



Mathematics and Numeracy Policy

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Nominated Governor:

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The November 2014 Ofsted Inspection report made the following comments about Numeracy at Heltwate:

There has been significant improvement in the way adults assess and record information about pupil's progress in English and Mathematics. The school can now demonstrate that pupils make good and increasingly outstanding progress from their individual starting points.

What the school needs to do to improve further.... Ensure that all subject leaders adopt the effective monitoring procedures and practices that are being used, so they can quickly identify any pupils at risk of not making expected progress and take steps to make sure they catch up.

Pupils throughout the school continue to make good progress, particularly in English and Mathematics.

Policy Statement

Numeracy/ Mathematics should be an integral part of all lessons with focus on children achieving a high standard of numeracy skills to become as independent as possible when leaving school.

Environment

Heltwate School provides a rich learning environment in which all children 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 children to learn.

Introduction

Mathematics is a method of communication. It is a specific language through which very difficult concepts are explained in a precise and concise form. Ideas are explored and developed, and relationships can be described, patterns identified and hypothesis made and tested:

Mathematics includes the development of all numeracy skills; a proficiency that involves confidence and competence with numbers and measures. It requires an understanding of the number system, a repertoire of computational skills and an inclination and ability to solve number problems in a variety of contexts. Mathematics also demands practical understanding of the ways in which information is gathered by counting and measuring, and is presented in graphs, diagrams, charts and tables.

Therefore, a numerate person needs to understand the ways mathematics can be used for communication and this requires the possession of two attributes:

- Being at ease with those aspects of everyday life that enable a person to cope with the practical demands of everyday life.
- The ability to understand information presented in mathematical terms.

Our Aims

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

- To equip pupils with a powerful mathematical tool that provides:
 - i) A precise means of communication using numbers, symbols and shapes;
 - ii) 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.
- We also aim to:
- To develop staff skills to enable them to enhance and extend their teaching and learning.

Objectives

- To enable all pupils to achieve their potential according to their abilities by providing them with interesting and challenging tasks that enable them to achieve.
- To encourage students to develop as independent learners who are able to make decisions about their own work.
- To promote confidence and competence so that children are 'proud to shine' about their achievements.
- To provide training and support that will develop an expert and knowledgeable staff.
- To ensure management systems and structures provide support for the aims and objectives for mathematics.
- To provide appropriate resources to ensure a rich and diverse curriculum.
- To ensure teaching and learning styles are varied and suited to the pupils being taught and the areas being studied.
- To ensure full coverage of the National Curriculum in mathematics across the whole school at the different key stages.

Teaching & Learning Guidelines

Mathematics is taught as a standalone subject but is also integrated into other subject areas and across the whole curriculum. In this way pupils learn the place of mathematics in the world around them. Lessons include practical investigations, problem solving and verbal activities. Students participate in regular speaking and listening activities in order to improve their use of appropriate mathematical vocabulary. In addition, staff use Interactive Whiteboards in lessons to support students' learning.

Teachers use a range of learning and teaching 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' along with games and real-life materials to engage students and help them to learn in the way that best suits their needs. Children are taught through discussion, practical activity, games, investigations, problem solving and recording which can be supported through the use of IT. The teaching style and methods are varied according to the subject matter and the pupils being taught.

Pupils develop mathematics through using a variety of methods: mental strategies, practical activities, written calculations, problem solving, discussion, and application of basic skills.

Class teachers are required to provide lesson planning, resources and worksheets that meet the needs of individual learners.

Assessment

- 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, Cornerstones.
- Pupils working up to year 8 may have additional evidence collected using Tapestry as an online learning journal.
- All staff members are expected to annotate children's work stating the amount of support given and provide children with constructive feedback. This should build on positive attributes of the work produced, but also constructively highlight areas for improvement. In classes following our adapted Foundation curriculum, children's work will be annotated by what they have said and done rather than writing to the child (see Marking policy).
- Assessment will take account of all children regardless of their abilities and physical difficulties.
- Effort grades should also be given to inform pupils and teaching staff of their efforts during the lesson and pupils are encouraged to self-evaluate their work.

Numeracy and Accreditation

Teachers working with students in Upper School KS4 base their numeracy coverage on accreditation units, following the OCR Life and Living skills modules.

- Students working in Upper School are expected to cover 3 numeracy modules per term, which allow for breadth of study and opportunity for progression through the varying entry levels as appropriate
- The module overviews provide a starting point for teachers to then adapt and differentiate learning as needed within individual class groups
- Class teachers are required to provide lesson planning, resources and worksheets that meet the needs of individual learners
- Students' work is to be annotated in line with the school marking policy
- Evidence of students' work is to be kept in a record folder so it is easily available for moderation and scrutinies
- Work is to be moderated termly by the exams officer (Darrel Fox)
- All students are to be assessed twice a year, in the Autumn and Summer Term against the National Curriculum statements.
- Students in KS4 working within the Rainbow Rooms also undertake accreditation. These students complete OCR Life and Living Skills modules, alongside ASDAN Life Skills Challenges in Communication. The above criteria also pertains to Rainbow Rooms' students, alongside the following:
 - Class Teachers are to use OCR and ASDAN modules to accredit work being produced whilst following the Heltwate School's adapted Cornerstones Curriculum.
 - Class Teachers are to ensure all National Curriculum objectives are being met within the Rainbow Rooms' numeracy cycle
 - Class teachers are to assess academic achievement against the National Curriculum at the end of each term, in addition to an initial baseline assessment
 - Students within Rainbow Rooms will complete less accreditation than in Upper School. This is due to their higher level of need, more rigorous academic assessments against the National Curriculum and focus on SCERTS targets within the Rainbow Rooms. Rainbow Room students also have a higher weighting of their timetable dedicated to Lifeskills and functional skills, enabling them to access the community more successfully.

Written Calculations

The policy contains the key pencil and paper 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 students will have equal opportunities to access, take part in and succeed in mathematics. All students, regardless of race, gender, physical or learning disabilities or social origins are entitled to be included and achieve. Our policy is to enable *all* students 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
- Nominate a link governor to visit the school regularly, to liaise with the coordinator and to report back to the Governing Body
- 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 childrens' work. The work collected will demonstrate effectiveness differentiation in planning
- Give all teachers a scheme of work to follow
- Monitor assessments based on guidance materials from the Deputy Head and ensure evidence is tracked on Tapestry (up to Year 8)

Role of the Nominated Governor

The Nominated Governor will:

- Work closely with the Head teacher and the coordinators
- Ensure this policy and other linked policies are up to date
- Ensure that everyone connected with the school is aware of this policy
- Annually report to the Governing Body on the success and development of this policy

Role of School Personnel

School personnel are expected to:

- Comply with all aspects of this policy
- Develop planning from schemes of work in Numeracy based Cornerstones
- 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 differentiated according to levels and physical needs of all children. Where possible symbols will be used to support children to ensure they can assess a full curriculum

Role of Pupils

Pupils are expected to:

- Behave in a way that allows learning to take place
- To respect resources used to support learning in class
- To take part in all lessons
- To ensure they have the correct resources and are in the correct mood to complete their best work in Numeracy sessions
- To take part in all numeracy lessons differentiated as appropriate

Role of Parents/Carers

Parents/carers are encouraged to:

- Encourage numeracy activities wherever possible
- Encourage independence when out in the community e.g. shopping
- Have a positive attitude towards Numeracy and learning
- Encourage children to solve Mathematical problems in relation to everyday living

Role of the School Council

The School Council will be involved in:

- Determining this policy with the Governing Body
- Discussing improvements to this policy during the school year
- Reviewing the effectiveness of this policy with the Governing Body

Numeracy Support

We have a designated Teaching Assistant who assesses students' skills and knowledge using the Sandwell Assessment Program. This informs specific areas to be developed through intervention as well as giving a mathematical age which can be tracked and monitored for progress each academic year.

Raising Awareness of this Policy

We will raise awareness of this policy via:

- The School Handbook/Prospectus
- The school website
- The Staff Handbook
- Meetings with parents such as introductory, transition, parent-teacher consultations and periodic curriculum workshops
- School events
- Meetings with school personnel
- Communications with home, such as weekly newsletters and of end of half term newsletters
- Reports, such annual report to parents and Head teacher reports to the Governing Body