



Ysgol Gynradd
TREROBART
Primary School

LNF: Numeracy

Chair of Governors: *Mrs. Marianne Jones*
Acting Headteacher: *Mrs. Tracy Buckle*

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The Literacy and Numeracy Framework (LNF.) Numeracy Element

Numeracy is a priority for the whole of Trerobart Primary School, alongside Literacy it is the focus of teaching and learning.

Within all subjects the teaching of numeracy and literacy is promoted. Using the Literacy and Numeracy Framework (LNF) teachers are expected to plan and deliver objectives pitched appropriately to the learners, ensuring learners are progressing.

Within every subject (at some point) Numeracy skills may be required. For example, in Science children might use data handling; in Geography they might use co-ordinates; in History a time line etc. In Primary School we currently implement own curriculum which alongside teacher tracking sheets ensures coverage of the Numeracy skills as outlined in the LNF.

Our aim is for the children to apply the skills they learn in mathematics to all areas of their lives helping them to perceive the importance of being numerate. This is achieved both through teachers using the LNF when planning and teaching the curriculum. By using the LNF teachers pitch the numeracy being taught in particular lessons appropriately, ensuring both progress and coverage of skills. In addition to the subject based learning objective the LNF objective is also shared with the children at the beginning of a lesson.

The focus on Numeracy across all subjects does not take away from the importance of teaching Mathematics properly. As stated by ESTYN in their 2010 report: **‘Numeracy is proficiency with number that is acquired through Mathematics being taught well.’** As such, Trerobart’s Mathematics lessons are the key focus for teaching the skills that the children need in order to be numerate. It is through these focussed lessons following the new Abacus scheme of work (in Yr. 1 – Yr. 6) and Abacus Evolve (in Reception Year) that these mathematical skills are taught. (See LNF – Abacus coverage charts for each Year group)

Mathematics

Introduction

This policy outlines the teaching, organisation and management of the mathematics taught and learnt at Trerobart Primary School. The school’s policy for Mathematics is based on the new Abacus Scheme, The Foundation

Phase Profile, The National Curriculum and the LNF. This policy has been drawn up as a result of staff discussion and has full agreement of the Governing Body. The implementation of this policy is the responsibility of all teaching staff.

Subject Definitions

Mathematics is a way of communicating. It is a language through which ideas can be explained, explored and developed and one through which relationships can be expressed, hypothesis made and pattern identified.

“Numeracy means knowing about numbers and number operations. More than this, it includes an ability and inclination to apply numerical understanding and skills to solve problems, including those involving money and measures. It also includes familiarity with the ways in which numerical information is gathered by counting and measuring, and is presented in graphs, charts and tables.” (National Numeracy Project)

Mathematics Subject Aims

Through using the Abacus Scheme as a base, our aims in Mathematics are to ensure every child will develop:

- A positive attitude towards mathematics as an interesting and enjoyable subject.
- An ability to think clearly and logically in mathematics with confidence and independence.
- The ability to calculate problems using a variety of mental strategies and formal written methods.
- The ability to use their key skills in mathematics across the curriculum.
- The ability to use mathematical skills and knowledge accompanied by the quick recall of basic facts to solve problems in everyday situations.
- The ability to use mathematical equipment effectively and appropriately.
- The ability to use the calculator accurately whilst understanding its use in no way reduces the need for mathematical understanding.
- An ability to work independently or with others to solve mathematical problems.
- Skills in using I.C.T. to develop their mathematical understanding.
- Skills and strategies for checking results of calculations.
- The ability to express ideas fluently and to talk about the subject with assurance and to use the language of mathematics.

Environment

We endeavour to ensure that has a Numeracy / Mathematics rich and stimulating environment. This is provided through:

- Mathematics displays in each classroom and around the school which promote thinking and discussion.
- Appropriate Mathematics vocabulary with definitions are displayed.
- The presence of numeracy elements on other displays where appropriate and numeracy incorporated into areas of learning within the Foundation Phase. (e.g. Numeracy in everyday life examples i.e. role play areas with a Numeracy theme.)
- Access to a range of mathematical resources, apparatus, materials and equipment which are clearly labelled and available for the children to use. (These are kept centrally in the Junior Area and Foundation Phase have additional practical resources in individual classrooms.)
- Appropriate number lines, number tracks, written numbers, calendars, hundred squares, charts etc. should be accessible to the children.
- Positive attitudes towards Numeracy / Mathematics demonstrated by all stakeholders.

Planning

Strategies for ensuring progress and continuity at Trerobart Primary include:

- Adhering to the current NC document and Foundation Phase Profile, the Skills Framework, the LNF, the Abacus Scheme of Work (Yr.1 – Yr.6) and Abacus Evolve (Reception) and using other appropriate resources (e.g.: Thinking through number, Big Maths, Badger Maths etc.), teachers plan on a weekly basis ensuring skills and content coverage.
- Weekly planning is done using the on-line www.activelearnprimary.co.uk
- Appropriate meetings and INSET's guide teachers and keep them informed of new and appropriate resources.
- Staff meetings provide opportunities for all staff including the Subject Leader to monitor books, moderate and standardise work and share good practise
- Monitoring of coverage, planning, books and listening to learners is carried out by the Subject Leader at regular intervals following the schools monitoring policy
- A portfolio of children's work from each class is being developed by the Subject Leader as evidence of coverage / attainment
- Each teacher keeps a record of what has been taught and evaluates lessons as appropriate, these are kept in their planning files which are monitored by both the Head teacher and members of the SLT.

Organisation

The principles of the teaching and learning of mathematics at Trerobart Primary school are:

- to be relevant to the age and ability of the child
- to enrich children's key skills in mathematics
- to vary teaching methods ensuring breadth and balance
- to ensure continuity and progression
- to build on previous experience
- to ensure every child feels they can achieve

Teaching

Mathematics is taught daily. Abacus mental maths (for approximately fifteen minutes) takes place daily. One mathematical reasoning lesson is also incorporated into weekly planning and teachers implement the RUCSAC (Read, Underline, Choose, Solve, Answer, Check) model as a step by step approach for learners to use to solve reasoning problems. Badger Maths is used. The Nrich website is also used for planning problem solving lessons. ICT is used in mathematics lessons where it will enhance learning, as in modelling ideas and methods. Where ever possible we encourage learners to use and apply their learning in real life situations.

Although Abacus provides a structure for lessons, the implementation and organisation of lessons is down to the individual class teacher.

In the Foundation Phase Mathematics is taught through a range of oral, play, practical and written activities both in the indoor and outdoor environment.

The strategies for the teaching of mathematics at Trerobart Primary School are:

- a dedicated mathematics lesson which outlines the main lesson objective and an appropriate LNF objective to the children
- a lesson organised into an oral/mental session, a direct teaching session and a plenary session making use of the strategy moving from concrete learning; to visual to abstract
- controlled differentiation with all pupils engaged in Mathematics relating to a common theme (in line with the Abacus Scheme of Work)
- ensuring concrete materials are available for children to use throughout the lesson
- a variety of individual, paired and group directed activities
- to give each pupil the opportunity to reason and explain orally, using correct mathematical terms / language
- the use of open and closed questioning so the child learns through interactive teaching

- the use of classroom assistants to work with individuals or small groups on certain activities
- the use of I.C.T. to support the key skills taught (e.g. – Interactive on-line resources and games provided by Abacus Maths)
- regular investigative and problem solving work
- the use of mathematical key skills across the curriculum
- homework (where and when appropriate) is set to consolidate the skills already learnt. Homework might take the form of suggested practical activities which the parents can undertake with the children, worksheets or on-line activities. (Children from Year 1 to Year 6 have been allocated Usernames and Passwords in order to access on-line differentiated Mathematics games provided by Abacus.)
- the use of incidental Welsh to promote the speaking of Welsh

Equal Opportunities and Special Educational Needs Provisions

At Trerobart Primary we are committed to providing a teaching environment conducive to learning. Each child is valued and respected and challenged appropriately regardless whatever their ability, race, gender, religion, social background, culture or disability.

The needs of each individual will be met by the following:

Tasks and activities are differentiated appropriately to ensure that all pupils have the best opportunity to learn, consolidate and progress their Numeracy skills at the appropriate level, including pupils with Additional Learning Needs. Differentiation of mathematical concepts are in-line with children's needs and teachers are able to adapt planning accordingly using Abacus active learn. Significant consideration is given to the needs of the More Able and Talented children and the children with Additional Learning Needs. More Able and Talented pupils are challenged and motivated by differentiated work given by the teacher appropriate to his or her needs. I.E.P'S are drawn up for selected children by the class teacher and SENCo; theses are shared with the support teacher and the parent/ guardian to support the child with their target. These targets are reviewed termly and new ones set accordingly.

Assessment, Recording and Reporting

In accordance with the school's Assessment, Recording and Reporting (ARR) Policy, assessment is regarded as an integral part of teaching and learning and is a continuous process. We endeavour to make our assessment purposeful, allowing us to match the correct level of work to the needs of the pupils, thus benefiting the pupils and ensuring progress.

Teachers' on-going Assessment sheets kept in teachers' Assessment Files, will be used to record test scores and any relevant comments about pupils progress. Abacus assessment results are stored electronically on ActiveLearn.

In order to make assessment an integral and purposeful part of teaching process AfL strategies are incorporated into Mathematics teaching where appropriate.

The assessment of a pupil's understanding of a topic are carried out in several ways:

- observation of Foundation Phase children during continuous and enhance provision.
- the use of plenary sessions to assess pupil's understanding and resolve any misconceptions
- a traffic light system (throughout Abacus tasks) which assists AfL and in gaging the children's confidence and understanding
- effective marking, to have relevant, positive and constructive comments, where possible with the child. (in line with the schools marking policy)
- through discussions in small groups or during a practical task
- individual discussion, where the pupil is encouraged to explain their workings
- LA tracker is used by all teachers as a tracking tool of pupils progress and is updated regularly

In addition to this:

- pupils have individual termly Mathematics Targets with which they are familiar and these are discussed and revised with pupils so that pupils are beginning to take responsibility and become active in their own learning
- pupils from Year 2 to Year 6 undertake annual National Numeracy and Reasoning Tests
- parent – teacher interviews are undertaken twice yearly and during these times parents have the opportunity to look at their children's books and discuss their child's progress and achievements with the class teacher.
- mathematics as a subject is reported on within the annual school report and achievement against the LNF will also be shared with parents

Subject Leader's Role

The responsibility of the Subject Leader is:

- to monitor the implementation of the policy document;

- to monitor standards in the subject of Mathematics through analysing planning, monitoring book, listening to learners and through lesson observations.
- to monitor the planning of foundation subject planning and books in regards to Numeracy element of the LNF being taught, pitched appropriately and taught progressively
- keep up to date with National developments and disseminate good ideas and good practice
- to analyse and set targets from pupil tracking data
- to liaise with staff members in order to support teachers, to monitor the standard of skills; content progression and the delivery of the curriculum;
- to review the Policy and Resources on an annual basis. The review will inform any subsequent change.
- deliver the Maths curriculum following the guidelines contained in this document;
- plan and evaluate lessons effectively
- look after, replenish and use all available resources to enhance the experiences for all children
- work with link-governors to keep them informed of the mathematics taking place in the school, any relevant changes and the implications these may have.

Reviewed Mar 2017

Next review Mar 2019