



Eleanor Smith School

Maths Policy

This policy was agreed and signed by the Governing Body and Head Teacher:

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Approved by:	Chair of Governors and Head Teacher
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Introduction

The majority of our pupils have split placements between ESS and a mainstream school. Whilst recognising the individual needs of our pupils, we feel it is necessary to provide them with a Mathematics Curriculum that parallels practice in mainstream primary schools, thus giving them consistent expectations in a Mathematics lesson. In the Primary phase follow the National Curriculum Units of Study. The LCP New Generation Mathematics Resource File is used by Primary staff to support planning and is adapted to meet the pupils' individual needs. This will be supplemented in September by the Singapore Maths Programme and the Maths No Problem scheme of work and their text books and work books. The Secondary phase follows the Edexcel syllabus for Mathematics. This includes Functional Skills which are first assessed at the end of year 9 KS3 (Key Stage 3) with the E.L.3 (Entry Level 3) exam and again at Level 1 and 2 in KS4 (Key Stage 4). All pupils, (this is not the case for the new 9-1 syllabus where pupils will be streamed), in KS4 will take the final Edexcel Mathematics GCSE assessment at the end of year 11.

Our Aims

At ESS one of our aims are:

- ◆ To inspire a positive attitude, and develop an effective and confident approach towards the learning of Mathematics in all of our pupils
- ◆ To provide a curriculum which will support and enhance the Mathematics Curriculum experienced by pupils in their mainstream schools
- ◆ To cater for a range in learning styles
- ◆ To differentiate the Mathematics Curriculum according to pupil needs.
- ◆ To monitor and assess pupil performance and evaluate the effectiveness of learning/teaching, through the use of 'Next Step' marking. Progress is monitored and recorded on pupils' individual assessment sheets that are kept in the Teacher's assessment folder. This informs Teacher's termly assessment levels and their planning of the next unit of work
- ◆ To develop the pupils' own self-assessment, evaluation and target setting skills through raising awareness of learning objectives, success criteria, progress and Next Step marking



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Teaching Time Allocation for Mathematics

Each teacher is expected to deliver a daily Mathematics lesson, or four sessions of Mathematics per week. The lesson should last approximately 1 hour in Keys Stages 1 and 2. In Key Stage 3 there are 5 40 minutes lessons each week, and in Key Stage 4 there are 4 40 minute lessons per week. These times are flexible, according to the behavioural or emotional needs of the pupils prior to, or during the Mathematics lesson. The teacher should use his/her professional judgement as to the appropriateness of the length of each part of the lesson.

Lesson Organisation

Every lesson across the school, begins with a 'Do Now' in order to calm and focus pupils. This can involve re-capping previously learnt methods or techniques, solving problems, explaining what is happening or new learning. Teachers follow the 'I-We-You' structure of lesson throughout the school

- I – Introduce learning. The teachers shows, explains and models the topic that is being taught; addressing misconceptions and assessing for learning.
- We – With scaffolds, teacher and pupils experience problems, methods and techniques together. This can be differentiated according to the needs of the pupils using manipulatives if neccessay
- You – Pupils complete work independently, or are supported by school staff. Challenges and next steps can follow in order to consolidate or progress learning.

Teachers in the Primary Phase are expected to be use the National Curriculum Units of Study for planning, teaching and learning. This is supplemented by the 'Mathsnoproblem' textbooks which encourage the use of the concrete to pictorial to abstract technique that is prominent in the Singapore Maths Programme. Teachers plan on a week-to-week basis, using the unit blocks from Maths No Problem. Each unit of work should begin with an elicitation of the pupils' previous knowledge and understanding, through referring to pupils individual assessment sheets. The natures of the following sessions are then determined by the teacher's judgement of the pupils' current levels of understanding. The unit consists of a range of teaching styles and learning experiences from the 'cycle of learning' as deemed appropriate. These lessons should consist of a range in: 1) direct teaching of mathematic principles, 2) practice and consolidation exercises, 3) Processes and applications of Knowledge and Understanding and 4) reviewing and assessing teaching and learning. There is flexibility in the number, and nature of Mathematics sessions required during a unit of work, according to the needs of the pupils.

From September 2019, at KS3 we will be teaching according to the White Rose Mastery Scheme of work. The decision to change to this scheme of work has been made as it follows on better from the primary scheme, and also it allows for greater depth at mastery level, meaning we can more accurately differentiate for our pupils.



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It also means that both primary and secondary ages are exposed to the Singapore maths programme.

Ks3/4 pupils follow the National Curriculum Attainment Targets of: Mathematical Processes and Applications, Number and Algebra, Geometry and measures, and Handling Data. Teaching is focused on problem solving in real life contexts within cross-curricular themes from other subject areas. The pupils are encouraged to build up their mathematical skill bases by applying the 4 operations of number across all four Attainment Targets. Pupil progress is monitored through a skill based target sheet and tracked on a data base. Teachers constantly evaluate lessons and try to offer a variety of heuristic techniques and methods which complement the teaching and learning styles accordingly.

The Role of Additional Adults

Additional adults are actively involved in all parts of the lesson which is indicated in the Teacher's planning. Should they be supporting a group, or administering any pupil/group *focused interventions*, they should monitor and record the progress of those pupils on a daily basis, setting targets alongside them through 'Next Step' marking in their exercise books and having verbal discussions.

Assessment

In Key Stages 1 and 2, termly PUMA tests are completed in relation to the year that the pupil is working at. This is then turned into a standardised score of between 80 and 120 which allows progress to be measured over time.

Alongside this, teachers complete own assessment by marking pupils progress off of the objectives which are included in the front of each pupils book. This allows staff to measure progress, and also to differentiate learning according to their pupils needs.

Teacher assessment is used throughout lessons in the form of questioning and differentiated work, and then used to pitch lessons accurately and to build on each individual child's needs.

At Key stages 3 and 4, the Edexcel progression steps for each topic are being used in order to mark whether each child has completed an objective. The Maths lead and Head of assessment are currently looking into a standardised test system, similar to that which is used on the Primary site, in order to ensure smooth progression from Key Stages 2 to 3.

On completion of each unit of work (approximately every three weeks), each pupil should have their progress monitored by highlighting of the APP levelling criteria that they have attained. This should then be used as basis on which to pitch the following unit of work from that area of Mathematics, when the next unit within that block is taught. An end of unit test is also administered and monitored. Pupils also complete a self-evaluation against the unit criteria.



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Marking of Work

See marking policy.

Subject Delivery and Monitoring

The Head of Mathematics monitors all class teachers' delivery of Maths lessons over the course of each academic year through observations and by monitoring planning and pupil work at the end of Term 1, 3 and 5 of each academic year. Feedback is given to the teacher regarding effective aspects of planning and recommendations as to how it may be developed further. Action points for development are agreed between the Head of Maths and teacher where appropriate after observations have been completed. All members of staff are supported to improve their practice through support with their planning and teaching by the Head of Maths, an Advanced Skills Teacher or other suitable staff. They are also offered appropriate external training courses when they are available if necessary to supplement the training provided within school through twilight sessions and training days. Each week, a different class is also chosen by the Senior Leadership Team for Monitoring week. This may include the observation of Maths lessons, books and planning. For more information see the Monitoring and Evaluation policy.

Interventions

Intervention programmes are put in place for any pupils who are underachieving within the Mathematics Curriculum. It is the role of the Mathematics and Assessment Coordinators to put these in place. These may be in the form of one-to-one, or group tutoring to be administered through removal from the Mathematics lessons, or delivered by an additional adult within the Mathematics lesson in class, according to the needs of the Pupil and nature of the intervention. These interventions will be reviewed on a termly basis and a recognised evaluation of the intervention needs to take place .

Resources

Each class has a bank of resources kept in an accessible area within the classroom. Web based resources are also available for use. Additional and more topic-specific resources are available in the resource cupboard. There is an expectation that in due course there will be extended use of concrete resources such as Uni-fix blocks, Deines blocks and Cuisenaire rods to support the Singapore Maths techniques.

Parental Access and Involvement

Parents are updated regarding the attainment of their children and are included in setting targets for development at regular review meetings and twice yearly Parent Evenings. Should their child require extra support in Mathematics, they are consulted



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and informed of the appropriate intervention that their child may benefit from receiving.

Evaluation of the Policy

This policy is reviewed annually by the Heads of Mathematics. Staff feedback is sought, amendments to the policy are made and presented to the whole staff and Governors for acceptance.

