

Mathematics Policy: Spring 2018

Colehill First School is a Rights Respecting School. As such it is committed to upholding children's rights and promoting their responsibilities under the UN Convention for the Rights of the Child (UNCRC).

The contents of this policy are fully in keeping with this commitment.

1. Introduction

All children at Colehill First School have an entitlement to the fullest possible development of their mathematical abilities as part of a broad and balanced curriculum.

Mathematics is more than simply learning about numbers, shape and space: it is a powerful way of viewing and making sense of the world. It is a language used to analyse and communicate information and ideas, and to tackle a wide range of practical tasks and real-life problems.

We wish to foster in our children a positive attitude towards mathematics so that they find it rewarding and enjoyable. We believe children should become increasingly able to enjoy and appreciate the creative and aesthetic aspects of the subject as part of their mathematical learning, developing an appreciation of the 'mathematical connectedness' of our world.

We also believe that mathematics has an important practical contribution to make to children's lifelong learning. From a very early age, children will need to systematically develop and learn all the skills of mathematics so that they can use and apply them in their school learning and in their everyday lives.

2. Aims

We aim to develop:

- A positive attitude to mathematics as an interesting and valuable area of learning with applications far beyond the classroom;
- An age appropriate understanding of number (place value and calculation), algebra, measurement, data handling, shape and space through meaningful and practical activities;
- An awareness and appreciation of mathematical patterns and interrelationships, and a curiosity in searching for these;
- The ability to choose appropriate ways of using and applying mathematics in order to answer questions, investigate and solve problems within mathematics and across the wider curriculum;
- A capacity to think clearly and logically in mathematics with confidence and flexibility;
- An awareness of the practical application of mathematics to help solve problems in everyday contexts;
- A confidence in mathematics which will allow children to express ideas fluently, using the language of mathematics with growing assurance.

By the time pupils leave Colehill First School, they will:

- have a good sense of the relative size and scale of numbers, and of where they fit into the number system;
- know, from learning by heart, age appropriate number facts including number bonds, multiplication tables, doubles and halves;
- use what they know by heart to figure out answers mentally;
- calculate accurately and efficiently both mentally and with pencil and paper, using a range of effective and efficient strategies;
- recognise when a calculator may be needed and be able to use one effectively if appropriate;
- make sense of progressively more complex number problems expressed in words, and recognise the mathematical steps required to solve them;
- be able to explain their methods and reasoning using the correct mathematical language;
- judge whether their answers are reasonable and have strategies for checking them;
- suggest suitable units for measuring and make sensible estimates of measurements;
- be able to explain and make predictions from the data in graphs, charts and tables.

3. The National Curriculum

Children will be taught following the National Curriculum programmes of study, covering:

- Knowledge, skills and understanding
- Number
- Shape, space and measures
- Handling data

In demonstrating their knowledge, skills and understanding of mathematics children should be able to use and apply what they have learnt in order to solve problems, communicate effectively and explain their reasoning.

Pupils in year groups 1 to 4 inclusive access National Curriculum mathematics through the Singapore approach. The school uses Maths No Problem as its principal resource to deliver this approach, supported by supplementary resources from White Rose Maths Hub and NCETM.

4. Time Allocation

- Mathematics lessons will usually be taught on a daily basis;
- Typically, lessons will range from 60 to 75 minutes, but on occasions they may consist of shorter 'mini-lessons' or extended learning opportunities, such as 'maths mornings'.

5. Classroom Management and Organisation

- Each class is taught mathematics by their class teacher, supported by one or more teaching assistants.
- Children often work in groups according to their ability but may at times also work in mixed ability groups, depending upon the lesson objectives, context and stage of the lesson.
- Learning is appropriately differentiated to accommodate all abilities, including children on the S.E.N. register and our most able pupils.

Pupils will be grouped flexibly according to need, and differentiation structures will not limit opportunity for pupils to learn at a greater level of depth.

Within all classes we seek to ensure that all children:

- receive a **balanced** mathematical diet, consisting of:
- whole class/group/individual experiences;
- exposition/discussion/consolidation/problem solving/ investigation;
- mental/written/practical work;
- access to manipulative materials to support and consolidate understanding at all levels;
- activities which develop knowledge, skills and understanding and those which develop the ability to tackle problems;
- activities which are purely mathematical and those that require the application of mathematical thinking in cross curricular and / or real-life contexts;
- shorter term/more sustained pieces of work.
- are **engaged** in high quality interactive learning.

6. Planning

- Planning will follow the National Curriculum for mathematics and the Maths No Problem content sequences.
- Planning will be monitored regularly by the curriculum leader.
- Standards will be monitored by the curriculum leader / Headteacher against national benchmarks at end of Foundation Stage and end of KS1 and against local benchmarks at end of Y4.
- Continuing Professional Development for mathematics will be needs-led.

7. Equal Opportunities and Special Educational Needs

All pupils, regardless of race, gender and disability, are entitled to a broad, balanced and appropriate curriculum in mathematics which meets their individual needs. Activities are planned to encourage full and active participation by all learners, regardless of their profile or circumstances. All children have access to the full mathematics curriculum at a level appropriate to their age and mathematical stage of development and are encouraged and expected to do their best. Efforts and achievements are praised and rewarded through the school's reward system.

8. Assessment

- All teachers have appropriately high expectations for pupil progress, informed by prior attainment and with due regard to national age related expectations. Tracking of pupils' progress is reviewed at least six times per year term for all children, and more frequently, if necessary, for individual pupils working below age related expectations. Any children whose progress gives cause for concern are quickly identified and their provision discussed with Headteacher, SENCO and subject leader as appropriate

Appropriate intervention strategies are put in place without delay to support children's learning. All strategies are reviewed regularly to ensure effectiveness and fitness for purpose. If needed, provision plans are drawn up to detail the nature and frequency of ongoing intervention.

The accuracy of teacher assessment is of paramount importance to us. We use an agreed language of assessment as set out in our assessment policy and procedures documentation. This is shared between all schools in our multi-academy trust and subject to regular ongoing review. Rigorous moderation of standards take place frequently across our Trust and also involves local non-Trust schools. The curriculum leader regularly attends Trust network meetings to ensure consistency of practice across our Trust.

Trust-wide assessment processes and systems are agreed within this network, and teachers use key skills gaps analysis tests and an ongoing curriculum tracker to assess pupils' progress. Summative assessment judgements are entered into the SIMS tracking system at key data drop points 6 times per year.

9. Recording / Journalling

- The purposes for which children record their work will include:
- acting as a note for future reference;
- communicating with others;
- providing evidence of their learning and thinking in mathematics.
- Recording will take different forms (e.g. symbolic, graphical, diagrammatic, pictorial, written, constructed, verbal) depending on the nature of the mathematical activity and the purpose of the recording.
- Children will record their work in plain workbooks (YR) and squared workbooks (Y1, 2, 3 & 4). Loose pieces of work are glued into books and all work is organised in strict chronological sequence to enable progress to be clearly evidenced. Presentational expectations are that pupils should record 'one digit per square' when recording formal calculations.

Evidence of key skills test outcomes is kept at the back of the maths journal.

10. Marking

Pupils' learning will be marked, and feedback given, in accordance with the school Assessment policy and the Trust's marking, feedback and presentation policy. As part of these, pupils are expected to use feedback systems pro-actively to indicate whether they have found the learning straightforward, challenging or problematic. Marking is carried out against the success criteria for the learning, and children are given opportunity, where appropriate, to respond to comments from their teacher or learning partners.

11. ICT

- ICT will be used when appropriate to deliver the mathematics curriculum. Staff will be encouraged to use ICT innovatively to enhance learning for all children.
- Planning incorporates the use of SMART Board interactive whiteboards and the related SMART Notebook software.
- The use of ICT across the curriculum will be reviewed by the curriculum leader for ICT and those for other curriculum areas to ensure consistency of approach.

12. Parental Support

Colehill First School values its strong links with parents and encourages them to share in their child's progress through regular dialogue with class teachers and through annual reports. We also encourage parents to share home learning activities with their children. Home learning tasks in mathematics are designed in accordance with the school's Policy for Home Learning.

Policy Review

This policy will be reviewed at least once every two years, or more frequently if necessary, by the Mathematics curriculum leader and the Academy Committee.

Signed.....

Position: Chair of Academy Committee

Date: 20th February 2018

Next scheduled review: Spring Term 2020