Numeracy Policy

This Policy describes our values and philosophy in relation to meeting the needs of all numeracy learners at Errigal College. It outlines the framework within which all staff work and gives guidance on planning, teaching and assessment. It is designed to describe how the school intends to meet the needs of mathematics learners of all ages.
This Policy should be read in conjunction with DEIS Planning materials and the SEN Policy.

Introduction and link to Mission Statement

Errigal College is a fully inclusive school and in keeping with our Mission Statement each student is enabled to reach their educational potential. The spirit and content of this policy has a direct input to that mission statement.

Rationale

Mathematics is a broad structure that provides a way of viewing and of understanding the world. Through the use of mathematics information can be

- Organized
- Manipulated
- Predicted
- Described
- Explained
- Communicated
- Questioned

We want all students in Errigal College to develop into confident and competent mathematical thinkers and to be able to use maths in real life situations.

Aims

At Errigal College, our aim is that all students should reach their full potential in numeracy. In order to achieve this, our aims as teachers are:

1. to encourage an enthusiastic and inquisitive attitude to mathematics.
2. to foster high standards of achievements in mathematics.
3. to enable children to acquire and develop mathematical language, skills, knowledge and understanding within their individual capabilities.

4. to present mathematics as an enjoyable and interesting activity, involving enquiry and experimentation.
5. to develop clear logical thinkers, who become secure in numeracy, through an understanding of the mature of number, space, relationships and patterns.
6. to equip children with strategies to enable them to apply mathematics to real and unfamiliar situations within and beyond the classroom.
7. to develop an appreciation of the intrinsic value and fascination of mathematics as well as its usefulness in life.

Objectives

Through the implementation of the policy students at Errigal College will be able to:

- develop a positive and confident attitude to mathematics
- make an active contribution and to be competent working with mathematics
- develop an understanding of the ways in which information is gathered and presented
- become thinkers and problem solvers
- develop a clear understanding of the language of mathematics
- develop logical thinking, enabling them to record work clearly and in a variety of ways
- develop the skills, knowledge and understanding needed in daily life

Content

Strategies

- In First Year students are taught in a mixed ability setting and differentiation is used. In other years students are taught in ability groups.
- Differentiation is manageable with targeted, positive support to help those who have difficulties with mathematics.
- Students should engage in discussion and tasks that will enable them to develop their mental imagery of mathematical situations.
- Work is carried out using a balance of individual, paired and group work.

- A high proportion of lesson time is devoted to direct teaching of whole classes and groups.
- Teachers demonstrate, explain and illustrate mathematical ideas to fully involve students and maintain their interest through appropriately demanding work.
- Teachers use and expect students to use correct mathematical notation and vocabulary.
- Mathematical errors and misconceptions are dealt with as they are identified in a positive and supportive way.
- We believe that the ability to calculate mentally lies at the heart of numeracy. Thus the teaching and learning of mental methods is emphasised throughout the school. Students are taught a variety of mental calculation strategies.
- Students are given a variety of mathematical approaches to solving problems. They are encouraged to develop their own mathematical strategies as well as learning standard methods.
- We recognise and help to develop the student's abilities to select methods for problem solving mentally, recognizing that these may differ from those used to solve pencil and paper problems.
- The use of calculators is taught including the skills and appropriateness of use.
- Homework for all students is set in accordance with the Homework Policy.

<u>Roles and Responsibilities</u>

The BOM should:

- Ensure that the policy is developed and evaluated from time to time
- Approve the policy
- Consider report from the Principal on the implementation of the policy

The Principal/Deputy Principal should:

- Establish such structures and procedures that are necessary for the implementation of the policy
- Provide opportunities to staff for CDP in this area
- Monitor the implementation of the policy

Students should:

- Make every effort to improve their numeracy skills
- Participate and involve themselves with all activities provided by staff to improve numeracy
- See also Homework Policy

Parents are encourages to take an active interest in the learning of their children and strong home school links are encouraged through the following:

- Use of the diary to review work and sign on a weekly basis
- Visits and relevant information from HSCL teacher
- Attendance at parent teacher meetings and other meetings as required
- Support the policy by seeking to provide their child with suitable mathematical supports at home
- Please also see Homework Policy

The HSCL teacher can provide advice and materials to parents to support their involvement in their children's numeracy development.

Teaching Staff should:

- Participate in CPD in this area
- Be able to identify a student's numeracy strengths and weaknesses and know how to build upon these in order to promote student progress (see assessment)
- Report on a student's standard of numeracy at parent Teacher Meetings or as appropriate
- Have a common marking policy where a positive approach is taken
- Ensure that they are familiar with the specific numeracy demands of their subject and ensure sufficient coverage of these skill in their lesson planning
- Should refer to subject planning documentation

Assessment

Assessment is a vital tool in the teaching of Mathematics. It is designed to monitor student's progress and measure attainment.

Assessment opportunities are built into the planning of lessons and a range of other methods are used as appropriate.

These include:

- Student's work marked promptly
- Listening to what students say and questioning them to ascertain their level of understanding
- Teacher tests as appropriate
- Targets set each term
- Observations of individuals or groups, looking for particular skills or concepts to be demonstrated
- Self assessment by students
- Homework set that is appropriate

Success Criteria

- Improved numeracy standards among all students measurable in part by Mathematics Age scores
- Increased numbers taking Higher Level papers at Junior and Leaving Certificate
- Increased numbers achieving higher grades in maths-related subjects
- Increased retention rates
- Increased progression rates to 3rd Level

Monitoring Procedures

- Tracking of results at State Examinations and Mathematics Ages
- Tracking of numbers taking Higher Level papers
- Tracking of retention and progression rates
- Inclusion of review of numeracy strategies at Maths Department meetings on a regular basis
- Review by JCSP & SEN teams
- Regular inclusion of numeracy issues at AP, staff and other relevant meetings
- Principal will reply to BOM as required
- Continued review of JCSP and LCA

Review Procedures

The Policy will be reviewed after two years. Review methods will include data analysis, views and experience of staff and students.

Adopted at BOM meeting 5 April 2011