject and used to evidence the pupils' depth of understanding.

Impact



As a result of our Maths teaching, you will see:

- Engaged children who are all challenged.
- Confident children who can all talk about Maths and their learning and the links between Mathematical topics.
- Lessons that use a variety of resources to support learning.
- Different representations of mathematical concepts.
- Learning that is tracked and monitored to ensure all children make good progress.