

Curbar Primary School Policy Document



- Name of policy: **MATHEMATICS**
- Date Approved by Governors: _____
- Signature of chair of governors / governors' committee:

- Date for next review: _____



Mathematics Policy

The Importance of Mathematics

Teachers should use every relevant subject to develop pupils' mathematical fluency. Confidence in numeracy and other mathematical skills is a precondition of success across the national curriculum.

Teachers should develop pupils' numeracy and mathematical reasoning in all subjects so that they understand and appreciate the importance of mathematics. Pupils should be taught to apply arithmetic fluently to problems, understand and use measures, make estimates and sense check their work. Pupils should apply their geometric and algebraic understanding, and relate their understanding of probability to the notions of risk and uncertainty. They should also understand the cycle of collecting, presenting and analysing data. They should be taught to apply their mathematics to both routine and non-routine problems, including breaking down more complex problems into a series of simpler steps.

(National Curriculum, 2014)

Aims

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

- become fluent in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils have conceptual understanding and are able to recall and apply their knowledge rapidly and accurately to problems
- reason mathematically by following a line of enquiry, conjecturing 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.

Mathematics is an interconnected subject in which pupils need to be able to move fluently between representations of mathematical ideas. The programmes of study are, by necessity, organised into apparently distinct domains, but pupils should make rich connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems. They should also apply their mathematical knowledge to science and other subjects.

The expectation is that the majority of pupils will move through the programmes of study at broadly the same pace. However, decisions about when to progress should always be based on the security of pupils' understanding and their readiness to progress to the next stage. Pupils who grasp concepts rapidly should be challenged through being offered rich and sophisticated problems before any acceleration through new content. Those who are not sufficiently fluent with earlier material should consolidate their understanding, including through additional practice, before moving on.



Organisation

The National Curriculum Order for Mathematics describes what should be taught in each Key Stage. Curbar Primary school ensures continuity and progression in the teaching of mathematics.

Planning

Long term planning is based on the yearly teaching programmes set out in the National Curriculum 2014.

Medium term planning is carried out each half-term. Plans are checked to ensure a balanced mathematics curriculum. Teachers adapt their plans as necessary to take account of assessment information for particular groups of children. A system of highlighting medium term plans is used to help teachers monitor the coverage of objectives and to provide assessment information to inform future planning.

Short-term planning is completed weekly. These plans include teaching and learning objectives and activities, differentiated as appropriate. Planning is monitored on a regular basis by the subject co-ordinator and senior management team.

Teaching

Mathematics is taught daily in lessons which have a structure and length appropriate to the age and stage of development of the children. The following is a guide as to what a session could consist of:

1. A mental and oral starter - Whole class, or small group work to rehearse, sharpen and develop mental and oral skills.
2. The main activity - Direct teaching input through demonstration, modelling and discussion. Teachers use a variety of visual, aural and kinaesthetic resources and use correct mathematical vocabulary during this part of the lesson. Children are actively involved through questioning and activities related to the learning objectives.
3. A plenary - Whole class work to summarise key facts and ideas, sort out misconceptions and identify progress.

Roles & Responsibilities

Head Teacher and Governing Body

- Support the use of appropriate teaching strategies by allocating resources effectively
- Ensure that the school buildings and premises are best used to support successful teaching and learning
- Monitor how effective teaching and learning strategies are in terms of raising pupil attainment
- Ensure that staff development and performance management policies promote good quality teaching

Role of the Maths Co-ordinator

- To have an impact on raising standards of attainment for mathematics across the whole school
- Ensure the effective implementation of the statutory national curriculum for maths
- To monitor the whole school and individual needs to be able to assess individuals
- Professional development opportunities and needs
- To maintain the availability of high quality resources



- To maintain an overview of current trends and developments within the subject
- To ensure, together with the head teacher, a rigorous and effective programme of lesson observation monitoring
- To ensure a regular and effective programme of analysis of children's work sample monitoring is in place
- To ensure regular and effective programme of analysis of short-term planning is in place
- To ensure there is regular reviewing and monitoring of layered curriculum targets
- To effectively manage any funding designated to literacy

Role of the Teacher

- to ensure progression in the acquisition of mathematical skills, with due regard to the national curriculum for mathematics
- to develop and update skills, knowledge and understanding of mathematics
- to identify inset needs in mathematics and take advantage of training opportunities
- to keep appropriate on-going records
- to plan effectively for mathematics
- to inform parents of pupils' progress, achievements and attainment

Role of the Teaching Assistant

- If available, to support the teacher by working with individuals or groups; or by following agreed intervention strategies.

Assessment and Record Keeping

Short term assessments are made during lessons as teachers evaluate children's responses to oral questions and written tasks and respond to misconceptions. Judgements about the achievement of learning objectives are used to inform short and medium term planning. APP grids are updated at the end of each unit, which contributes to teacher assessment throughout the school year. Summative assessments are used at the end of each key stage, as well as at the end of each academic year, alongside teacher assessment to complete the annual report to parents.

Resources

The mathematics co-ordinator is responsible for auditing and ordering the mathematics equipment across the whole school. Some age appropriate resources are located in each classroom. There is also a central bank of resources in class two.

Making links between mathematics and other subjects

Mathematics contributes to many subjects of the primary curriculum, often in practical ways. Teachers plan for opportunities to exploit links between mathematics and other subjects, to enhance learning in those subjects and to provide opportunities to apply and use mathematics in real contexts.

Marking

Marking of mathematics is in-line with Curbar Primary schools' marking policy.

Display

Each classroom should contain a mathematics working wall; an essential tool that may have examples of the concepts taught during the unit, key vocabulary and examples of good work from the children.



Equal Opportunities

The teaching of mathematics in our school takes consideration of our equal opportunities policy and inclusion. We recognise children as individuals and base our teaching upon our knowledge of their specific needs. A range of teaching methods and resources allow children with a wide range of abilities to achieve their full potential. The use of multi-cultural resources is encouraged and teachers are aware of gender issues surrounding mathematics.

Pupils with Special Needs

Pupils with diverse learning needs are provided for through:

- Teachers planning for the pupils full participation.
- Setting high expectations.
- Providing opportunities for all pupils to achieve.
- Creating effective learning environments.
- Providing equality of opportunity through teaching approaches.
- Setting learning targets.
- Liaison with SENCO and the development and delivery of appropriate IEPs.
- Liaison with outside agencies, e.g. psychological services.
- Appropriate intervention (As set out in the Code of Practice)
- Allowing pupils access to specialist equipment and approaches where necessary.
- Liaison with the adviser for gifted and talented pupils.
- More able pupils are planned for appropriately.
- This is supported by our equal opportunities policy.
- Continuous consultation with and involvement of parents.

Appendix 1: Calculation Policy

Appendix 2: Key skills expected at the end of each year.

Signed: