



PONTARDDULAIS COMPREHENSIVE SCHOOL YSGOL GYFUN PONTARDDULAIS



Numeracy Policy

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Defining Numeracy

The National agenda for Numeracy

'Numeracy is an essential life skill and learners need to be able to apply this skill across the curriculum in different subject areas, and in real life contexts. It is also about identifying and applying numerical reasoning skills in order to solve a problem, and carrying out the numerical procedure which enable people to work out and show their solutions'.

Achieving the ambition in Wales

The ambition for numeracy in Wales will be achieved by 'raising overall numeracy levels across Wales' by 'having robust and consistent standards of numeracy across Wales' and 'all teachers will be teachers of numeracy'.

(National Numeracy Programme—Welsh Government - May 2012)

Whole-School Numeracy mission statement

"Live to learn, learn to live."

Pontarddulais Comprehensive School is committed to raising the standards of numeracy of all its pupils, providing them with opportunities across the curriculum to develop the ability to apply numeracy skills effectively and consistently. This will also enhance their development of the skills necessary to cope confidently with the demands of further education, employment and adult life.



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A numerate student is able to:

- have a sense of the size of a number and where it fits into the number system;
- recall mathematical facts confidently;
- calculate accurately and efficiently, both mentally and with pencil and paper, drawing on a range of calculation strategies;
- use proportional reasoning to simplify and solve problems;
- 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 a calculation;
- use simple formulae and substitute numbers in them;
- measure and estimate measurements, choosing suitable units, and reading numbers correctly from a range of meters, dials and scales;
- calculate simple perimeters, areas and volumes, recognizing the degree of accuracy that can be achieved;
- understand and use measures of time and speed, and rates such as £ per hour or miles per litre;
- draw plane figures to given specifications and appreciate the concept of scale in geometrical drawings and maps;
- 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;
- have some understanding of the measurement of probability and risk;
- explain methods and justify reasoning and conclusions, using correct mathematical terms;
- judge the reasonableness of solutions and check them when necessary;
- give results to a degree of accuracy to the context.

Implementation of the Strategy

The role of the Senior Management Team is to:

- participate in the planning, implementation and evaluation of the whole-school numeracy strategy;
- determine the role of the Literacy/Numeracy Coordinators;
- specify expectations of all teachers;
- support the development and implementation of a whole-school numeracy policy;
- provide INSET, resources and opportunities for staff within the school, to accommodate the LNF within SOW;



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- provide opportunities for effective communication between the Numeracy core team within the school;
- provide finance for material resources;
- produce portfolios to evidence cross-phase work.

The role of the Numeracy Coordinators is to:

- work with the Senior Management 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;
- monitor the implementation of the whole-school numeracy policy;
- lead INSET on numeracy;
- produce a numeracy toolkit for all members of staff;
- ensure all departments across the school have numeracy displays;
- complete the numeracy audit across the school with the KS3/KS4 Coordinator;
- monitor and support subject leaders with the implementation of the LNF;
- evaluate the impact of the implementation of the LNF;
- design curriculum mapping years 2-9 with the partner primaries;
- create an overview - introduce / consolidate / progression.

The role of the KS3/KS4 Coordinator is to:

- track KS3/KS4 procedural and reasoning personalised assessment results;
- analyse test data;
- set pupil numeracy targets;
- monitor catch-up classes and their impact;
- support on numeracy INSET;
- complete the numeracy audit across the school with the whole-school Numeracy Coordinators;
- use the Key Stage 2 numeracy data to set targets for pupils at the start of Year 7.



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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 departments, so that a correct and consistent approach is used in all subjects;
- provide information to other subject teachers on literacy targets set;
- seek opportunities to use topics from other subjects in Maths lessons;
- be aware of the strategies used in the catch up numeracy groups in order to support identified pupils in their Maths lessons.

The role of Subject Leaders / Area Coordinators is to:

- be aware of the techniques used in other subjects and provide assistance and advice to other departments, so that a correct and consistent approach is used in all subjects;
- provide information for the numeracy audit as to where elements of the LNF are covered within the SOW;
- identify opportunities for developing numeracy skills in SOW;
- ensure coherence and consistency in the application of numeracy skills linked to the LNF across the subject area and teaching staff;
- moderate standards of numeracy work in their subject, with other members of staff across the curriculum;
- map progression in numeracy skills across year groups;
- assess pupils on their numeracy skills in the element identified for their subject;
- on the identified elements of the LNF provide a summative comment in the subject report;
- ensure exemplar work is provided to the Numeracy Coordinators of elements of the LNF that have been achieved within lessons;
- provide a numeracy notice board, within classrooms or corridor, highlighting exemplar work covering elements of the LNF;
- work within cross-curricular groups on a given topic, appropriate for subjects and plan progressive, differentiated and challenging task that will allow learners to demonstrate the full range of numeracy skills;
- monitor and evaluate the impact of the LNF on standards of learning within subject area.



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The role of others teachers within the school is to:

- Ensure knowledge of the LNF and the progression of pupils through it;
- understand the importance of numeracy skills in relation to raising standards of work within own subjects;
- be aware of the numeracy targets of pupils and difficulties pupils may face with numeracy skills;
- identify opportunities to apply numeracy skills within subjects and across the curriculum;
- provide examples of work completed covering LNF elements;
- monitor and evaluate the impact of the approaches used.

Teaching and Learning

The whole-school numeracy policy promotes teaching in Pontarddulais Comprehensive School that is:

- informed by clear, challenging and progressive objectives;
- direct and explicit;
- highly interactive;
- inspiring and motivating;
- varied in style, well paced and strong focus;
- well-pitched to pupils' needs;
- inclusive and ambitious.

The whole-school numeracy policy promotes learning in Pontarddulais Comprehensive, that is:

- active and highly-motivated;
- purposeful;
- creative and imaginative;
- reflective;
- secured in use and meaningful in context;
- increasingly independent;
- incorporates individual or group targets.



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Planning and Assessment

Planning within the school should:

- be cross-curricular;
- ensure coverage and progression across KS3/KS4 and improve teaching and learning;
- involve the use of elements from the LNF for teaching numeracy;
- ensure inclusion and differentiation;
- ensure the transference of numeracy skills across the curriculum.

Assessment across the school should:

- include ongoing formative assessment on pupil development of numeracy skills;
- inform planning and have an impact on teaching and learning;
- make reference to elements of the LNF for teaching numeracy;
- inform target-setting;
- support and inform pupil progress of the individual skills from the LNF;
- contribute towards a summative report.

Evaluation

The whole-school numeracy policy will be monitored and reviewed through:

- the school, area and departmental development plans;
- lesson observations;
- portfolio of pupils work;
- discussion with pupils, staff, parents and governors;
- reviewing planning and SOWs;
- analysing assessment data.

Through this evaluation process of monitoring and reviewing the implementation of the whole-school numeracy policy will inform decision making about improvements and further developments.



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References:

The following documents have been used to support the writing of Pontarddulais Comprehensive School's numeracy policy:

The National Literacy Programme—WELSH GOVERNMENT—May 2012
Supplementary Guidance - Literacy and numeracy in secondary schools—ESTYN-September 2013

Curriculum Planning Guidance—WELSH GOVERNMENT—January 2013

National Literacy and Numeracy Framework—WELSH GOVERNMENT— March 2013

Assessment for Learning and the National Literacy and Numeracy Framework-
WELSH GOVERNMENT—November 2013