

Consett Junior
School



Mathematics
Policy

Document Control

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Change history

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1.0	1/02/2014	Bi-Annual review
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Related documents/policies

References	Title
	Calculations Policy

Introduction

At Consett Junior School we value every pupil and the contribution they have to make. As a result we aim to ensure that every child achieves success and that all are enabled to develop their skills in accordance with their level of ability. Mathematics is both a key skill within school, and a life skill to be utilised throughout every person's day to day experiences.

Rationale

Mathematics equips pupils with the uniquely powerful set of tools to understand and change the world. These tools include logical reasoning, problem solving skills and the ability to think in abstract ways. Mathematics is important in everyday life. It is integral to all aspects of life and with this in mind we endeavour to ensure that children develop a positive and enthusiastic attitude towards mathematics that will stay with them.

The National Curriculum for mathematics (2014) describes in detail what pupils must learn in each year group. Combined with our Calculation Policy, this ensures continuity, progression and high expectations for attainment in mathematics.

It is vital that a positive attitude towards mathematics is encouraged amongst all of our pupils in order to foster confidence and achievement in a skill that is essential in our society. At Consett Junior School we use the National Curriculum for Mathematics (2014) as the basis of our mathematics programme. We are committed to ensuring that all pupils achieve a thorough understanding of the key concepts of mathematics, appropriate for their age group, in order that they make genuine progress and avoid gaps in their understanding that cause barriers to learning as they move through education. Assessment for Learning, an emphasis on investigation, problem solving, the development of mathematical thinking and development of teacher subject knowledge are therefore essential components of the Consett Junior School's approach to this subject.

Aims

- To foster a positive attitude to mathematics as an interesting and attractive part of the curriculum
- To develop the ability to think clearly and logically, with confidence, flexibility and independence of thought
- To develop a deeper understanding of mathematics through a process of enquiry and investigation
- To develop an understanding of the connectivity of patterns and relationships within mathematics
- To develop the ability to apply knowledge, skills and ideas in real life contexts outside the classroom, and become aware of the uses of mathematics in the wider world
- To develop the ability to use mathematics as a means of communicating ideas
- To develop an ability and inclination to work both alone and cooperatively to solve mathematical problems

- To develop personal qualities such as perseverance, independent thinking, cooperation and self confidence through a sense of achievement and success
- To develop an appreciation of the creative aspects of mathematics and an awareness of its aesthetic appeal

Principles of Teaching and Learning

The school uses a variety of teaching and learning styles in mathematics lessons during each lesson to cater for all learning styles. Children from Y3 to Y6 are taught in mixed ability classes.

Our teachers strive to:

- build children's confidence and self esteem
- develop children's independence
- allow all children to experience regular success
- Contextualise mathematics
- Use practical approaches to mathematics (models and images)
- Encourage children to select independently resources to help them
- Challenge children of all abilities.
- Encourage children to enjoy mathematics
- Develop a child's understanding of mathematical language
- Learn from teachers, peers and their own mistakes.
- Allow children to ask questions as well as answer them.

Our pupils should:

- have a well-developed sense of the size of a number and where it fits into the number system (place value)
- know by heart number facts such as number bonds, multiplication tables, doubles and halves
- use what they know by heart (facts for free) to figure out numbers mentally
- calculate accurately and efficiently, both mentally and in writing on paper
- they should draw on a range of calculation strategies and use them fluently
- make sense of number problems, including non-routine/'real' problems and identify the operations needed to solve them
- explain their methods and reasoning, using correct mathematical terms
- judge whether their answers are reasonable and have strategies for checking them where necessary
- suggest suitable units for measuring and make sensible estimates of measurements
- explain and make predictions from the numbers in graphs, diagrams, charts and tables
- develop spatial awareness and an understanding of the properties of 2D and 3D shapes

To provide adequate time for developing mathematics, maths is taught daily and discretely. However, application of skills are linked across the curriculum where appropriate.

Maths Curriculum Planning

Mathematics is a core subject in the National Curriculum and we use the objectives from this to support planning and to assess children's progress. White Rose Maths Hub long term plans and medium term schemes of learning (SOLs) documents are used as a foundation for planning. The Abacus maths scheme is used to source fluency activities. Reasoning and problem solving tasks are sourced from White Rose Maths SOLs and from Classroom Secrets maths scheme. These three schemes are used to ensure parity across year groups, continuity and progression.

Assessment

This section details the various assessment methods and practices used in Consett Junior School through which we ensure that children are making appropriate progress and that the activities they take part in are suitably matched to their ability and level of development. Please see separate assessment policy for a detailed description.

Resources

A bank of essential mathematics resources are kept in each classroom and work areas. Further resources relating to key whole school topics are kept in maths cupboards in the work area between Class 7 and Class 8. The cupboards have a maths resource list displayed so that equipment can be located efficiently. All teachers have subscriptions to Abacus, Times Tables Rockstars, Classroom Secrets and Deepening Understanding. They also have online access to White Rose Maths SOLs.

Computing

Teachers should use their judgement about when ICT tools should be used, including the use of calculators, ipads and laptops.

Role of the Subject Leader

- Ensures teachers understand the requirements of the National Curriculum and is able to offer advice to help them to plan lessons
- Leads by example by setting high standards in their own teaching
- Prepares, organises and leads CPD and joint professional development
- Works with the SENCO and SLT
- Observes colleagues with a view to identifying the support they need
- Discuss regularly with the Headteacher and the mathematics governor the progress of Mathematics in school
- Monitors and evaluates mathematics provision in the school through regular book sampling, pupil discussion, through sharing good practise, learning walks and assessment data analysis etc.
- Organises an annual 'Whole School Mathematics Day' to raise the profile of the subject

Moderating and Review

Moderating of the standards of children's work and of the quality teaching in mathematics is the responsibility of the mathematics subject leader alongside members of the senior leadership team. The work of the mathematics subject leader also involves supporting colleagues in the teaching of mathematics, being informed about current developments in the subject, and providing a strategic lead and direction for the subject in the school. The mathematics subject leader gives the Headteacher a termly report in which strengths and weaknesses in the subject are evaluated and areas for further improvement are highlighted. A member of the school's governing body is briefed to oversee the teaching of numeracy. This governor meets regularly with the subject leader to review progress, discuss changes to the way mathematics is taught in Consett Junior School and when possible observe some of the daily mathematics lessons. Following contact with school they will report back to the curriculum committee on a regular basis.