

Broughton Primary School



Mathematics Policy

Mathematics Policy (Wales)

We believe this policy relates to the following legislation:

- School Standards and Organisation (Wales) Act 2013 (Welsh Government)

The following documentation is also related to this policy:

- The School Curriculum for 3 to 19 year olds in Wales 2008 (Welsh Government)
- National Literacy and Numeracy Framework 2013 (Welsh Government)

Mathematics is a method of communication. It is a specific language through which ideas are explored explained, and developed, and one by which relationships can be described, patterns identified and hypothesis made and tested.

It is a way of organizing and managing information gathered practically in everyday situations; in the use of measures and spatial measurement.

Mathematics includes the development of numeracy skills; a proficiency that involves confidence and competence with numbers and measures. It requires an understanding of the number system, a repertoire of computational skills and an inclination and ability to solve number problems in a variety of contexts. Numeracy also demands practical understanding of the ways in which information is gathered by counting and measuring, and is presented in graphs, diagrams, charts and tables.

We acknowledge and support the Welsh Government strategies for Literacy and Numeracy which is aimed at developing the full potential of all pupils.

We aim to promote the teaching of numeracy and literacy within all subjects and by using the revised National Curriculum framework. We plan and deliver objectives pitched appropriately to the learners.

We wish to work closely with the School Council and to hear their views and opinions as we acknowledge and support Article 12 of the United Nations Convention on the Rights of the Child that children should be encouraged to form and to express their views.

We as a school community have a commitment to promote equality. Therefore, an equality impact assessment has been undertaken and we believe this policy is in line with the Equality Act 2010.

Aims

- To develop an enthusiasm for and fascination with mathematics.
- To equip pupils with a powerful mathematical tool that provides:
 - i) a precise means of communication using numbers, symbols and shapes;
 - ii) an universal language used to explain, predict and tackle problems.
- To increase the confidence of each pupil in mathematics to enable them to apply the knowledge and skills with assurance.

- To promote the teaching of numeracy and literacy within all subjects and by using the Revised National Curriculum Framework at FP & KS2.
- To work with other schools to share good practice in order to improve this policy

Objectives

- To enable all pupils to achieve their potential according to their ages and abilities.
- To provide training and support that will develop an expert staff that provides a balanced and broad curriculum suited to the development of appropriate knowledge and concepts.
- To ensure management systems and structures provide support for the aims and objectives for mathematics.
- To provide appropriate resources to ensure a rich and diverse curriculum.
- To ensure teaching and learning styles are varied and suited to the pupils being taught and the areas being studied.
- To ensure full coverage of the National Curriculum in mathematics in all year groups.

Teaching Guidelines

Mathematics in the first place is a practical subject, which develops the concepts of shape, space, money, measure, number, pattern and problem solving. In the first years of the Foundation phase children have activities that develop these concepts in a meaningful real life context whenever possible and prepare the children for further mathematical studies when they are ready. The Foundation Phase philosophy emphasizes the importance of the practical and spoken aspects of the curriculum, and the development of concepts through speaking and listening and encouraging enquiry in children, before they are required to record their work. In Broughton Primary School we utilize the whole school initiatives such as kagan structures, thinking maps and ANIES to support mathematical development. Mathematics is supported by the Physical Development area of the Foundation Phase curriculum, developing hand-eye coordination, dexterity and physical strength alongside the mental conceptual skills, so that when a child needs to record mathematics s/he will have the physical abilities to do so. Numicon is the primary resource used throughout the foundation phase to support mathematical development.

Mathematics is taught as a discrete subject at Key Stage Two but is also integrated into the other subject areas. Mathematics is included in the planning of all subjects and applied across the whole curriculum. In this way pupils learn the place of mathematics in the world around them. The teaching of mathematics is central to the development of the skills continuum in the Skills Framework, and this is used to support the planning of the mathematics curriculum.

Throughout the school teachers use a range of learning and teaching styles, incorporating individual, pair, class and group work into lessons. Children are taught through discussion, practical activity, games, investigations, problem solving, recording and practice, consolidation, and through the use of IT. The teaching style and methods are varied according to the subject matter and the pupils being taught.

Mathematics learning is developed through a variety of activities; mental strategies, enquiry, written calculations, discussion, and application and practice of basic skills.

Pupils of different levels of ability are catered for through the differentiation of activities provided for them. The pupils work in groups that are flexible and allow for transition between the groups as pupils improve their skills.

Support is provided for pupils with additional learning needs using appropriate resources. Pupils on the AEN register are catered for according to the AEN policy.

Planning and organisation

Curriculum planning is managed in three phases.

□ **Long Term Planning**

This is based on the National Curriculum framework which details what is to be taught over the year and provides teaching guidelines and overall objectives for each year group for the whole year.

□ **Medium Term Planning**

This organizes the teaching of mathematics into termly or half-termly sections. The planning is more detailed and the objectives are more specific in nature. This planning is developed by the teachers who identify the skills to be taught and respond to the needs of their pupils. It also ensures a balanced distribution of work is undertaken across each term.

□ **Short Term Planning**

This details the mathematics skills and appropriate activities/lessons to be developed over a 2 week period. Lessons are planned in detail and specific class objectives are set, in accordance with the curriculum skills. Individual learning goals are also set for each pupil.

The teachers collaborate on the planning of mathematics to ensure parity in provision and to share expertise.

Role of the Governing Body

The Governing Body has:

- delegated powers and responsibilities to the Headteacher to ensure all school personnel and stakeholders are aware of and comply with this policy;
- responsibility for ensuring compliance with the legal requirements of the National Curriculum;
- responsibility for ensuring that the school complies with all equalities legislation;
- nominated a designated Equalities governor to ensure that appropriate action will be taken to deal with all prejudice related incidents or incidents which are a breach of this policy;
- responsibility for ensuring funding is in place to support this policy;
- responsibility for ensuring this policy and all linked policies are maintained and updated regularly;
- responsibility for ensuring all policies are made available to parents;
- responsibility for the effective implementation, monitoring and evaluation of this policy

Role of the Headteacher and Senior Leadership Team

The Headteacher and the Senior Leadership Team will:

- ensure all school personnel are aware of and comply with this policy;
- ensure compliance with the legal requirements of the National Curriculum;
- consider disapplying a pupil from all or part of the National Curriculum for a period of time if this will benefit the child;
- encourage parents to take an active role in curriculum development;
- provide leadership and vision in respect of equality;
- provide guidance, support and training to all staff;
- monitor the effectiveness of this policy by;

- observing teaching and learning
 - planning scrutinies and work trawls
 - discussions with pupils and members of the school council
- annually report to the Governing Body on the success and development of this policy

Role of Teachers

Teachers will:

- comply with all aspects of this policy;
- work closely with the subject leader to develop this policy;
- devise medium and short term planning;
- develop mathematical fluency, numeracy and mathematical understanding in all subjects;
- develop pupils' spoken language, reading, writing and vocabulary in all subjects;
- plan and deliver good to outstanding lessons;
- plan differentiated lessons which are interactive, engaging, of a good pace.
- have high expectations for all children and will provide work that will extend them;
- create opportunities for pupils self assessment and peer assessment as referred to in the marking policy
- assess, record and report on the development, progress and attainment of pupils;
- achieve high standards;
- celebrate the success of pupils in lessons
- implement the school's equalities policy and schemes;

Inclusion

We believe that we are an educationally inclusive school as we are concerned about the teaching and learning, achievements, attitudes and well-being of all our pupils.

Differentiation

Differentiation is best defined as 'the process by which differences between learners are accommodated so that all students in a group have the best possible chance of learning.' (Geoff Petty)

The main purpose of differentiation is to challenge and raise standards of learning by ensuring that curriculum objectives are accessible to all our children despite their backgrounds or abilities. We see differentiation as a form of integration and not exclusion.

Differentiation must reflect the learning objective and can be achieved in a variety of ways either by task, by support or by outcome and should be chosen by fitness for purpose.

We want all children to achieve success, therefore we will ensure they are given differentiated tasks that are matched to their level of attainment so that they can demonstrate successfully what they know, understand and can do.

The main feature of effective differentiation is good planning resulting in effective teaching and learning with children making good progress. Also we expect to see in all classes interested well motivated children responding to challenges, children working productively on task and being aware of their own progression.

Special Educational Needs

Those pupils with special educational needs at School Action and School Action Plus will receive an Individual Education Plans (IEP) with appropriate targets relating to the subject.

Assessment for Learning

Teachers will:

- carry out continuous assessment;
- use short-term assessments matched to the teaching objectives to adjust their planning;
- make comments in pupil's books related to the teaching objective;
- carry out medium-term assessments to measure progress against key objectives to adjust planning;
- carry out long-term assessment to assess progress against school and national targets;
- administer national tests and assessment in Y2 and Y6;
- carry out tests at the end of Y3, Y4 and Y5;
- use long-term assessments to help them plan for the next academic year;
- inform parents and carers of their child's progress and targets

Monitoring and Review of the Subject

Monitoring of standards of children's work and the quality of teaching is the responsibility of the subject coordinator supported by the Headteacher and the Senior Leadership Team.

Standards will be monitored by:

- looking at pupils work
- subject observations
- pupil discussions
- audit of subjects
- scrutiny of planning
- general curriculum discussions

Cwricwlwm Cymreig

We live in Wales and our pupils are educated in Wales, and in order to consolidate our sense of national identity we ensure that the learning that happens in the Mathematics lessons includes issues of local and wider Welsh interest.

Contribution of the Subject to other Areas of the Curriculum

Mathematics contributes to many subjects within the primary curriculum and opportunities will be sought to draw mathematical experience out of a wide range of activities. This will allow children to begin to use and apply mathematics in real contexts. Outdoor learning is used to support and enhance the development of mathematical skills.

Resources

The school has a full range of resources to support the teaching of this subject throughout all year groups. Resources are upgraded and replenished when the need arises.

Monitoring the Effectiveness of the Policy

The practical application of this policy will be reviewed annually or when the need arises by the coordinator, the Headteacher and the nominated governor.

A statement of the policy's effectiveness and the necessary recommendations for improvement will be presented to the Governing Body for further discussion and endorsement. (See Policy Evaluation)

Headteacher:		Date:	
Chair of Governing Body:		Date:	
Review Date		Date:	