

WCB Numeracy Policy



1. INTRODUCTION

Wellington College is committed to raising the standards of numeracy of all its students in order to allow them to develop the ability to use numeracy skills effectively in all areas of the curriculum and the skills necessary to cope confidently with the demands of further education, employment and adult life.

This policy sets out the school's principles and practices for the promotion and development of numeracy, both across the curriculum and within the area of mathematics.

It clarifies the responsibilities for all stakeholders in ensuring the support and development of numeracy skills

It reflects classroom practice in relation to the statutory learning experiences within the NI Curriculum.

2. DEFINITION OF NUMERACY

Numeracy is the ability to apply appropriate mathematical skills and knowledge in familiar and unfamiliar contexts and in a range of settings throughout life, including the workplace.

It involves the development of:

- a) an understanding of key mathematical concepts and their interconnectedness;
- b) appropriate reasoning and problem-solving skills;
- c) the proficient and appropriate use of methods and procedures (formal and informal, mental and written); and
- d) active participation in the exploration of mathematical ideas and models.

Count, Read: Succeed Paragraph 1.10

A numerate student is one who:

- is confident and competent at performing calculations involving number;
- can use a range of techniques to carry out computations mentally and on paper;
- knows and understands the properties of number;
- can explain methods and justify reasoning & conclusions, using correct mathematical terms;
- can use calculators and other ICT resources appropriately and effectively to solve mathematical problems, and select from the display the number of figures appropriate to the context of the calculation; and
- can recognise and use mathematical skills and techniques in a variety of contexts.

3. CONTEX

The stated vision of the Department of Education for NI is “*to ensure that every learner fulfils his/her potential at each stage of his/her development*”. (DE 2010)

This has been enunciated in the overall aim of the NI Curriculum (DE 2008), which aims to “*empower young people to achieve their potential and to make informed and responsible decisions throughout their lives*”.

In March 2011, DE published **Count, Read: Succeed – A Strategy to Improve Outcomes in Literacy and Numeracy** which states:

- Literacy and numeracy are at the very heart of the revised curriculum (paragraph 2.3)
- Developing literacy and numeracy therefore must be central elements of a school’s delivery of the revised curriculum, and of the support and professional development for teachers in implementing the curriculum (2.5)
- School should have a literacy and numeracy policy, linked to the School Development Plan and annual targets (5.7)

4. AIMS

Wellington College will:

- promote numeracy throughout the curriculum in a consistent and efficient manner;
- raise standards of numeracy by enhancing the quality of learning and teaching;
- implement appropriate procedures for the monitoring and evaluation of the delivery of numeracy throughout the school;
- provide staff training where necessary and raise the profile of numeracy within the school;
- ensure the school culture of achievement, improvement and ambition exists with respect to numeracy, with clear expectations that all pupils can and will achieve to the very best of their ability; and
- have effective interventions and support in place to meet the additional educational needs of pupils and to help them overcome barriers to learning.

5. ROLES AND RESPONSIBILITIES

5.1 Board of Governors and Principal

The Board of Governors will ensure they are involved in, and kept informed of, the life and work of their school. They will work with the principal, holding her or him to account for the outcomes achieved by pupils, in a constructive yet challenging role as critical friends, thus ensuring that numeracy is a key priority in their school.

Board of Governors, working with the Principal, will ensure that its School Development Plan is agreed and coherent and is focused on a manageable number of core priorities, always including numeracy. It should identify the actions and resources to be used in support of the identified priorities, including those relating to numeracy.

5.2 The role of the Senior Leadership Team

The Senior Leadership Team fully supports the work of the Numeracy Co-ordinator and recognises the fact that all teachers are teachers of Numeracy. The Senior Leadership Team should:

- Give a high profile to Numeracy on the School Development Plan;
- Provide opportunities for staff training on Numeracy.

5.3 The role of the Numeracy Coordinator

- Work with the Senior Leadership Team to determine a strategy for dealing with numeracy across the curriculum and to ensure the effective development and implementation of the numeracy policy;
- Establish and maintain lines of communication to ensure there is constructive liaison between the Mathematics Department, mathematics teachers and teachers of other subjects;
- Monitor and evaluate the implementation of the Numeracy Policy;
- Facilitate amendments to the numeracy strategy in the light of evaluation and curriculum changes;
- Provide information and training to other staff members on agreed methodology;
- Oversee support provided to students at Key Stages 3 and 4;
- Raise awareness of numeracy throughout the school.

5.4 The role of the Head of Mathematics

- Lead their team to reach, collaboratively, a shared understanding of the most effective pedagogy;
- Lead planning for developing and promoting numeracy, along with the Numeracy Coordinator, involving teachers throughout the school;
- Use their expertise to co-ordinate and promote the sharing of best practice in the interests of staff development;
- Use individual and team self-evaluation to identify and implement actions to improve pedagogy and the standards pupils achieve, taking account of whole-school issues;
- Set targets for and assess outcomes in numeracy; and
- Undertake rigorous monitoring and evaluation, including the use of performance data, and review the above actions in light of the outcome.

5.5 The role of the Mathematics teacher

- Be aware of the mathematical techniques used in other subjects and, in conjunction with the Numeracy Coordinator, provide assistance and advice to other departments, so a correct and consistent approach is used in all subjects;
- Provide opportunities for different stimuli to be used in lessons to generate ways of seeking solutions to problems;
- Seek opportunities to use topics from other subjects in mathematics lessons.

5.6 The role of the SENCO

- Identify, in conjunction with the Numeracy Coordinator, any pupils who require extra support due to a special educational need;
- Monitor and review the support being provided to such pupils to ensure that their needs are being met.

6. NUMERACY ACROSS THE CURRICULUM

Every teacher regardless of the subject which they teach, must promote and model high standards of numeracy.

Decisions on pedagogy are a matter for individual teachers, drawing on research and advice from those with particular expertise. Teachers should have flexibility to develop their classroom practice within the whole-school approach.

A broad and balanced curriculum is essential to develop well-rounded and well educated pupils. However, the development of numeracy skills is of such fundamental importance that all pupils must spend the necessary time developing these skills, including through cross-curricular approaches. This may include the prioritising of work to develop numeracy in pupils who are under-achieving.

The school recognises that numeracy is a significant factor within a number of subjects; within these carrier subjects, specific skills will be audited and monitored in relation to assessment and progression.

7. MONITORING AND EVALUATION

The Numeracy Policy will be:

- Regularly reviewed and updated in consultation with Staff
- Presented to the Board of Governors regularly;
- Shared with parents;
- In line with the School Development Plan.

Appendix 1

Numeracy Guidance (Learning & Teaching)

Good practice: Learning and Teaching

The five things that class or subject teachers will do to raise standards in numeracy are, in order:

1. provide high-quality teaching for all pupils;
2. address underachievement as soon as it emerges;
3. address continuing underachievement with support from other staff in the school;
4. address continuing underachievement with support from outside the school; and
5. meet the needs of pupils after a non-statutory assessment through the SEN framework.

To develop numerate students, teachers need to:

- appreciate and promote the importance of strong numeracy skills;
- give opportunities for practice of mental mathematics skills;
- provide lessons which are highly interactive, inspiring, motivating and which are varied in style to meet all pupils needs;
- show enthusiasm for their subject and for the role which numeracy plays within their subject;
- carry out self-evaluation of their own work and reflect on the outcomes of individual pupils.

Each teacher will set high expectations for all pupils to fulfil her or his individual potential, from the highest achieving to the lowest. Pupils who have already been identified as having a special educational need should have their individual requirements accommodated through appropriate differentiation, drawing on any support already in place.

Teachers should inform, engage and work in partnership with parents, whose full support and engagement will help their children to achieve.

Planning should:

- Ensure coverage, progression across the key stages and improve teaching and learning;
- Involve the use of objectives from the Levels of Progression in Using Mathematics Across the Curriculum;
- Ensure inclusion and differentiation;
- Ensure the transference of numeracy skills across the curriculum.

Assessment should:

- Inform planning and have an impact on teaching and learning;
- Provide data for the use of early identification and application of intervention strategies for those pupils whose numeracy skills are not as proficient;
- Inform target setting.

Strategies to be used to improve number skills

Teachers, drawing on their professional expertise, will use a variety of teaching strategies including whole-class teaching, co-operative small group work and individual work, differentiated where appropriate, to promote numeracy in their lessons.

- Number to be identified as the most important area of the curriculum in Mathematics Departmental Schemes;
- Use of technology such as interactive whiteboards to deliver engaging lessons;
- ‘Raw score only’ policy to be followed across the school when giving out results;
- Monitor lessons for correct Numeracy applications;
- Ensure pupils are in the correct setting so their needs can be met;
- Agreed methodology to be followed by all teachers when working with numeracy;
- Numeracy development plan to be reviewed every year.

If any teacher has concerns about the numeracy levels of a student, they should pass those concerns on to the Numeracy Coordinator.

Whole school guidance on the use of calculators

Wellington College expects that all pupils own a scientific calculator which they should bring to school on a daily basis for use in mathematics classes as well as other subjects. Wellington College recommends the *Casio fx-83GTX* or *fx-85GTX*. In deciding when pupils use a calculator in lessons we should ensure that:

- pupils’ first resort should be mental methods: ESTIMATE, CALCULATE, CHECK.;
- pupils have sufficient understanding of the calculation to decide the most appropriate method: mental, pencil and paper or calculator;
- pupils have the technical skills required to use the basic facilities of a calculator constructively and efficiently, the order in which to use keys, how to enter numbers as money, measures, fractions, etc.;
- pupils understand the four arithmetical operations and recognize which to use to solve a particular problem;
- when using a calculator, pupils are aware of the processes required and are able to say whether their answer is reasonable;
- pupils can interpret the calculator display in context (e.g. 5.3 is £5.30 in money calculations);
- we help pupils, where necessary, to use the correct order of operations – especially in multi-step calculations.