

Numeracy Across the Curriculum

Whole School Numeracy Policy



Date Approved by Governors:

Date for review:

Oastlers School

Policy Document



NUMERACY ACROSS THE CURRICULUM Whole School Literacy Policy

NUMERACY

Numeracy is:

The ability to cope confidently with the mathematical demands of further education, employment and adult life.

This includes:

- The ability to carry out basic calculations efficiently and accurately, either mentally or with pencil and paper as appropriate.
- The ability to apply knowledge of number to both familiar and new circumstances and to use it in the solution of problems.
- The ability to understand and use units of measurement of length, mass, capacity and time.
- The ability to understand and use information presented in mathematical forms, including graphs, tables and charts

Numerate students:

- Have a sense of the size of a number and where it fits into the number system.
- Read numbers correctly from a range of meters, dials and scales
- Know basic number facts and recall them quickly and confidently
- Use what is known to work answers mentally
- Use calculators and other ICT resources appropriately and effectively to solve mathematical problems.
- Make sense of number problems, recognise the operation(s) needed and are available to work confidently with numbers
- Know when answers are reasonable and give results to an appropriate degree of accuracy
- Are able to manipulate algebraic expressions and simple formulae
- Understand and use correct mathematical notation and terminology
- Are able to explain methods, reasoning and conclusions
- Use units of measurement of length, angle, mass, capacity and time; can suggest suitable units for measuring, make sensible estimates of measurements and measure accurately using a range of instruments.
- Understand and use compound measures and rates.
- Use simple formulae and substitute numbers in them.
- Measure and estimate measurements, choosing suitable units and calculate simple perimeters, areas and volumes.
- Draw plane figures to given specifications and appreciate the concept of scale in geometrical drawings and maps.

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Policy Document



NUMERACY ACROSS THE CURRICULUM

Whole School Literacy Policy

- Understand the difference between the mean, median and mode and the purpose for which each is used.
- Collect data, discrete and continuous and draw, interpret and predict from graphs, diagrams, charts and tables.
- Understand probability and risk.

AIMS

Oastlers School is committed to raising the standards of Numeracy of all its students, so that they develop the ability to use Numeracy skills in all areas of the curriculum and the skills necessary to cope confidently with the demands of further education, employment and adult life.

Learners arrive at Oastlers either with significant learning difficulties or with behavioural problems which inhibit learning. Whatever the reason for their statement the learners arriving are often significantly below their peers in attainment and often social skills. The programme of study for maths is based on materials from the National Strategy where appropriate. The range of needs means that the mathematics programme in KS3 is one of attempted recovery initially and then progression.

Whatever their starting point or experience 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.

The mathematics teaching at Oastlers is geared towards enabling each pupil to develop within their capabilities; not only the mathematics skills and understanding required for later life, but also enthusiasm and fascination about maths itself. We aim to increase pupil confidence in maths so they are able to express themselves and their ideas using the language of maths with assurance.

All students will be entered for GCSE examination other than in exceptional circumstances.

RAISING STANDARDS IN MATHS

A whole school strategy for raising standards of numeracy involves:

- Increasing awareness of secondary teachers of the teaching strategies used in primary schools and the mathematical skills acquired by pupils.
- 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 pupils to aid understanding.
- Developing a consistent approach to learning and Numeracy skills in all subjects.

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Policy Document



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- Increasing the awareness of pupils of the transferability of skills, so that they can make effective use of the Numeracy they have, in a range of contexts.
- Encourage teachers to work more effectively. Increasing awareness of secondary teachers of the teaching strategies used in primary schools and the mathematical skills acquired by pupils.

ROLES AND RESPONSIBILITIES

- **Senior Managers:** lead and give a high profile to numeracy;
- **Maths Department:** provide pupils with knowledge, skills and understanding they need to use maths effectively;
- **Teachers across the curriculum:** contribute to pupils' development of numeracy;
- **Parents:** encourage their children to use the range of strategies they have learnt to improve their levels of numeracy;
- **Pupils:** take increasing responsibility for recognising their own numeracy needs and making improvements;
- **Governors:** a linked governor for whole school numeracy

THE MATHS DEPARTMENT

In addition to all the whole-school aspects of this policy, the Maths teachers at Oastlers School have a leading role in providing pupils with the knowledge, skills and understanding they need to become numerate.

The Maths department is well placed to offer good advice and expertise.

The role of the Maths department includes:

- Identifying numeracy priorities, targets and objectives and other particular contributions they can make;
- Making a specific, numeracy-related contribution to the school development plan;
- Using data to identify curricular targets;
- Adapting the department development plan to achieve these.

NUMERACY DEVELOPMENT ACROSS THE CURRICULUM

The focus on Numeracy skills is not just the responsibility of those teaching maths lessons. All subjects where learners are expected to apply numerical skills should be taking positive steps to develop learners' Numeracy skills and concepts and provide opportunities for them to acquire the mathematical language crucial to understanding mathematical knowledge.

The improvement of Numeracy skills raises learners' mathematical attainment, which promotes high standards in other subjects.

People with poor Numeracy skills are at a disadvantage when they try to enter full-time employment. They frequently struggle to enter full time employment and often fail to stay in employment long term.

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ASSESSMENT AND LEARNING

Oastlers School has a Whole School Marking Policy (Appendix A) which identifies the key aspects of numeracy that each department addresses in its marking of learners' work.

LEARNING ENVIRONMENT

Oastlers School is committed to providing:

- Displays of reading material relevant to the topic or national curriculum subject; each classroom promotes subject-specific vocabulary which pupils are encouraged to use regularly
- High quality numeracy resources, which is up-to-date, relevant and balanced in its presentation of ethnicity, culture and gender;
- Dictionaries, glossaries and lists of appropriate subject vocabulary that are available during lessons, and which students are encouraged to use
- Access to appropriate audio visual equipment
- A classroom environment which is conducive to good numeracy practice.
- Access to up-to-date ICT facilities to support maths teaching

MONITORING AND EVALUATION

We will make use of available data to assess the standards of pupils' numeracy.

Possible approaches to monitoring are:

- sampling work – both pupils' work and departmental schemes;
- observation – pupil tracking and maths teaching;
- meetings;
- pupil interviews;
- scrutiny of development plans;
- encouraging departments to share good practice by exhibiting or exemplifying pupils' work and peer observation.

INCLUSION

Oastlers School pupils are entitled to our highest expectations and support. Some will need additional support and others will need to be challenged and extended. Strategies that we can use include:

- questioning;
- adjusting the demands of the task;
- the use of additional support;
- use of group structures;
- resources;
- making focuses clear;
- creating an atmosphere where pupils evaluate their own and others' work.

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