

Maths Curriculum Statement: Cliftonville Primary

Mathematics is not about numbers, equations, computations, or algorithms: it is about understanding.

— William Paul Thurston

Intent

At Cliftonville Primary School, we create an exciting learning environment in which children can confidently learn and achieve. We value both independent and collaborative learning. Our maths curriculum is designed to spark creativity, centred around mathematical problems, enabling a curiosity for maths and igniting passion for the subject.

The aims of the national curriculum for mathematics are to ensure that all pupils:

- become **fluent** in the fundamentals of mathematics, including through varied and frequent practise with increasingly complex problems, so that the pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
- **reason mathematically** by following a line of enquiry, predicting and testing relationships and generalisations, and developing an argument, justification or proof using mathematical language.
- can **solve problems** by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

One focus for our work will be the teaching of skills, methods and facts to enable pupils to solve problems. The children will be required to learn number facts with quick re-call, so that when learning new methods they can concentrate on the process. The number facts they need e.g. times tables should not hinder their development. The children will be given time to practise skills so they become fluent in calculation methods and other mathematical skills e.g. using a protractor. However, our focus will be on enabling children to use these skills to solve problems, as we feel there are limited reasons for children knowing *how* to do something if they do not understand when it is appropriate to *use* it. The expectation will be that children can explain their mathematical thinking; maths lessons should not always be quiet lessons, but interactive and fun, with children engaged in tasks, sharing ideas and solving problems.

We cover the curriculum at a pace that ensures that deep mathematical understanding of concepts is enabled. Our expectation is that the majority of children will move through the curriculum at the same pace. Decisions about when to progress will be based on the understanding the children have demonstrated and their readiness to progress to the next part of learning. Children that grasp ideas and concepts at a quicker pace will be challenged appropriately, through variation and problems. Those children that are not fluent with learning taught in a particular lesson, will consolidate their learning through additional practise and support in our daily interventions (maths mop up).

Implementation

We implement our approach through high quality teaching delivering appropriately challenging work for all individuals. To support use, we have range of mathematical resources available in classrooms including Numicon, Base10 and counters (concrete equipment). When children have grasped using concrete equipment, images and diagrams are used (pictorial) prior to moving to abstract questions. Abstract maths relies on children understanding a concept thoroughly and being able to use their knowledge and understanding to answer and solve maths questions without equipment or images.

Every KS2 class has access to TTRS (Times Tables Rock Stars). An interactive programme in which children can practise their multiplication and division facts recall. In term 6, year 2 will begin to use TTRS as a transition to KS2. This is a focus to prepare for the multiplication check in year 4, and to enable children to be fluent in their recall facts to aid their maths learning. In the Early Years and KS1, Doodle Maths is used for children to practise and consolidate their maths learning. The expectation is that children access the programme at home as well as time allocated in school.

Every class from EYFS to Year 6 follows the White Rose scheme of learning which is based on the National Curriculum. Lessons can be adapted and personalised for the needs of the pupils in each class. The pace of learning is dependent on the need of the children in each class. We also use a range of planning resources including those produced by the NCETM, NRICH and Testbase to enrich our children's maths diet.

Impact

At Cliftonville, we monitor the impact of maths through:

- Seasonal testing using PUMA
- Regular oral and written feedback
- Book moderation – within year groups and whole school
- Lesson drop ins

The outcomes of the children include:

- Children demonstrate quick recall of facts and procedures. This includes the recollection of times tables and number facts.
- Mathematical concepts or skills are mastered when a child can show it in multiple ways, using the mathematical language to explain their ideas, and can independently apply the concept to new problems in unfamiliar situations.
- The chance to develop the ability to recognise relationships and make connections in maths lessons.
- Children use acquired vocabulary in maths lessons. They have the skills to use methods independently and show resilience when tackling problems.
- The flexibility and fluidity to move between different contexts and representations in maths.
- Children 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.
- Children show a high level of pride in the presentation and understanding of the work.