

NUMERACY POLICY

College Governance Status

This policy was first issued in December 2010 and approved by the Governing Body on 8 February 2011. It will be reviewed every three years or as required such as in the light of new guidance or legislation.

Review dates	By Whom	Approval date
May 2015	Staff and Governors	25.06.15
June 2018	Staff and Governors	21.6.18

Signed by the Chair:



Context

Recent changes in the Ofsted framework have placed a greater emphasis on numeracy across the curriculum. As we move towards a single school, there needs to be a single numeracy policy across all stages.

Aims

- To raise standards of numeracy by enhancing the quality of numeracy teaching and learning
- To develop cross-curricular use of numeracy by building opportunities for numeracy into all schemes of work (SOW)
- To ensure that all staff are confident teachers of numeracy

Intended Outcomes

- Students will acquire the numeracy skills they need to prepare them for the next stage of their education and for the world of work
- Students will make good progress in maths and will reach at least national average levels of attainment
- Students will apply the numeracy skills developed in lessons across all curriculum areas, in order to improve their performance in numeracy questions in examinations in all subjects
- Students will be aware of how to improve when approaching numeracy questions as a result of clear feedback on how to improve in line with a consistently applied procedure

Numeracy Procedures

Definition of 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.

The College takes the view that all teachers share responsibility for their student’s development of numeracy. Those involved in teaching mathematics lay the groundwork, and other learning areas provide opportunities every day for students to build upon.

The Roles of Key Personnel

The Role of the Senior Teacher i/c Curriculum & Maths

- To line manage the numeracy co-ordinator

The Role of the Numeracy Co-ordinator

- To develop numeracy throughout the College
- To carry out an audit of the numeracy requirements/provision in all subject areas and update as appropriate
- To develop over time a set of resources to support teachers in the delivery of numeracy
- To help identify training needs of staff in relation to numeracy and ensure that these training needs are met
- To liaise with all subject areas to ensure that numeracy is developed in a coherent and consistent manner throughout the College
- To ensure all staff are aware of their responsibility that the acquisition of basic skills is a whole College issue
- To establish procedures to monitor and evaluate the numeracy provision for all students in the College

The Role of the Subject Leaders

- To ensure that numeracy is explicit in schemes of work
- To signpost opportunities/requirements to deliver numeracy and ensure all teachers are aware of these
- To ensure teachers are aware of the section of this policy on the marking of numeracy questions
- To monitor through classroom observation that the teaching of numeracy is planned and delivered as required by the scheme of work, and that opportunities are differentiated appropriately
- To monitor through work scrutiny that numeracy is delivered as planned and marked accordingly to the relevant section of this policy
- To nominate a numeracy representative and ensure that meetings are attended and key messages are fed back to the rest of the team

The Role of the Subject Numeracy Representative

- To attend numeracy across the curriculum meetings
- To feedback to their subject team any key messages from these meetings

The Role of the Teacher

- To ensure that numeracy elements within the scheme of work are delivered and referred to in planning

The Role of Tutors

- To discuss progress in numeracy with tutees identified by the numeracy co-ordinator as falling behind

The Role of Parents

The parents' role in the numeracy development of their children is crucial and to be encouraged. To do this effectively, parents should:

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- make their children aware when they as parents are faced with mathematical demands in their everyday lives, and display a positive attitude when they face these demands
- ask their children to explain their mathematical thinking when doing maths homework or performing everyday mathematical tasks.

Helping with Numeracy at Home:

- encourage your child to become involved in everyday problems and activities for example facts and figures for planning a meal or planning a shopping trip
- be a sounding board for your child's ideas and problems. Listen, question, and be willing to accept your child's own ideas
- play games with your child and let them help you score
- praise and encourage your child as they come to grips with various mathematical situations. Give them the confidence to better organise and control their world through using maths
- students who are good at mathematics are prepared 'to have a go' so encourage your child to find ways of doing things and talk to them about what they did, and why. This will help them see mistakes for what they are, important steps in working out how to get it right!

The Link between Numeracy and Literacy

- Language is an important tool for learning mathematics. Explaining to oneself, or someone else 'putting it into words', can be a powerful means of working through and clarifying ideas
- Students should use language as a tool for reflecting on their mathematical experiences and hence for their own mathematical learning
- Students also need to develop the skills of recording their mathematics. The first forms of recording are likely to be in everyday language or in pictures or diagrams. Gradually these representations may be shortened, leading to the need to use symbols

English

English lessons can help to develop and support students' numeracy skills, for example, by use of mathematical vocabulary and technical terms, by asking students to read and interpret problems to identify the mathematical content, and by encouraging them to explain, argue and present their conclusions to others.

Science

Almost every scientific investigation or experiment is likely to require one or more of the mathematical skills of classifying, counting, measuring, calculating, estimating and recording in tables and graphs. In Science students will, for example, order numbers, including decimals, calculate simple means and percentages, use negative numbers when taking temperatures, decide whether it is more appropriate to use a line graph or bar chart, and plot, interpret and predict from graphs.

Art and Design and Technology

Measurements are often needed in Art and Technology. Many patterns and constructions are based on spatial ideas and properties of shapes, including symmetry. A lot of work is also undertaken using estimation of measurement and quantities. Designs may need enlarging or reducing, introducing ideas of multiplication and ratio. When dealing with recipes and cooking students will

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carry out a great deal of measurement calculations that include working out times and calculating cost.

ICT

Students will apply and use mathematics in a variety of ways when they solve problems using ICT. For example, they will collect and classify data, enter it into data handling software, produce graphs and tables, and interpret and explain their results. Their work in control includes the measurement of distance and angle, using uniform non-standard then standard measures. When they use computer models and simulations they will draw on their abilities to manipulate numbers and identify patterns and relationships.

History, Geography and Religious Education

In History and Geography students will collect data by counting and measuring and make use of measurements of many kinds. The study of maps includes the use of co-ordinates and ideas of angle, direction, position, scale and ratio. The pattern of the days of the week, the calendar and recurring annual festivals all have a mathematical basis. For older students historical ideas require understanding of the passage of time, which can be illustrated on a time line, similar to the number line that they already know.

Physical Education and Music

Athletic activities require measurement of height, distance and time, while ideas of counting, time, symmetry, movement, position and direction are used extensively in music, dance, gymnastics and ball games

PSHCE

In these two areas numeracy can be directly related to everyday life. Budgeting, paying bills, running a home and other money management issues can be undertaken.

Modern Languages

Looking at currency within a country. Calculations in a foreign language. A lot of work that is already undertaken in the mathematics classes and careers can be applied here to learn about different countries.

The key to making the most of all these opportunities is to identify the mathematical possibilities across the curriculum at the planning stage. This will be achieved in each area of study by conducting an audit of what numeracy is required. Teachers of all subjects should make the links between subjects and numeracy explicit by talking about links frequently in their classes and should also draw students' attention to the links between subjects by talking frequently about them, both in mathematics and in other lessons.