



COCKFIELD COMMUNITY PRIMARY & NURSERY SCHOOL

MATHEMATICS GUIDELINES

TEACHING AND LEARNING STYLE

Cockfield Community Primary & Nursery School uses a variety of teaching and learning styles in mathematics lessons and throughout the Creative Curriculum linking learning throughout the curriculum wherever possible. Our principal aim is to develop children's knowledge, skills and understanding in mathematics. During these lessons we encourage children to ask as well as answer mathematical questions. They have the opportunity to use a wide range of level appropriate resources such as number lines, number squares, digit cards and small apparatus to support their work. Children use ICT in mathematics lessons where it will enhance their learning. Wherever possible, we encourage the children to use and apply their learning in everyday situations.

In all classes there are children of differing mathematical ability. Suitable learning opportunities are provided for all children by matching the challenge of the task to the ability of the child. This is achieved through a range of strategies – in some lessons through differentiated group-work and in other lessons by organising the children to work in pairs on open-ended problems or games. Teaching assistants support children where appropriate.

TEACHING METHODS

Year 1 - 6

Cockfield Community Primary & Nursery School recognises that certain methods of teaching result in better standards, and within the timetabled daily maths lesson (50 – 60 minutes) teachers:

- Structure their mathematics lessons and maintain a good pace
- Provide appropriate challenge for the children
- Provide daily oral and mental work to develop and secure pupils' calculation strategies and rapid recall skills.
- Include one oral starter per week related to shape
- Devote a high proportion of lesson time to direct teaching of whole classes and groups, making judicious use of textbooks, worksheets and ICT resources to support teaching, not to replace it.
- Demonstrate, explain and illustrate mathematical ideas, making links between different topics in mathematics and between mathematics and other subjects.
- Use and give pupils access to number lines and other resources, including ICT, to model mathematical ideas and methods.
- Use and expect pupils to use correct mathematical vocabulary and notation.
- Question pupils effectively, including as many pupils as possible, giving them time to think before answering, targeting individuals to take account of their attainment and needs,

asking them to demonstrate and explain their methods and reasoning, and exploring reasons for any wrong answers.

- Involve pupils and maintain their interest through appropriately demanding work, including some non-routine problems that require them to think for themselves.
- Ensure that differentiation is manageable and centred on work common to all the pupils in a class, with targeted, positive support to help those who have difficulties with mathematics to keep up with their peers.

FOUNDATION STAGE UNIT

We support children in developing their understanding of solving problems and reasoning and number in a broad range of contexts in which they can explore, enjoy, learn, practise and talk about their understanding using the indoor and outdoor areas. We provide children with opportunities to practise and extend their skills in these areas and to gain confidence and competence in their use.

Practitioners need to be clear that although there may be a focus on the prime areas, maths learning doesn't begin at age three! However, children need to hear maths talk and have lots of opportunities to explore in a mathematical way from the very earliest months. Development Matters in the Early Years Foundation Stage (EYFS), the non-statutory guidance material that supports practitioners in implementing the statutory requirements of the EYFS (2012), provides lots of helpful information about working with children from birth until the end of the Reception year. There are suggestions for:

- A unique child: observing what a child is learning
- Positive relationships: what adults could do
- Enabling environments: what adults could provide.

When planning to support mathematics, leaders, managers and practitioners need to reflect on the ways in which children learn and ensure both provision and practice are informed by this. The revised framework emphasises the three characteristics of effective teaching and learning.

- playing and exploring - children investigate and experience things, and 'have a go'
- active learning - children concentrate and keep on trying if they encounter difficulties, and enjoy achievements
- creating and thinking critically - children have and develop their own ideas, make links between ideas, and develop strategies for doing things.

So, when we are planning for maths, we need to ensure this is through active learning as children are playing and exploring, both indoor and outdoor, that as children grow, the experiences we provide support them to develop their own ideas. The revised framework clearly states that each area of learning and development must be implemented through planned, purposeful play and a mix of adult-led and child-initiated activity; the challenge is to provide a simulating environment for our youngest children, which supports their continuing development as confident mathematicians.

Medium Term Plans

Medium Term Plans are developed on a half termly basis. The plans include the skills to be covered. Skills are taught through play based activities that are child initiated or adult led.

Short term plans

Short term plans are flexible and child led.

PLANNING

In order to ensure a consistent approach and good progression throughout the school, a thorough planning system is in place.

- Staff teaching Y1 – Y6 plan from The National Curriculum framework document and the Durham County National Curriculum 2014: Progression Guidance document using a range of resources within the school which best fits the success criteria.
- Nursery and Reception staff plan from the EYFS Curriculum

Year 1-6

Medium Term Plans

Objectives from The National Curriculum framework document and the Durham County National Curriculum 2014: Progression Guidance document are used to support medium term plans. Teachers plan for differentiation by using objectives from other year groups where this is relevant.

Medium term plans are translated into short term, weekly plans which identify the teaching and learning and differentiation, and the role of any support within the class.

Short Term Plans

Short-term plans include: -

- Objectives for the oral / mental starter and the main part of the lesson.
- Opportunities for the development of mathematical vocabulary.
- Opportunities for different forms of questioning.
- The strategies and methods the teacher will use to deliver the objectives.
- Pupil activities including differentiation.
- A meaningful plenary
- The role of any classroom support and support packages
- How ICT will be used, if appropriate

The daily maths lesson, the short term and medium term plans are evaluated to inform the next stage of planning.

ASSESSMENT

We believe that effective assessment provides information to improve teaching and learning, please refer to The Assessment, Record Keeping and Reporting Policy and Guidelines.

MARKING AND PRESENTATION

Marking and presentation of mathematics will be carried out in line with The Whole School Marking and Presentation Policies.

PROGRAMME OF STUDY

The school's programme of study is The National Curriculum framework document and the Durham County National Curriculum 2014: Progression Guidance documents Learning objectives are taken from the year groups below for lower ability pupils and above for higher ability. This is identified in teachers planning, and ensures the needs of each child are met.

See Guidelines for Progression in Written Calculation for further advice.