



**Newall Green  
Primary School**

*Aiming High To Reach Our Goals*

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# School Policy Document for Numeracy



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Amendments	
Related Policies/Guidance	<ul style="list-style-type: none"> <li>• Teaching &amp; Learning Policy</li> <li>• Calculation Policy</li> </ul>
Review	3 year Jan 2022

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#### AIMS

- To ensure that all pupils are enthusiastic, confident and fluent in the fundamentals of Numeracy so that pupils have conceptual understanding and are able to recall and apply their knowledge rapidly and accurately to problems.
- To ensure that all pupils reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language.
- To ensure that all pupils can solve problems by applying their Numeracy 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.
- To increase the confidence of each pupil in Numeracy to enable them to apply the knowledge and master skills with assurance across the curriculum and in real life.
- To develop pupils' initiative and ability to work both independently and in cooperation with others enabling pupil's communication.
- To develop pupils' ability to calculate accurately and efficiently, both mentally and in writing, drawing on a range of calculation strategies
- To promote the teaching of numeracy and literacy within all subjects.
- To share good practice within the school.
- To work with other schools, for example, in Cluster Meetings and learning walks, to share good practice in order to improve this policy.

#### SCHOOL POLICY AND THE NATIONAL CURRICULUM

At KS1 and KS2, teachers deliver the National Curriculum 2014 and use elements of Assertive Mentoring and White Rose Maths tailored to suit the requirements of our school.

#### SCHOOL POLICY AND BREADTH OF STUDY

Through careful planning and preparation, we aim to ensure that throughout the school children are given opportunities for:

- practical activities and mathematical games
- problem solving
- individual, group and whole class discussions and activities
- open and closed tasks that apply skills across the curriculum
- a range of methods of calculating eg. mental, pencil and paper and using a calculator
- working with computers as a mathematical tool

## **TEACHERS' PLANNING AND ORGANISATION**

Each class teacher is responsible for the Numeracy in their class. Teaching and learning that takes place within their classroom is supported by guidance from Numeracy co-ordinators through regular learning walks and feedback from relevant training courses.

The planning for Numeracy is organised into Long term/Medium Term and short-term weekly planning. There is a format that is universally used across the school which can be found on the [Teachers Only Network](#).

The approach to the teaching of Numeracy within the school is based on the following expectations:

- a Numeracy lesson is taught every day – one lesson a week will be set aside for the teaching of Maths Basic Skills to develop Fluency in line with the New Curriculum guidelines (see Assertive Mentoring Guidance for further details.)
- in KS1 and KS2, problem solving opportunities are provided throughout the numeracy curriculum to promote mastery skills
- a clear focus on direct, instructional teaching and interactive oral work with the whole class and group.
- an emphasis on pupils mastering an area before moving on.

Lessons are organised so that pupils engage with Numeracy for between 45 and 60 minutes per day.

Lessons are planned using a common planning format and are collected and monitored by the Numeracy coordinator.

Teachers plan lessons using the curriculum specific for the age range being taught and in accordance with the school's calculation policy.

## **Maths in Early Years**

Children in Nursery and Reception are taught maths through delivery of the Mathematics area of learning in the Early Years Foundation Stage framework. The teaching of maths in the EYFS involves providing children with opportunities to develop and improve their skills in counting, understanding and using numbers, calculating simple addition and subtraction problems; and to describe shape, space and measure. Children will develop their understanding through planned, purposeful play and through a mix of adult-led and child-initiated activity.

Reception teachers use the White Rose Maths scheme to plan units of work and adapt it as necessary to meet the needs of the children. Reception and Nursery children receive a short daily Maths whole class/group session. There are also opportunities to undertake maths activities within continuous provision, outdoor play and enhancements linked to the current learning. It is expected that the vast majority of children in Nursery and Reception will be taught maths in mixed ability groups, with the whole cohort working towards the Early Learning Goals at broadly the same pace. Pupils who grasp concepts rapidly will be challenged through having access to a wider variety of problems, whilst those children who are not sufficiently fluent in their understanding will be given opportunities to further develop their understanding before moving on.

Children's progress is tracked each half-term using a tracking grid similar to Development Matters which lists children's age-related expectations. Targets are set regularly throughout the year which parents/carers are informed of. Assessments are gathered through guided group tasks and observations of children during both adult initiated and child-initiated learning. These observations are cross referenced to the age-related expectations.

Listed below are the two Mathematics Early Learning Goals which children are expected to achieve by the time they leave Reception:

### **ELG – Numbers**

Children count reliably with numbers from one to 20, place them in order and say which number is one more or one less than a given number. Using quantities and objects, they add and subtract two single-digit numbers and count on or back to find the answer. They solve problems, including doubling, halving and sharing.

### **ELG - Shape, space and measures**

Children use everyday language to talk about size, weight, capacity, position, distance, time and money to compare quantities and objects and to solve problems. They recognise, create and describe patterns. They explore characteristics of everyday objects and shapes and use mathematical language to describe them.

### **SPECIAL EDUCATIONAL NEEDS**

Children with SEN are taught within the daily Numeracy lesson or within a provision room.

Where appropriate, children receive additional support through TA support and interventions in areas identified by the Assertive Mentoring assessment grids.

Where applicable, children with SEPs, SAPs and on class action will have suitable objectives from the Assertive Mentoring assessment and teachers keep these specific objectives, which relate to the individual child, in mind when planning work and interventions.

Teaching Assistants are deployed to work with small groups across both Key stages.

Within the daily Numeracy lesson, teachers not only provide activities to support children who find Numeracy difficult but also activities that provide appropriate challenges for children who are high achievers in Numeracy. Enrichment activities such as Able Maths Days and after school clubs such as 'Magical Maths' have also been organised to extend this group.

### **EQUAL OPPORTUNITIES**

We incorporate Numeracy into a wide range of cross-curricular subjects and seek to take advantage of multi-cultural aspects of Numeracy.

In the daily Numeracy lesson we support children with English as an additional language in a variety of ways.  
eg. repeating instructions, speaking clearly, emphasising key words, using picture cues, playing mathematical games, encouraging children to join in counting, chanting, finger games, rhymes etc.

### **PUPILS' RECORDS OF THEIR WORK**

Children are taught a variety of methods for recording their work and they are encouraged and helped to use the most appropriate and convenient method of recording. For further guidance, see the school's calculation policy.

Children are encouraged to use mental strategies before resorting to a written algorithm.

Children are encouraged to show all "working out" in their exercise books, crossing out any mistakes rather than rubbing them out. Whiteboards should only be used for activities where the teacher is assessing whole-class responses such as counting activities and/or mental/oral warm-up activities.

In Year 1, as children move from the EYFS setting, there is a greater emphasis on teaching Numeracy through practical activities which develop skills of written calculation. As children move from the EYFS curriculum and onto the National Curriculum, children will be encouraged to record as much work as possible in their maths books even when carrying out practical activities.

In Year 2, children will still be encouraged to learn through practical activities, however, there is an expectation that children begin to become more familiar with formal written methods.

In KS1 and KS2 there is an expectation of recorded work **for every day**, ie, four times per week (the fifth day being Weekly Basic Skills); including photographs of any group/whole-class investigative work which would not be recorded in maths books in the normal manner.

### **Exercise Books for Recording**

It is school policy that the following pattern is used:

- KS1: 15mm squares
- Year 3: 10 mm squares
- Year 4: 10 mm squares
- Year 5: 7 mm squares
- Year 6: 7 mm squares

All children are encouraged to work tidily and neatly when recording their work. When using squares, one square should be used for each digit.

## **MARKING**

Work in Numeracy can generate a great deal of marking and it is recognised that it is not always desirable to mark every piece of work in detail. The children themselves can mark exercises which involve routine practice with support and guidance from the teacher. They are also encouraged to peer mark where possible. Where appropriate, children are encouraged to check computational exercises with a calculator. This can foster independence in the children, who can seek help if they are unable to locate and correct their errors.

The quality of marking is crucial. A simple 'X' is of little assistance to a child. A dot is put next to any incorrect answers and then the children are given time to revisit this through their 'Next Steps' the next day. 'Next steps' may include corrections from the previous day's work or further questioning to help support the mastery of the area being taught.

Marking should be both diagnostic and summative and feedback will either be verbal or written.

## **ASSESSMENT AND RECORD KEEPING**

Teachers are expected to make regular assessment of each child's progress and to record these systematically. The following is the school policy for assessment in Numeracy:

### Informal Tests of Mental Arithmetic

This involves daily questioning both within the maths lesson as well as outside where further opportunities may arise, e.g. during register time, lining up etc.

### Formal Tests of basic skills

In KS2 each class participates in the Times Tables Challenge. These are differentiated accordingly. Children also do Weekly Basic Skills Tests from the Assertive Mentoring Scheme and are put into ability settings based on the outcomes of the tests to address misconceptions.

### Formal Written Tests

Using Assertive Mentoring, children are tested on an on-going basis and results are recorded on class criteria sheets every half term.

### Termly Evaluation

The evaluation of half-termly criteria sheets shows what has been taught and what has yet to be learned. This serves as a class record of progress. The teacher may wish to make notes on individual children whose progress differs markedly from the rest of the class, and the reasons for it. These notes and class records are passed to the child's next teacher at the end of the school year.

Pupil Progress Meetings are held half-termly. Progress in Numeracy is recorded for each child. Any areas of concern / lack of progress are noted, along with any recommendations for accelerating progress.

### Formal Assessment

At the end of each term, the children in Years 1-6 are formally assessed in end of term tests (Arithmetic and Reasoning) as part of the School's Assessment Policy.

## **REPORTING TO PARENTS**

Reports are completed at the end of the first Spring half Term and then again, before the end of the summer term. Parents are given opportunity to discuss their child's progress and look at children's work at two parents' evenings.

Teachers use the information gathered from their half termly assessments to help them comment on individual children's progress.

## **PARENTAL INVOLVEMENT**

- In KS1, parents are invited into school every day whereby they look at their own child's progress and misconceptions.
- Parent workshops are held at the beginning of the year in Nursery and Reception to introduce parents to the use of Numicon and other Structured Maths Apparatus that they can support their children with using.
- Target setting mornings take place termly whereby parents are invited into the classroom to see the new targets that their children have been set to enable parents to support their children with their progress.
- Parent Meetings take place in every year group at the start of the year to introduce techniques used to teach

Numeracy in school.

- SATS Meetings are held for parents of children in Year 2 and 6.
- When significant changes have been/are made to the Numeracy curriculum, parents are invited to a meeting or sent information via the half termly newsletter.

### **DIFFERENTIATION**

This should always be incorporated into all Numeracy lessons and can be done in various ways:

- Stepped Activities which become more difficult and demanding but cater for the less able in the early sections.
- Common Tasks which are open ended activities/investigations where differentiation is by outcome.
- Resourcing which provides a variety of resources depending on abilities eg. counters, cubes, 100 squares, number lines, mirrors.
- Grouping is fluid and based on assessment of the gaps in children's learning.
- Questioning techniques to meet the needs of different abilities within the class.

### **MONITORING AND EVALUATION**

The Maths Focus Group Leads carry out regular Teaching and Learning Reviews together with a member of SLT and an external advisor. The Maths Focus Group carry out book scrutinies and pupil voice interviews. This time is used to monitor and evaluate the quality and standards of Numeracy throughout the school and enables the team to support teachers in their own classrooms.

Opportunities for teachers to review the scheme, policy and published materials are given on a regular basis during staff meetings. The Maths Focus Group also meet every week to monitor Numeracy teaching in school and develop and support the teaching and learning of this subject through focussed discussion and then allocation of tasks.

### **RESOURCES**

Teachers should organise an interactive area within the classroom dedicated to Numeracy. This area is easily accessible to all children and allows them to become familiar with all resources. Structured Maths Apparatus are available to all children to promote independent learning, support and extension when necessary.

### **STAFF**

The Numeracy coordinators are given dedicated time in order to work alongside other teachers. This time is used to monitor and evaluate the quality and standards of Numeracy throughout the school and enables the coordinator to support teachers in their own classrooms.

Opportunities for teachers to review the scheme, policy and published materials are given on a regular basis during staff meetings.

### **HOMEWORK**

It is our school policy to provide parents and carers with opportunities to work with their children at home. These activities may only be brief, but are valuable in promoting children's learning in Numeracy.

Activities are sent home on a regular basis (see the separate school Homework Policy) and take the form of number games and tasks with some formal exercises for older children.

Teachers ensure that homework time is not spent "finishing off" written work carried out in class.

### **Written by:**

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