



HEARTS ACADEMY TRUST

Maths Policy

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Version: 1

HEARTS Academy Trust is committed to providing a happy, caring and safe learning environment for all within a values led context, where everyone feels valued and grows in confidence and independence.

We promote **HAPPINESS** through a creative, exciting and practical curriculum, which generates a love of, and interest in, learning and a resilience and hope which supports us through challenging times.

Great value is placed on pupils' self **ESTEEM** which is developed through a positive and motivated attitude to learning, a healthy lifestyle, good social skills, self-discipline and a positive self-image.

We promote the highest standards of **ACHIEVEMENT** in all areas of the curriculum and help all pupils to fulfil their potential regardless of gender, race or ability.

We foster **RESPECT and RESPONSIBILITY** for all by establishing good relations between the school, home and community. Pupils are taught respect for themselves, others and the environment. They are also taught to take full responsibility for their own choices and responsibility for themselves and their community.

We encourage **TRUTH** and honesty in all aspects of school life – relationships, work and the curriculum and learn to trust and accept others' individuality and uniqueness.

We develop **SPIRITUALITY and SERVICE** so that calm, quiet, reflective times which support deep thought are part of school life and beauty is appreciated. We promote a service culture that reflects our duty to support and show compassion to all members of the community and not just ourselves.



Children at the HEART

Rationale

This policy sets out the principles on which we base our practice and reflects the requirements of the National Curriculum 2014.

The Hearts academy trust is committed to providing a happy, caring and safe learning environment for all within a value-led context where pupils and adults feel valued and grow in confidence and independence.

Intent

Through our curriculum we aim for pupils to;

- become fluent in the fundamentals of mathematics, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately;
- be confident and competent in using and applying basic skills of counting and written and mental calculation;
- 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 problems with increasing sophistication;
- develop awareness of the uses of mathematics in the classroom and everyday life, enabling them to apply their mathematics skills and knowledge to real life situations;
- have a positive attitude towards mathematics;
- understand and appreciate pattern and relationship in mathematics;
- are able to communicate clearly and fluently about mathematics, using the appropriate mathematical language;

Confidence and fluency in Mathematics provides pupils with a powerful set of tools with which 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 pupils develop a positive and enthusiastic attitude towards mathematics that will stay with them. 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 HEARTS, emphasis is placed on investigation, problem solving and the development of mathematical thinking.

At HEARTS, we use the National Curriculum for Mathematics (2014) as the basis of our mathematics programme. We are committed to ensuring that all pupils achieve mastery in the key concepts of mathematics, appropriate for their age group, in order that they make genuine progress and avoid gaps in their understanding that provide barriers to learning as they move through education. To ensure continuity,

progression and high expectations in mathematics, lessons are planned in line with our Mathematics Knowledge Progression Map.

Teachers reinforce an expectation that all pupils are capable of achieving high standards in mathematics.

The expectation is that the large majority of pupils' progress through the curriculum content at the same pace. However, decisions about when to progress will always be based on the security of pupils' understanding and their readiness to progress to the next stage.

Depth of understanding is prioritised, alongside high expectations of every pupil, including those with additional needs. Pupils who grasp concepts rapidly will be challenged to apply higher order reasoning before any acceleration through new content. Those who are not sufficiently fluent with earlier material will consolidate their understanding, including through additional practice, before moving on.

Implementation

Subject Organisation:

In Key Stage 1 and 2 the mathematics curriculum is delivered using the National Curriculum 2014 guidelines. In Reception, the mathematics curriculum is taught through the mathematics specific area of learning and development. It is also delivered within learning opportunities related to other areas of the Early Years Foundation Stage curriculum. This ensures continuity and progression from the Foundation Stage through to the National Curriculum.

Early Years Foundation Stage:

All pupils in the EYFS follow a broad-based curriculum and have a wide range of opportunities to explore mathematical concepts; both planned and self-initiated inside and outdoors. Pupils' also take part in whole class and group activities designed to develop mathematical language and concepts. This supports development of initiative and an ability to work both independently and in cooperation with others. Resources are used imaginatively and creatively to stimulate curiosity and excitement about the world around them and to develop an understanding of mathematics through a process of enquiry and investigation.

Assessments are observation based and inform planning to build on prior knowledge and understanding.

Effective planning ensures:

- that there are achievable learning objectives for all pupils;
- that work is matched to pupils' abilities and experience;
- that the teaching meets needs of all pupils through support, scaffolding, use of resources and challenge;
- that the teacher's & LSA's time is employed effectively throughout the lesson;
- that there is progression and continuity related to previous learning, not previous teaching;
- balanced coverage of the objectives / statutory requirements.

Key Stage 1 and 2:

In both key stages, high quality schemes of work are used alongside teacher and trust developed plans and resources. Teaching is underpinned by methodical curriculum design and supported by carefully crafted lessons and resources to foster deep conceptual and procedural knowledge. Practice and consolidation play

a central role. Carefully designed variation within this builds fluency and understanding of underlying mathematical concepts in tandem.

Pupils will be taught mathematical knowledge, skills and understanding through:

- planning and resources that support procedural and conceptual understanding;
- direct instruction following a clear, small-step progression, building gradually on previous learning and providing appropriate challenge for all;
- regular and rigorous teaching of key facts to ensure pupils have rapid recall;
- quality questioning and supported discussion to probe understanding and remedy their misconceptions;
- high quality partner work will be used to support pupils in making their thinking clear to themselves as well as others when discussing their mathematics;
- using mathematical patterns, relationships and making connections;
- explicit teaching of problem solving skills including a wide range of increasingly complex problems;
- exploring using a variety of resources and materials, including ICT.

Classroom practice and organisation:

In all classrooms pupils are encouraged to discuss mathematics using talk partners. Pupils are given the opportunity to work independently, with partners and in groups. Throughout the school, an extensive range of models and images are used alongside key practical resources and structured apparatus. It is important that pupils understand the mathematical concepts conceptually before they are expected to apply and use. ICT is used in all classrooms, this is through interactive white boards, cameras, laptops and applications on iPads.

Classes will be kept together to access the content, to ensure all pupils are exposed to high level mathematical vocabulary and ideas. Pre-teaching and specific teacher led interventions occur to ensure all pupils are given the best opportunity to achieve.

Pupils 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. All pupils are taught the importance of high quality presentation.

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.

Impact

The Assessment and Recording process:

Foundation Stage pupils are assessed through observations, activities and work scrutiny which is then recorded onto their Foundation stage profile either by written comments or given as photographic evidence.

All teachers make individual informal assessment from observing, talking to and working with pupils, alongside looking at written evidence as appropriate to monitor progress. End of unit quizzes are used to support future planning and teaching focus.

At the end of each term assessments are administered to help teachers make judgements on progress and attainment. Analysis of these tests is used to support the teachings in addressing misconceptions and plan for the next steps in learning.

In Key Stage 1 and Key Stage 2, progress in basic skills of counting, recall of addition and subtraction facts and multiplication facts are assessed using ICT on a termly basis.

Calculation Policy:

The Trust calculation policy outlines how addition, subtraction, multiplication and division will be taught. The policy is to be used by teaching staff to plan and deliver lessons. Teachers are given support on which methods should be taught and when, and the reasons behind the progression towards formal written methods. The models and images included in the policy should be used in the classroom in order to enhance the pupil's learning. The policy is available for everyone in the school community on the website. All new staff will be trained in using the calculation policy in lessons.

Parents and carers:

As a trust we value the input and support of parents and carers. Parents are invited into classrooms on a regular basis so they can understand the expectations we have and develop techniques to support their own pupils. Parent workshops are organised on a regular basis to keep parents and carers informed about methods, policy and expectation changes and ways that they can support their child's progress.

Feedback and Marking:

Feedback and marking follow the Trust policy.

Special Educational Needs:

Within daily maths lessons, teachers adapt teaching and resources to enable pupils with special educational needs to make good progress. They provide activities that provide appropriate challenges for all. It is vital that all pupils are challenged.

Where required, pupil's provision plans incorporate suitable objectives from the National Curriculum for mathematics or Development Matters and teachers keep these objectives in mind when planning work.

These areas for development will be worked upon within the lesson as well as outside the maths lesson.

Additional small group support is provided where needed; this will have a particular learning focus, addressing specific gaps or weaknesses and be time-limited. The expectation is that gaps will be filled quickly and pupils will then access learning in main lessons effectively.