



# **Ballyclare Secondary School**

## **Numeracy Policy**

# **BALLYCLARE SECONDARY SCHOOL**

## NUMERACY POLICY



*“Every child, regardless of intellectual ability or social background, should have a rewarding educational experience”*

*Count, Read: Succeed* (Department of Education, 2011) sets out a strategy to improve standards in literacy and numeracy in schools. Its aim is to “support teachers and school leaders in their work to raise overall levels of attainment in literacy and numeracy among young people”. Our Numeracy strategy aims to address the main points of *Every School a Good School* and *Count, Read: Succeed* to improve pupil confidence in Numeracy and raise attainment in Mathematics.

### **What is Numeracy?**

Mathematics, Numeracy and Using Maths have many definitions and are quite often mistaken as being all in one.

Mathematics is an area of study as set out in the programme of study for Northern Ireland and as such is the responsibility of the Mathematics department.

Numeracy is the development and application of mathematics across the curriculum and in real life situations. Skills in numeracy should help pupils to make informed and responsible choices and decisions throughout their lives

It involves:

- having the skills necessary to be a full contributor to society and the economy, including those central to personal financial capability;
- having the ability to think mathematically in everyday situations including those arising in future employment;
- the development of key mathematical concepts and realising their interconnectedness;
- the development of reasoning and problem solving skills;
- the use of methods and procedure – formal and informal, mental and written;
- active participation in exploring mathematical ideas and models.

Using Mathematics is the skill of applying mathematical concepts, processes and understanding appropriately in a variety of subject areas across the curriculum.

### **Underachievement**

“Underachievement is used to describe the situation where performance is below what is expected based on ability. It can apply at the level of an individual pupil or describe a class”. (*Count, Read: Succeed*)

Mathematical ability is assessed at the beginning of Year 8 by the mathematics teacher using appropriate methods such as KS2 results and MidYIS. Pupils are assessed through homework and a

four-point testing system. These results are recorded on a departmental spreadsheet as well as a combination of assessments being recorded in the SIMs tracking system. A traffic light system is applied within SIMs based on these results. Pupils are also assessed through effective teacher questioning, class work and homework.

Pupils within year 11 are assigned target grades and assessed through classwork, homework and tests. Results are recorded in the SIMs tracking, again using a traffic light system to highlight areas for concern.

Pupils within year 12 are given aspirational grades. These grades are discussed with the pupils and parents and assessed throughout the year. After school classes are offered by the mathematics teachers to assist pupils with areas of difficulty.

### **Staff and Numeracy Support Strategies**

The Senior Leadership Team takes overall responsibility for Numeracy within the school. Other staff involved in whole school Numeracy initiatives are:

Mrs W. Shingleton – Vice Principal for School Improvement

Mrs E. Colgan – Head of Learning

Mr I. Thompson – Head of Mathematics Department

Miss J. Miniss – SENCO

Mrs L. Woods – Numeracy Co-ordinator

Pupils requiring numeracy support are identified by the SENCO but areas for concern can also be identified by the Head of Mathematics, Numeracy Co-ordinator and Subject Teacher. Methods of identification are:

- a Numeracy need as identified on the pupils' Individual Education Plan;
- MidYIS and assessment point results;
- HOD and Numeracy Co-ordinator analysis of results;
- parental concern;
- GCSE students who do not perform to target in mock exams or who are re-sitting a module.

Most teachers within the Mathematics department offer extra tuition after school for GCSE pupils within their classes requiring extra assistance with class work, homework or exam preparation.

Early morning classes on the morning of a GCSE exam and late evening classes before an exam are also being discussed as possibilities to support those candidates who struggle with exam success.

Using MidYIS results, Year 8 pupils who score less than 90 are identified and invited to attend morning support classes. These are coordinated by the Numeracy Co-ordinator and focus on basic maths such as adding, subtracting, multiplying and dividing. These support classes are taught in small groups during class assembly time.

MidYIS data is also used to identify those pupils with low scores (<84 in maths). The names of these pupils are sent to the SENCO to arrange further testing such as Dyscalculia Screening. The Mathematics department are also made aware of these pupils' areas for improvement as well as areas of strength.

The Mathematics department employ a range of strategies/resources to target pupils of all abilities. Resources include:

- Text books
- Worksheets (10 Ticks)
- Homework booklets
- Interactive Boards
- Maths Watch revision discs

### **Numeracy across all Learning Areas**

*“Developing numeracy enables pupils to apply mathematics across the curriculum and in real life situations. Skills in numeracy should help our young people to make informed and responsible choices and decisions throughout their lives.”*

*(Count, Read: Succeed)*

**Each teacher is responsible** for developing pupils’ numeracy skills within their own area of learning. The skills are not intended to be something that is added on at the end but rather a way of helping pupils develop and demonstrate a deeper understanding of the subject. Some subjects are obviously better suited to meeting certain curriculum requirements more than others.

The subject teacher has a central role in relation to the Numeracy of every pupil. All pupils are helped to understand and use mathematics in order to enhance learning in all curriculum areas. The subject teacher should act as a positive role model, demonstrating confidence in mathematical procedures and making clear the importance of sound mathematical understanding. Pupils should be encouraged to realise that mathematical concepts are related to many subjects and are interconnected and relevant to everyday life.

Numeracy and mathematical concepts can be developed in all subjects:

- Basic concepts should be developed by concrete activities such as sorting, matching, comparing, classifying, pattern making and sequencing in a variety of appropriate contexts.
- Opportunities should be provided for exploring and investigating, doing and observing, talking and listening and answering and asking questions. Clearly there is an overlap here with the development of literacy.
- Classroom routines should promote numeracy: dates, times, use of planner etc.
- Learning should be supported where possible by the use of ICT, including effective and efficient calculator skills.
- Teachers should endeavour to promote links with other subjects and demonstrate how mathematical skills are transferable.
- Pupils should be encouraged to apply their knowledge and skills to everyday, real life problems through skilful questioning interpretation and analysis of mathematical data.
- Numeracy should be made interesting and relevant and teachers should demonstrate how mathematical skills can be used in everyday life, further and higher education and employment.
- Providing clear explanations of any numeracy based concepts being used by modelling good practice of mathematical methods related to the subject: work on the board, wall displays and highlighting common mistakes and misconceptions.

## **Using Maths (Cross-Curricular)**

The statutory requirement for Using Maths was introduced in 2012/2013. Departments report on each pupils' Using Maths Level in Years 8 and 9 in the annual report. In Year 10 a level is assigned as well as a report on the pupil's level. The following Learning Areas are responsible for assessing and reporting on Using Maths:

Y8: Science

Y9: Technology

Y10: Maths

## **Pupils with Special Educational Needs**

A child is considered to have a special educational need if they have a learning difficulty or disability. A child has a learning difficulty if they *"have significant greater difficulty in learning than the majority of children of the same age"* (Code of Practice 1998). A disability is *"a physical or mental impairment which has a substantial and long term effect on his or her ability to carry out normal day to day activities"* (Disability Discrimination Act 1995).

Individual Education Plans will be used to identify pupils who have difficulty with numeracy. The teacher will then differentiate appropriately to meet the needs of the pupils and where appropriate help the pupils to fulfil their targets.

Streaming in Mathematics means that pupils can be placed in a class with others who have similar ability in Mathematics and therefore top classes are stretched while the lower classes, whilst also being stretched, receive appropriate support from their class teacher.

## **Role of Parents**

Parents can contribute to the development of Numeracy through home learning. Support in completion of homework is invaluable.

Year 8 parents are invited to a support evening at which the numeracy coordinator talks through supporting numeracy at home through everyday activities and games. A copy of the PowerPoint used on this evening is available on the school website.

Pupils with Individual Pupils Educations Plans benefit greatly from parental support and these act as a means of communication between home and school.

## **Information Communication Technology**

Appropriate ICT resources will be used in each Area of Learning to enhance pupils' learning experiences, for example spreadsheets will be used to make calculations and graphs. Through consultation and co-operation, the Mathematics Department will advise on and co-ordinate the introduction and development of calculator skills and other similar technologies to ensure consistent use throughout the school.

## **Staff Development**

*“The strategy recognises that teachers are the key to raising standards by meeting the needs and aspirations of pupils through high-quality teaching and learning. It recognises the particular importance of the teaching of literacy and numeracy and sets out in greater detail how teachers are to be supported in this vital work”.*

*(Count, Read: Succeed)*

Numeracy has been introduced as part of the PRSD system and departments are encouraged to incorporate numeracy into their lessons where possible. Staff are assisted in this process through the use of resources. These resources are distributed electronically by the Numeracy Co-ordinator.

*Reviewed August 2018*