



## Maths Policy

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## Norwich Road Academy Maths Policy

### Intent

At Norwich Road Academy we aim to foster a 'can do' attitude towards maths. If we feel we can't do it, the sentence is always followed with YET! "I can't do it yet!" This makes us believe we will be able to do it, we just haven't quite learnt all the skills we need to solve the problem. This positive mind-set towards maths helps us all to achieve more than we believe we can.

Our school values:

### **Be Proud - Empower – Motivate –aspire – Connect – Transform**

They are an integral part of every subject, including Maths, and are central to the Academy vision. Each value has its own place and can be linked to the Maths curriculum, encouraging children to strive to do their best, build on their learning and leave the academy as confident young people.

At Norwich Road Academy we intend to provide a high quality maths curriculum that is both challenging and enjoyable. The curriculum will be accessible to all and will maximise the development of every child's ability and academic achievement. We want pupils to make rich connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems, including using maths in other areas of the curriculum. Pupils will be exposed to, and use, mathematical vocabulary at all stages of learning in order to embed their understanding. Throughout their mathematical journey, children will have access to resources in order to secure mathematical concepts through the use of a concrete – pictorial – abstract methods. As they leave Norwich Road Academy we aim for pupils to have the mathematical foundations that will enable them to become successful adults in the community and wider society.

### Aims and Objectives

Our aim is to ensure that all children:

- Become FLUENT
- REASON and EXPLAIN mathematically
- Can SOLVE PROBLEMS

Children need to be regularly exposed to increasingly complex problems to solve, which allow them to apply their maths knowledge. In doing so they are encouraged to develop an argument and line of enquiry which they can prove and justify using mathematical vocabulary. This includes the ability to break down problems, both routine and non-routine, into a series of steps.

### Implementation

At Norwich Road Academy we teach maths using a mastery approach. All pupils should have the opportunity to build competency by using the CPA (concrete-pictorial-abstract) approach. Pupils are encouraged to physically represent mathematical concepts. Objects and pictures are used to demonstrate and visualise abstract ideas, alongside numbers and symbols. Teachers follow the long term plan to ensure progression in skills. Vocabulary is taught and displayed, then used in full sentences when talking to pupils about their work.

#### **At Norwich Road Academy we teach maths in a way that:**

- encourages children to use mathematical vocabulary to reason and explain.
- develops mental strategies
- makes links between the concrete, pictorial and abstract
- is engaging for pupils of all abilities
- allows time for talk in order to stimulate and develop a curiosity for maths

- builds on prior knowledge
- challenges children to stretch themselves
- allows children to secure their understanding of number and number relationships
- delivers the guidance in the National Curriculum

The learning environment will be positive and include a range of supportive systems for the children, including: a maths working wall, current vocabulary, a range of age appropriate manipulatives. Displays may include modelled examples from the teacher as well as examples of pupil's work. Pupils will be exposed to calculations and problem solving opportunities around the school, in lessons, displays or via verbal interaction with all staff. Teachers will use effective questioning in order to investigate deeper learning as well as to address misconceptions.

The Calculation Policy details the methods to be used to support calculations throughout the school. This can be found on the working wall in each classroom.

## **Impact**

Planning will enable pupils to make the appropriate progress over time.

Clear assessment procedures will help to identify gaps in knowledge and understanding, allowing for teachers to plan for intervention.

All pupils will be secure with the fundamental aspects of numeracy, ensuring they are able to function independently as they continue their journey through education.

## **Planning and assessment**

The school uses the National Curriculum, our Knowledge curriculum guidance and White Rose resources to plan the maths curriculum. The long term plan sets out areas of maths to be covered by each year group. Teachers use the guidance to formulate medium term plans.

Teachers plan and deliver lessons that suit the needs of the children in their class. They use their professional judgement and assessment information to ensure a flexible approach is adopted. Children are given the opportunity to engage in fluency, reasoning and problem solving activities throughout the week. Teachers have access to resources including the Power Maths Text books and White Rose maths resources to support their planning.

At Norwich Road Academy we use a variety of assessment systems to support our teacher assessment. These include: PIXL, Pupil Asset, Development Matters and our own half termly assessment.

Times tables knowledge will also be assessed and tracked.

These tests will *support*, **not** replace, teacher assessment. Formative assessment is used to guide teaching focus; summative assessment is used to track progress and attainment over time.

Children are provided with feedback in line with the school's feedback policy.

## **Inclusion**

When delivering Maths at Norwich Road Academy, care will be taken to ensure that all learning needs are met to ensure all children can keep up with the learning. Class teachers will identify pupils requiring support in Maths lessons, and also those that need intervention. These sessions may take place outside of the daily Maths lesson.

## **Parents**

It is important the parents and carers are actively involved in the children's learning. Pupils are given a weekly maths task as part of their home learning. Teachers use the Class dojo system to inform parents of classroom learning.