



*Empowering and developing young people to achieve  
their full potential"*

# LONGSTONE SCHOOL

## Mathematics POLICY

### ARTICLE 28

**“Every child has the right to an education.”**

*The ability to apply appropriate mathematical skills and  
knowledge in familiar and unfamiliar contexts and in a  
range of settings throughout life, including the workplace.*

*(Count Read, Succeed 1.10)*

**REVIEWED: June 2020**





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# **Longstone School**

## **Mathematics Policy**

### **2020**

*The ability to apply appropriate mathematical skills and  
knowledge in familiar and unfamiliar contexts and in a  
range of settings throughout life, including the workplace.*

*(Count Read, Succeed 1.10)*



*Article 28: All children and young people have the right to a good quality education that encourages them to reach the highest level they are capable of.*

## **Overall School Aims**

The mathematical programme at Longstone aims to:

- provide opportunities for our pupils to develop practical life skills relating to all areas of mathematics.
- Develop an understanding of key mathematical concepts and their interconnectedness through methods and procedures involving: guided discovery, enquiry and practical activities using a wide range of appropriate materials and resources.
- create opportunities for each child to develop their potential. This is achieved through a mathematical experience which is varied, enjoyable and interesting, appropriately designed to meet individual needs and abilities.

Mathematics and numeracy at Longstone is developed within four key areas:

**Child Centred Provision**

**Teaching and Learning**

**Leadership**

**Local Community**

### **Child Centred Provision**

We aim to develop each pupil within their ability level to a point where they are knowledgeable, confident and able to talk about the subject readily, using mathematical language.

UNCRC Article 29: **Your education should help you develop your personality, talents, mental and physical ability.**

**Planning and practice should ensure:**

- a learning environment is provided, in which pupils can enjoy mathematics.
- positive attitudes are developed towards mathematics, as an interesting and attractive subject, leading to personal achievement by the pupil.
- knowledge, skills and understanding of mathematical concepts and relationships are developed.
- pupils are encouraged to think logically at a level appropriate to their ability.
- an understanding of mathematical language is developed
- a consolidation, for each pupil, of mathematical processes and abstract concepts through application and practice.
- an appreciation of number pattern, place value and spatial relationships is developed.

- the promotion of the use of mental calculations, awareness of strategies and quick recall of facts.
- the development of appreciation and awareness of the practical application of mathematics in everyday life experiences outside the class room.
- the use of assessment (formal and informal) to determine where extra support is needed.

### **Teaching and Learning**

Mathematics pervades many areas of study and contributes significantly to the development of more general skills such as communicating, reasoning and problem solving. Therefore, pupils at Longstone are encouraged to apply mathematical skills in other areas of study, where appropriate. They are also encouraged, with parental support, to apply skills to everyday life situations.

The teaching staff at Longstone aim to develop areas in which mathematical possibilities exist. This may be presented through cross-curricular units of work or direct subject lessons. Opportunities for co-operative and collaborative work within mathematical activities should promote individual respect and worth, encouraging tolerance for others.

UNCRC Article 17: **You have the right to get information**

#### **Teaching strategies employed and pupil learning experiences should ensure:**

- a broad and relevant curriculum is delivered, promoting the knowledge, understanding and application of mathematics.
- a programme of study which develops the key areas of the Northern Ireland Curriculum, along levels of progression.
- schemes and plans which include teacher directed, exploratory and investigative activities.
- a variety of approaches which reflect differentiated learning activities and resources to develop individual needs, (individual needs indicated on each pupil's statement should be addressed).
- whole class, co-operative learning, small group and individual work.
- calculators are used to meet the individual needs of the pupil and to enhance basic maths skills.
- relevant use of ICT is used to develop and reinforce mathematical skills.
- opportunities for developing mental calculation. This should be done through a range of activities which enhances understanding of mathematical concepts.
- an appropriate and varied range of creative, engaging and challenging resources are used.
- preparation for homework which is relevant to work already completed, consolidating class room learning and developing the ability to work independently.
- the opportunity for assessing pupil progress through observation and assessment. Pupils are assessed through homework, class activities and annual formal assessment.
- IEP's are facilitated and individual needs are met.

Teachers are encouraged to develop and maintain good communication with parents/guardians. Pupil's mathematical targets are discussed with parents/guardians, who are encouraged to contribute to the education process through arranged interview, home/school Diary or telephone. Parents receive an annual written school report which contains a focus on mathematics.

A record is currently kept of each pupil's progress and annual score of standardised mathematics tests. Individual profiles for attainment and achievement are currently recorded and kept in an assessment file. The SIMS 'traffic light' system is used to monitor and track pupil progress and used to advise the possible need of intervention strategies and/or further differentiation. Mathematics profile sheets are completed at the end of each academic year. These are used to inform IEP's and passed on to the next teacher.

## **Leadership**

An effective school development plan is in place, providing clear and realistic targets for the improvement and development of mathematics, based on a sound vision for the school. This is supported by Board of Governors and the Principal.

The Principal informs members of staff of professional development opportunities as and when they arise, providing relevant details and provides guidance and support continually to all members of staff.

The School Numeracy Team consists of a member of staff from each key stage area: Mr McCune (KS1), Mr Melin (KS2), Mr Johnston (Lead Numeracy Co-ordinator and KS3) and Mrs Switzer (KS4).

UNCRC Article 3: **Whenever adults make decisions or do anything that effects the child, they should always do what they think is best for the child.**

### **The role of the Numeracy Co-ordinator involves:**

- having a knowledge of current DENI documentation and other relevant publications
- maintaining and developing programmes of study.
- encouraging the development of cross curricular skills.
- organising meetings
- disseminating information.
- ensuring continuity and progression within maths.
- regular reviewing and updating of the policy statement.
- familiarising new staff with the school's policy and programme of study.
- the requisition and co-ordination of resources.

- providing opportunities for all members of staff to share and learn from examples of good practice.
- making sure opportunities are given to teachers to contribute to the development and evaluation of mathematics and numeracy in their subject area.

### **Assessment Co-ordinator**

The Assessment Co-ordinator, Mr Harrison, ensures that all teachers receive standardised mathematics tests and mark schemes at the beginning and end of each academic year. The class teacher marks the tests and enters each result into SIMS. All completed and marked tests are returned to the Assessment Co-ordinator.

Pupils in Senior School work towards Entry Level Qualification, which they complete in Year 12.

It is the responsibility of all teachers to use the 'traffic light' tracking system on SIMS to monitor pupil progress. If there is cause for concern the teacher should bring this to the attention of the appropriate Numeracy Co-ordinator. Both teacher and co-ordinator will discuss if there is need for intervention and further differentiation to meet the needs of the pupil.

### **Teaching Staff**

It is the responsibility of teaching staff to create a curriculum planner each term with a specific focus on mathematics.

Teaching staff, based on knowledge and understanding of the individual, set specific mathematics targets for the personal development and progression of each pupil, throughout the year. This involves evaluating progress and making informed decisions on possible additional support and future targets.

Teaching staff should also inform and liaise with parents/guardians in relation to the individual progress and development of each child.

### **Local Community**

Longstone is committed to being a school connected with its local community. This is extremely valuable for the development of mathematics and life skills through fostering good partnerships with parents, other schools, the community, the work place and external agencies.

### **Parents/Guardians**

Parents/Guardians are encouraged to help pupils develop essential mathematical and life skills through:

- a range of activities outside school.
- exploring mathematics related websites and computer based activities at home.
- the use of money when shopping and paying at a range of venues, enhancing financial capability.
- taking responsibility for time within a range of activities.
- helping to construct and measure in a practical way where possible.
- engaging with home work and being actively involved in further developing key mathematical concepts they involve.

### **Other Schools**

Attending Courses is encouraged for professional development and making links with other practitioners. This allows the sharing of good practice and opportunities to problem solve and get good advice and guidance, relating to mathematics.

### **The Community**

School trips, outings and visits are essential for developing awareness of mathematics in the world around us and essential life skills involving mathematics. This may involve a walk through the local neighbourhood and surrounding area, visiting a local business or attraction, or doing a range of activities based further afield.

### **The Work Place**

Pupils are given the opportunity in Senior School to develop mathematics as a life skill through work experience.

### **External Agencies**

Staff are encouraged to take part in courses run by the Education Board. This allows them to develop professionally and gain insight into current practice relating to the teaching and learning of mathematics.

### **The Future for mathematics at Longstone**

Whilst we will always endeavour to fully engage with delivering a broad and varied mathematics curriculum, we also recognise the great importance of promoting and consolidating the basic mathematic processes and concepts, important to helping pupils cope with everyday life. This can be achieved through a variety of strategies, such as, collaborative units of work and increased opportunities for shared learning, as well as, establishing stronger links with the local community and work place. Intervention and differentiation is key to ensuring we meet the individual needs of each pupil, these are two areas we hope to develop. The CEA Adaptive Assessment pilot is one way we are seeking to pursue more informative and diagnostic testing, providing specific information on ability levels of each individual pupil, thus, helping to inform planning and teaching. There is a wealth of resources, including the use of ICT, which consolidate and develop learning. It is essential

we continue to incorporate these more and more into the teaching and learning experience within our class rooms, in order to enhance and develop understanding and application of mathematics and numeracy.

Curriculum audits and evaluation of programmes and policy will be ongoing and regular, in order to ensure we deliver the best possible learning experience to prepare pupils for the world of life and work.

**Review Date:** June 2020