

Numeracy Policy

Rationale: To promote numeracy across the curriculum and help pupils to achieve higher standards of numeracy and a greater degree of confidence in their use of numeracy. Intervention is now the key focus of the National Strategy and all subject teachers should be aware of the issues and ideas that underpin the Secondary National Strategy. It is important to identify any issues that a pupil may have in the use of numeracy, both within mathematics lessons and in its application within other subjects. Once identified, the subject leader for mathematics should be informed so that a strategy can be developed to help the pupil in

- the negotiation of targets and choices in learning
- planning, organisation and reflecting on their learning more effectively
- making the best use of opportunities for learning in a range of settings and at home
- personalising provision more closely.

What is Numeracy?

“Numeracy is a proficiency which 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. Numeracy 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.” (National Framework for Teaching Mathematics, 1999).

“The acquisition of at least basic mathematical skills – commonly referred to as ‘numeracy’ - is vital to the life opportunities and achievements of individual citizens. Research shows that problems with basic skills have a continuing adverse effect on people’s lives and that problems with numeracy lead to the greatest disadvantages for the individual in the labour market and in terms of general social exclusion. Individuals with limited basic mathematical skills are less likely to be employed, and if they are employed are less likely to have been promoted or to have received further training.” (Making Mathematics Count, 2003)

Departmental responsibilities:

Subject teachers are responsible for:

- Pupils using appropriate methods of working at numerical tasks within their areas (advice should be sought if unsure as to different methods available)
- Providing a range of appropriate contexts and situations which give meaning to numerical tasks
- Creating an environment which encourages children to develop and use their own methods of working at numerical tasks
- Creating opportunities for children to compare and discuss a range of different methods of numerical calculation
- Encouraging pupils to reflect on numerical answers in terms of accuracy and magnitude

The mathematics department accepts responsibility for teaching the technical aspects of numerical tasks and supporting other departments to ensure they offer pupils opportunities to use their numerical skills to the full.

In order to improve the standard of numeracy throughout the school further, the following structures are in place:

- The National Secondary Strategy Framework has been assimilated into the schemes of work. Opportunities have been identified for pupils to use mathematics in context and in project work.
- A Mathematics Support Club is held at lunchtime once a week, where senior pupils act as tutors, to support pupils with weaknesses in aspects of numeracy. A lunchtime club has been developed for pupils to use numeracy in context with the aid of a software package (Maths in Motion), which allows entry into National and International competitions, including collaboration with schools from different countries.
- Pupils across all years and abilities compete every year in a national mathematics competition.
- A team of year 12 pupils enter an inter-schools competition called The Airport Challenge, which enables the use of numeracy skills in a 'real world' application.
- Detailed pupil profile information (KS2 results, VR scores, CATs and department tests) enable the identification of pupils with lower levels of attainment in mathematics and numeracy skills, as well as aiding in the selection of pupils for the Gifted and Talented register. Less able pupils are supported within mathematics lessons (and setting occurs at the beginning of Y7) and through Mathematics Support Club. Pupil progress is discussed at monthly departmental meetings.
- Key terms for mathematics are in student planners for KS3 pupils.

In order to promote the effective use of numeracy skills, teachers should:

- adopt an investigative approach to teaching in order that the students' own skills of inquiry may be nurtured and developed;
- include mental and oral work regularly in the mathematics classroom - students should be encouraged to use calculators only when calculations are complex and, therefore, mental and/or written strategies would detract from the learning process;
- adopt a good balance of whole group interactive teaching, individual work and co-operative learning;
- use questioning extensively and effectively, giving learners enough time to think before answering;
- ensure that, wherever possible, learners have access to a variety of resources, including Information and Communication Technology, and use such technology so that learning outcomes are enhanced;
- focus lessons on the purpose of mathematical skills and processes, rather than the regurgitation of facts, formulae or algorithms;
- encourage the use of correct mathematical vocabulary and notation;
- encourage and support students' reflection on their own thinking;
- use strategies which will ensure equal access to mathematics for both male and female learners;
- use diagnostic measures to determine the special needs of learners and plan strategies to cater for such needs.
- use assessment strategies which match classroom activity and which allow for students to demonstrate what they know and understand;
- ensure that methods taught are consistent with the Secondary National Strategy.

Key numerical terms and methods of calculation are provided by the mathematics department and displayed in appropriate areas around school. All subject teachers will be guided by the Secondary National Strategy as to methods of working at numerical tasks.