

Llanbedr Church in Wales Primary School

Ysgol Yn Eglwys yng Nghymru Llanbedr



Mathematics and Numeracy Policy

September 2019

Headteacher: Mrs L.J.Green Chair of Governors: Cllr E. Lusted

Chair of Governors _____ Date _____

Rationale

This policy is the formal statement of intent for mathematics. It reflects the essential part that mathematics plays in the education of our pupils. It is important that a positive attitude towards mathematics is encouraged amongst all our pupils in order to foster self-confidence and a sense of achievement. The policy also facilitates how we, as a school, meet the legal requirements of recent Education Acts and National Curriculum Requirements.

Principles

The principles of Llanbedr Church in Wales Primary School for mathematics are:

- policy and provision are evaluated and reviewed regularly;
- planning of mathematics ensures continuity and progression across all year groups and key stages;
- cross curricular links will be highlighted where appropriate;
- resources of time, people and equipment are planned, budgeted for and detailed when appropriate in the SDP.

Aims

We aim to provide our pupils with a mathematics curriculum which will produce individuals who are literate, numerate, creative, independent, inquisitive, enquiring and confident. We also aim to provide a stimulating environment and adequate resources so that pupils can develop their mathematical skills to their full potential. Therefore, our pupils should:

- have a sense of the size of a number and where it fits into the number system
- know by heart number facts such as number bonds, multiplication tables, doubles and halves
- use what they know by heart to figure out numbers mentally
- calculate accurately and efficiently, both mentally and in writing and paper, drawing on a range of calculation strategies
- recognise when it is appropriate to use a calculator and be able to do so effectively
- make sense of number problems, including non- routine problems, and recognise the operations needed to solve them
- explain their methods and reasoning using correct mathematical terms
- judge whether their answers are reasonable and have strategies for checking them where necessary
- suggest suitable units for measuring and make sensible estimates of measurements
- explain and make predictions from the numbers in graphs, diagrams, charts and tables

- develop spatial awareness and an understanding of the properties of 2D and 3D shapes.

Provision

Pupils are provided with a variety of opportunities to develop and extend their mathematical skills in and across each phase of education and takes account of all learner styles and strategies to enable all learners to succeed. Lessons follow the TAPAS principles with a mental/oral starter, a main teaching activity and a plenary session. Staff use TAPAS principles and long term planners to inform their planning using the objectives appropriate to their year group.

The teaching of maths provides:

- paired work
- whole class teaching
- individual work
- Group work

Pupils engage in:

- the development of mental strategies
- written methods
- practical work
- investigational work
- problem solving
- mathematical discussion
- consolidation of basic skills and number facts

Mathematics contributes to many subjects and it is important that children are given opportunities to apply and use Mathematics in real contexts. It is important that time is found in other subjects for pupils to develop their numeracy skills e.g there should be regular, carefully planned opportunities for measuring in science and technology, for the consideration of properties of shapes and geometric patterns in technology and art, and for the collection and presentation of data in history and geography. We endeavour at all times to set work that is challenging, motivating and encourages the pupils to talk about what they have been doing.

Literacy and Numeracy Framework (LNF) 2012

At Llanbedr Church in Wales Primary School we fully endorse and have integrated the LNF into all our curriculum policies. Within all curriculum areas the following skills have been mapped into both the medium term and short term planning. The LNF focuses on the learners' acquisition of, and ability to apply, the skills and concepts they have learned to complete tasks appropriate for their stage of development. Expectations are given for each school year from Reception to Year 6 in each

of the elements and aspects. The LNF is designed to be inclusive of all learners, including those with additional learning needs (ALN). The Routes to literacy and Routes to numeracy components of the LNF describe progression into Foundation Phase for learners with ALN. Extension expectations are also given for those learners with higher-order literacy and/or numeracy skills, such as the more able and talented (MAT) learners. The two components of the LNF are divided into the following strands. Within literacy the strands are:

- oracy across the curriculum
- reading across the curriculum
- writing across the curriculum.

Within numeracy the strands are:

- developing numerical reasoning
- using number skills
- using measuring skills
- using data skills.

The teaching of these skills should always be integrated so that each supports the others. Numeracy in the LNF is described as consisting of four strands. However, developing numerical reasoning underpins the three procedural strands of using number skills, using measuring skills and using data skills. It is vital that numeracy is not viewed as four discrete strands which are developed in isolation from each other. Progression through the stages is demonstrated by an ability to develop and demonstrate an increasing competency in literacy and numeracy skills. The expectations are essentially concerned with developing and recognising a learner's ability to select and apply literacy and numeracy skills in ways that are appropriate to each context. The expectations are designed to recognise progression in terms of both underpinning techniques and of the skills of application. Each age-related expectation builds on the previous year's expectation to ensure year-on-year progression.

The Role of the Mathematics and Numeracy Team is to:

Take the lead in policy development and to ensure progression and continuity in mathematics and numeracy throughout the school; support colleagues in their development of detailed work plans, and in assessment and record keeping activities, monitor progress in mathematics and numeracy; take responsibility for the purpose and organisation of central resources for mathematics and numeracy and stimulating their use; keep up-to-date with developments in mathematics and numeracy education and disseminate information to colleagues as appropriate. The responsibility of the Curriculum Team will encompass liaison with other key stages of education, organising appropriate links arranging exchange of information relating to transfer.

Reporting LNF to parents

Reporting to parents/carers will be annual, at the end of each academic year. Reporting should be narrative in nature with reports concentrating on elements/aspects that learners have consolidated and those where improvement is needed.

Assessment

Assessment is regarded as an integral part of teaching and learning and is a continuous process. It is the responsibility of the class teacher to assess all pupils in their class. In our school we are continually assessing our pupils and recording their progress. We see assessment as an integral part of the teaching process and strive 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. Information for assessment will be gathered in various ways: by talking to the children, observing their work, marking their work, etc. Teachers will use these assessments to plan further work. Children's progress in Mathematics is tracked three times a year, in December, March and June using INCERTS. Children who are not making the expected progress are quickly identified and strategies put in place to support them.

National Tests

All pupils from Year 2 to Year 6 complete National Numeracy tests in Reasoning and Procedural every May. Reports are sent home to parents in the Summer term informing them of their child's attainment. The school uses these results to inform intervention groups for the following academic year.

Intervention Groups

Through analysis of assessment data, staff are able to identify pupils who are underachieving or under-attaining at an early stage. The school uses Catch Up Numeracy and small group work throughout the school to raise attainment.

Role of the Class Teacher

- to ensure progression in the acquisition of mathematical skills with due regard to the Foundation Phase and New Curriculum requirements 2022 for mathematics
- to develop and update skills, knowledge and understanding of mathematics
- to identify INSET needs in mathematics and take advantage of training opportunities
- to keep appropriate on-going records
- to plan effectively for mathematics.
- To inform parents of pupils' progress, achievements and attainment.

Standardisation and Moderation

The process of moderation is an essential part of the assessment system. This takes place regularly throughout the year and supports and strengthens teacher assessment. Teachers are involved in the moderation process to ensure agreement on criteria for levels in the following ways;

- With colleagues in school – during staff meetings
- With colleagues from other schools within the cluster
- By attending LEA sessions to ensure our judgments are in line with other schools.

Parental Involvement

At Llanbedr Church in Wales Primary School we encourage parents to be involved by:

- inviting them into school twice yearly to discuss the progress of their child.
- inviting parents into school in the summer term to discuss the yearly report.
- circulating information via half termly newsletters when significant changes have been/are made to the mathematics curriculum.
- encouraging parents to help in school.
- Half-termly mathematical homework objectives and activities are sent home for parents to help their children with everyday mathematics.

Pupils with Additional Learning Needs / More Able and Talented

Children who have been identified as having additional learning needs (ALN) will follow an IDP with specific targets identified by the pupil and class teacher. It is particularly important that activities for children with ALN in mathematics are set in a context which is familiar to the children's experience. It is also important that MAT pupils are challenged in their mathematical knowledge and application of learned concepts. This does not necessarily mean taking them on to a higher level but giving them a broader range of experiences within a level.

Developing Digital Competency

Digital competence is one of three cross-curricular responsibilities, alongside literacy and numeracy. It focuses on developing digital skills which can be applied to a wide range of subjects and scenarios which will be integrated into our Numeracy & Mathematics Curriculum.

Mathematics and Numeracy and the Four Purposes

Mathematics helps children and young people to make sense of the world around them and to manage their lives. It gives them skills they need to interpret and analyse information, solve problems and make informed decisions. Taught well through relevant contexts, mathematics can engage and fascinate children and young people of all interests and abilities. It provides strong support for the development of wider skills, particularly critical thinking and problem solving, planning and organisation, and creativity and innovation. It enables people to communicate ideas in

a concise, unambiguous and rigorous way, using numbers and symbols. A high level of numeracy and mathematical competence is important for the prosperity of the country.

Curriculum Cymraeg

Mathematics and Numeracy contributes to the Curriculum Cymraeg by the use of contexts that are relevant to learners' lives in Wales and the wider world. The rich and varied environment around learners gives the basis for fieldwork, travelling and exploring. Learners have the opportunity to study plans, directions, the world of work, Heritage and economy in Wales and around the world.

Review

The Governing Body will review this policy in 2022. The governors may, however, review the policy earlier than this if the government introduces new regulations or if the Governing Body receives recommendations on how the policy might be improved.

Equal Opportunities

Llanbedr Church in Wales Primary School is committed to equality, including racial equality, for all members of the school community. The school promotes a positive and proactive approach to valuing and respecting diversity, and will not tolerate racial harassment of any kind.