



# Mathematics Policy and Procedure

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The November 2018 Ofsted Inspection report made the following comments:

Leaders ensure that the curriculum enables pupils to have many opportunities to learn through practical and real-life experiences.

You have carefully chosen a curriculum that supports pupils' learning across all subject areas. Teachers use the curriculum to plan learning that provides pupils with opportunities to transfer practical skills into real-life situations. In one lesson, pupils were enthusiastically learning about money and what it can buy. Visits to the supermarket give pupils the chance to practise how to behave appropriately and begin to understand how to use money and its value.

Additional adults support pupils well. During a mathematics lesson, pupils were learning about clockwise rotation and direction. Adults use skilful questioning to extend pupils' thinking. Adults provide appropriate support so that pupils can approach tasks with confidence and a degree of independence. Pupils enjoy the challenge of, and want to do well in, individual tasks that are closely matched to their ability.

### **Policy Statement**

Numeracy/ Mathematics should be an integral part of all lessons with focus on building functional numeracy skills to become as independent as possible when leaving school.

### **Environment**

Heltwate School provides a rich learning environment in which all can learn and achieve, alongside enjoying their education and time spent here. Resources are well planned and used to support all levels of ability. Expectations are high to ensure behaviours in class allow for all to learn.

### **Our Maths Ethos**

Heltwate School supports pupils to develop their skills and understanding to promote learning for life.

We are an inclusive learning environment where pupils, families, staff and governors can learn together to thrive. Together, we promote independence, understanding, self-awareness, teamwork and perseverance. Every pupil brings their own unique and valuable strengths to our school. We build on these by offering a curriculum that is adapted to the needs of the individual through a stimulating, accessible and challenging environment. Each classroom is adapted to meet the needs of the pupils. We provide an environment where every child feels safe, valued, happy and able to succeed. We encourage parents and the wider community to take an active interest in the education of our pupils.

### **The Aims of our school**

Our principal aim is to develop pupils' knowledge, skills and understanding in all areas of Mathematics. Wherever possible we encourage the pupils to use and apply their learning in everyday situations.

- To create an engaging environment for all pupils.
- To create an inclusive culture of achievement, high standards and expectations.
- To enable pupils to use language and mathematics effectively.
- To ensure that all pupils have access to effective teaching and learning with resources that support and encourage pupils to succeed.
- To equip pupils, where possible, with a powerful mathematical tool that provides:
  - A precise means of communication using numbers, symbols and shapes;
  - A universal language used to explain, predict and tackle problems.
- To promote and develop enjoyment and enthusiasm for learning through practical activity, exploration and discussion.
- To provide pupils with a sound understanding of basic mathematical concepts through practical and investigational work.
- To increase the confidence of each pupil in mathematics to enable them to apply the knowledge and skills with assurance.
- To develop a practical understanding of the ways in which information is gathered and presented.

- To encourage pupils to use mathematics as part of their everyday life in school and at home.
- To develop pupil's thinking skills and logically apply their mathematical knowledge to solve problems.
- To explore features of shape and space, and develop measuring skills in a range of contexts.
- To develop staff skills to enable them to enhance and extend their teaching and learning.

### Teaching & Learning

Mathematics is taught in a variety of ways across the Heltwate Pathways, through a standalone lesson and integrated into other subject areas and across the whole curriculum. Pupils learn the place of mathematics in the world around them. Lessons include practical investigations, problem solving and verbal activities. Pupils participate in regular speaking and listening activities in order to improve their use of appropriate mathematical vocabulary.

Teachers use a range of teaching and learning styles, incorporating individual, pair, class and group work into lessons. We make great use of age related software, such as 'Choose It' and websites such as 'Purple Mash' and 'Education City' along with games and real-life materials to engage pupils and help them to learn in the way that best suits their needs. Pupils are taught through exploration, discussion, practical activities, games, investigations, problem solving and recording which can be supported through the use of IT. These teaching styles and methods vary according to the subject matter and the pupils being taught. Teachers have access to Teach Active resources (a Maths programme focusing on physical activities) and are encouraged to use these in lessons in order to engage and enthuse pupils whilst learning and keeping healthy through a range of practical activities.

Numicon is used throughout the school as a practical resource to support pupils. Numicon is an approach to teaching maths that helps pupils to see connections between numbers. It supports pupils as they learn early maths skills and is a **multi-sensory** way of learning. This means that the pupils can learn by seeing and feeling.

Within Key Stages 1-3, pupils are assessed and placed on a Curriculum Pathway that best suits their needs, (Engage, Explore, Develop). Within each of these curriculum-pathways, pupils focus on the skills they need to progress on to the next stage and achieve future goals and aspirations. The curriculum is personalised to the pupil and targets are taken from the academic framework, soft skills and the pupils' EHCP. Mathematics targets will appear in the pupils' individual learning plan under the heading 'My skills to learn' (Engage) 'My learning' (Explore) and 'Maths' (Develop). Coverage will be based on the pupils' individual needs within the Engage and Explore pathway. Coverage is mapped against EYFS outcomes/Year 1 ARE/cornerstones topics on the Develop/Discover journey.

Pupils engage in, explore, and develop mathematics through using a variety of methods: number songs, Attention Autism, exploration, mental strategies, practical activities, written calculations, problem solving, discussion and an application of basic and life skills.

Class teachers are required to provide lesson planning, create resources and activities and if appropriate, worksheets that meet the needs of individual pupils.

Annual work and planning scrutinies take place to ensure consistency throughout the school.

### Assessment

- During each lesson, the impact of learning will continually be monitored against the pupils' individual learning plan objectives. These are reviewed regularly by the class team through a colour coded system. When a child achieves a Green then this evidence is uploaded to Earwig to show success.
- Targets are continually reviewed to ensure that they are appropriate to the pupil. If a pupil has not achieved a target within a certain timescale, class leads will track back this target. This is so they are able to show the progress the individual pupil has made, and look at what steps they need to take to achieve the original target.
- Assessment will be based on the National Curriculum and Development Matters statements for Numeracy/ Mathematics and will be recorded in years and months through the school assessment tracker, Earwig.
- Pupils may have additional evidence collected (Photos, videos or written observations) using Earwig as an online learning journal.

- All staff members are expected to annotate-pupils' work stating the amount of support given and provide pupils with constructive feedback where appropriate. This should build on positive attributes of the work produced, but also constructively highlight areas for improvement. In classes following our adapted Foundation curriculum, pupils' work will be annotated by what they have said and done rather than writing to the pupil, (see Marking policy). Alternatively, work can be marked and assessed on Earwig.
- Assessment will take account of all pupils regardless of their abilities and physical difficulties.
- Year 10 & 11 pupils at St. George's undergo AQA ELC Maths. pupils are entered at Level Pre Entry, Entry 1, Entry 2 or Entry 3 based on their ability. Maths is split into 8 components that are taught across a 2 year rolling cycle. Some pupils will undertake formal examinations whilst others will complete more informal assessments. Alternatively, for the less able pupils, classroom based evidence is gathered throughout the 2 years and forms their summative assessments.
- In Post 16, students follow the EQUALS Moving On functional Maths modules. The units are designed to be flexible for the teacher to adapt to suit the cohort. They are practical and allow for greater functional aspects to be taught to pupils. The pupils will achieve unit certificates from Equals or ASDAN personal progress units, (which is dependent on individual cognitive abilities).

### **Written Calculations**

The policy contains the key calculation procedures that will be taught within our school. It has been written to ensure consistency and progression throughout the school and reflects a whole school agreement. Please see separate written calculations policy.

### **Equal Opportunities**

Heltwate School pupils will have equal opportunities to access, take part in and succeed in mathematics. All pupils, regardless of race, gender, physical or learning disabilities or social origins are entitled to be included and achieved. Our policy is to enable *all* pupils to experience success.

All aspects of safeguarding will be embedded into the life of the school and will be adhered to and be the responsibility of all staff.

### **Role of the Governing Body**

The Governing Body has:

- The duty to set the framework of the school's policy on Numeracy
- Responsibility to ensure that the school complies with this policy
- Delegated powers and responsibilities to the Head teacher to ensure that school personnel and pupils are aware of this policy
- Delegated powers and responsibilities to the Head teacher to ensure all visitors to the school are aware of and comply with this policy
- Appoint two coordinators for Numeracy to work with the Head teacher
- The duty to support the Head teacher and school personnel in maintaining high standards of work completed in Numeracy
- Responsibility for ensuring funding is in place to support this policy
- Responsibility for ensuring policies are made available to parents
- The quality and outcome committee will have the responsibility for the effective implementation, monitoring and evaluation of this policy

### **Role of the Head teacher**

The Head teacher will:

- Monitor the effectiveness of this policy
- Annually report to the Governing Body on the success and development of this policy

- Support the coordinators to ensure the policy is implemented effectively throughout the school

### **Role of the Coordinators**

The coordinators will:

- Lead the development of this policy throughout the school
- Review and monitor
- Annually report to the Governing Body on the success and development of this policy
- Talk to members of staff and be approachable when asked for guidance about the Numeracy curriculum.
- Collect examples of medium term plans and lesson plans, which will be asked for and kept in a curriculum folder alongside examples of pupils' work. The work collected will demonstrate effectiveness differentiation in planning.
- Give all teachers a scheme of work to follow.

### **Role of School Personnel**

School personnel are expected to:

- Comply with all aspects of this policy
- Develop planning from schemes of work in Numeracy.
- To ensure all teaching staff who are using Cornerstones are following the correct coverage for each topic
- To ensure lessons are supported by high quality resources, including ICT resources
- To make use of the school resources including Numicon and ICT software such as 'Choose It' and 'Purple Mash'
- Identify problems that may arise and offer solutions to the problem
- To ask for resources to be ordered which will benefit the learning of individuals, the class, or the school as a whole
- To complete assessment using the following moderation tools: National Curriculum level descriptors and Development Matters and provide evidence of these in end of year reports
- Teachers and support staff are to ensure all work is adapted according to levels and physical needs of all pupils. Where possible symbols will be used to support pupils to ensure they can assess a full curriculum

### **Role of Pupils**

Pupils are expected to:

- Learn to the best of their ability.
- Respect resources used to support learning in class
- Engage in lessons
- To develop an interest in Mathematics.

### **Role of Parents/Carers**

- Parents/carers are encouraged to:
- Encourage numeracy/maths activities wherever possible
- Encourage independence when out in the community e.g. shopping
- Have a positive attitude towards Numeracy and learning
- Encourage pupils to solve Mathematical problems in relation to everyday living