# Alderbrook School | Alderbrook Sixth Form



## Numeracy Policy

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#### Aim/mission statement

1 Alderbrook School is committed to raising the standards of numeracy of all its students, so that they 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.

#### Rationale

- 2 It is important that all pupils develop the ability to apply numerical understanding and skills confidently to solve problems in a variety of curriculum contexts and to cope with practical mathematical demands of every day life.
- 3 We want all children to see Numeracy as something they can learn and improve upon and it is something that is relevant to their lives after school. Whether or not they proceed to higher Maths, all children need to develop confident numeracy skills that will serve them well throughout life.
- 4 The focus on Numeracy skills is not just the responsibility of the Mathematics department. Every teacher must become a teacher of numeracy. That does not mean that every teacher becomes a maths teacher but that numeracy – just like literacy – is recognised as an intrinsic part of every subject across the school curriculum.
- 5 The improvement of Numeracy skills raises students' mathematical attainment, which promotes high standards in other subjects.
- 6 Without good everyday Numeracy skills, we are at a disadvantage. Low levels of numeracy and poor number skills are linked to unemployment, low wages and poor health. There is evidence that numeracy is even more closely related to wellbeing and socio economic achievement than is literacy. It is a key factor in determining success in life.
- 7 People with poor Numeracy skills are at a disadvantage when they try to enter fulltime employment. They frequently struggle to enter full time employment and often fail to stay in employment long term.

### A definition of numeracy

- 8 Numeracy is a proficiency which involves confidence and competence with numbers and measures.
- 9 Numeracy complements literacy and is sometimes called 'mathematical literacy'. Both skills are needed in order to function fully in Education and modern life.
- 10 Being numerate means being able to reason with numbers and other mathematical concepts and to apply these in a range of contexts and to solve a variety of problems. Being numerate is as much about thinking and reasoning logically as about 'doing sums'.

- 11 It means being able to:
  - Interpret data, charts and diagrams
  - Process information
  - Solve problems
  - Check answers
  - Understand and explain solutions
  - Make decisions based on logical thinking and reasoning.
- 12 Numeracy involves skills that are sometimes not adequately learnt in the classroom the ability to use numbers and solve problems in real life.

#### Raising Standards of Numeracy

- 13 A whole school strategy for raising standards of numeracy involves:
  - Ensuring the school curriculum allows enough time to establish solid understanding of the Numeracy fundamentals upon which all else is built and must relate to later reallife needs.
  - Developing better ways of assessing students' skills so that teaching and learning are not tied to and constrained by ineffectual forms of testing and examination.
  - Increasing awareness of the teaching strategies used in primary schools and the mathematical skills acquired by students when they begin secondary school.
  - Identifying the Numeracy needs of different subjects
  - Providing information on appropriate expectations of particular groups
  - Increasing teacher awareness of how students are taught particular skills in mathematics lessons, so that students can be encouraged to utilise these skills in various subjects
  - Increasing teacher awareness of differences that exist, in similar topics, between mathematics and other subjects, so that these differences can be explained to students to aid understanding
  - Developing a consistent approach to learning and Numeracy skills in all subjects
  - Increasing the awareness of students of the transferability of skills, so that they can make effective use of the Numeracy they have, in a range of contexts
- 14 It is the responsibility of the Mathematics Department to teach basic skills, but by working more effectively with other teachers in the school standards should be raised for all students
- 15 This should mean that:
  - Achievement in those aspects of the curriculum, which involve the use of basic Numeracy skills, will be raised.
  - The ability of all students to work correctly and confidently with mathematics in a variety of contexts will improve.
  - Students leaving the school will be better prepared for further education and employment and able to deal more confidently with the mathematical demands of adult life.

### The management of the strategy

- 16 The role of the Leadership Team is to:
  - Participate in the planning, implementation and evaluation of the whole school numeracy strategy
  - Identify staff for role of the Numeracy Co-ordinator
  - Determine the role of the Numeracy Co-ordinator
  - Specify expectations to be made of all teachers
  - Support the development and implementation of a whole school numeracy policy
  - Provide INSET resources for mathematics teachers and other teachers in the school
  - Provide opportunities for effective communication between the Numeracy Coordinator, the Leadership team, the Mathematics Faculty and other faculties
  - Provide finance for material resources
  - Support and encourage staff involved in the project
- 17 The role of the Numeracy Co-ordinator is to:
  - Work with the leadership team to determine a strategy for dealing with numeracy across the curriculum and to ensure the effective development and implementation of a whole school numeracy policy
  - Establish lines of communication and ensure that there is constructive liaison between the mathematics teachers and teachers of other subjects
  - Establish lines of communication and ensure that there is constructive liaison between the mathematics teachers and feeder primary schools
  - Establish a consistency in methodology of Numeracy skills across the faculties
  - Improve and support the transferability of skills
  - Monitor the implementation of the whole school numeracy strategy;
  - Evaluate the effectiveness of the strategy and make modifications where necessary
  - Facilitate amendments to the numeracy strategy in the light of evaluation and curriculum changes
- 18 The role of the Maths teacher is to:
  - Be aware of the mathematical techniques used in other subjects and provide assistance and advice to other faculties, so that a correct and consistent approach is used in all subjects
  - Provide information to other subject teachers on appropriate expectations of students and difficulties likely to be experienced in various age and ability groups
  - Through liaison with other teachers, attempt to ensure that students have appropriate numeracy skills by the time they are needed for work in other subject areas
  - Seek opportunities to use topics from other subjects in mathematics lessons
- 19 The role of teachers other than mathematics is to:
  - Ensure that they are familiar with correct mathematical language, notation, conventions and techniques, relating to their own subject, and encourage students to use these correctly
  - Be aware of appropriate expectations of students and difficulties that might be experienced with numeracy skills

- Provide information for mathematics teachers on the stage at which specific numeracy skills will be required for particular groups
- Provide resources for mathematics teachers to enable them to use examples of applications of numeracy relating to other subjects in mathematics lessons

#### Evaluation

- 20 The Numeracy Policy will be monitored and reviewed through:
  - The school and faculty Improvement plans
  - Faculty meetings
  - Lesson observation
  - Sampling students' work
  - Discussion with pupils, staff, parents / carers and governors
  - Reviewing planning
  - Analysing assessment data and progress data.
- 21 Information provided from the monitoring and review process will inform decision making about improvements and further development.
- 22 The school's Numeracy policy will be kept up to date with national agendas such as National Numeracy and Personal Development.