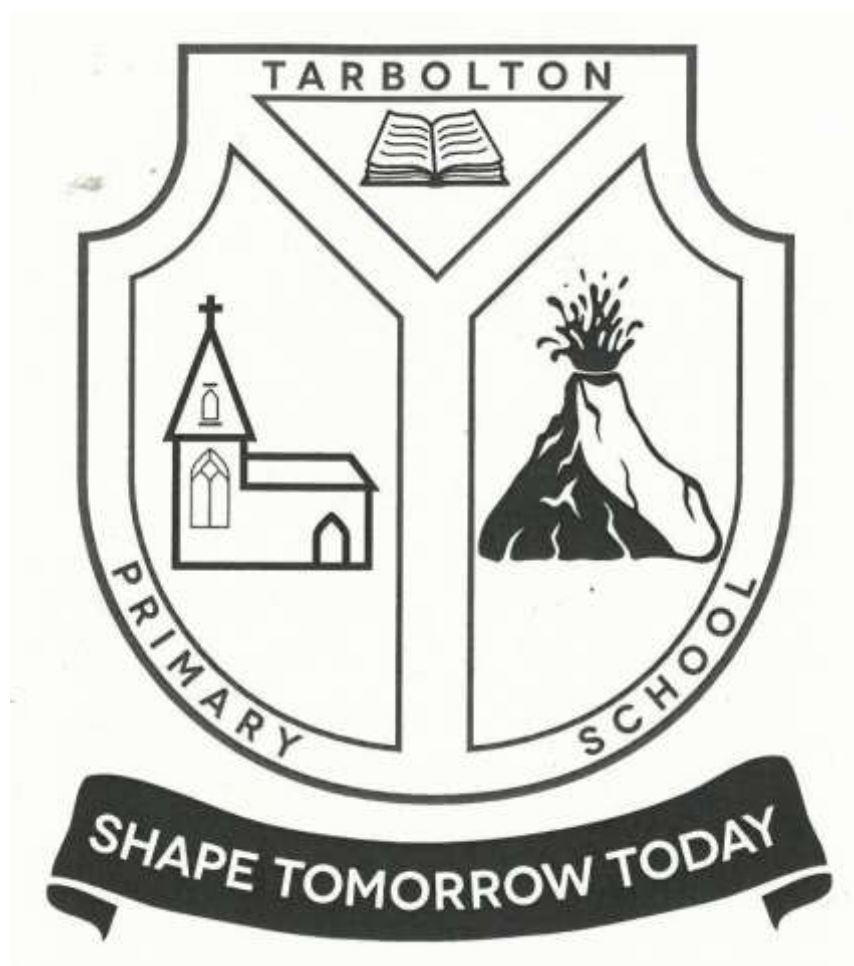


# MATHEMATICS POLICY



October 2020

**Rationale** *Mathematics is important in our everyday life, allowing us to make sense of the world around us and to manage our lives. Using mathematics enables us to model real-life situations and make connections and informed predictions. It equips us with the skills we need to interpret and analyse information, simplify and solve problems, assess risk and make informed decisions.*

## ***Mathematics: Principles and Practice A Curriculum for Excellence***

- Article 3: Everyone who works with children should always do what is best for each child.  
Article 12: We have the right to say what we think should happen and be listened to.  
Article 13: We have the right to information.  
Article 28: We have the right to learn and go to school.  
Article 29: We have the right to become the best we can be.



### **AIMS OF THIS POLICY**

- To outline the roles and responsibilities of all within a school community in terms of the teaching of mathematics
- To outline core resources that teachers can use to support learning and teaching
- To explain some of the terminology associated with the learning and teaching of mathematics in our school.

Through our Mathematics teaching we aim to support pupils to:

- Develop essential numeracy skills
- Engage in problem solving activities and develop new ways of thinking
- Apply skills and understanding to solve problems, within a variety of real-life contexts
- Develop a secure understanding of the concepts, principles and processes of mathematics and apply these in different contexts
- Develop an understanding of financial awareness, effective money management, using schedules and other related skills
- Experience learning and teaching approaches that will provide challenge and promote enjoyment
- Interpret numerical information appropriately and use it to draw conclusions, assess risk and make reasoned evaluations and informed decisions.

### **ROLES AND RESPONSIBILITIES**

#### **Mathematics Co-ordinator**

- To ensure the programme of Mathematics is delivered appropriately in all classes
- To ensure that all relevant resources are reviewed and updated on a regular basis
- To ensure the planning, recording and assessment of Numeracy is received regularly
- To ensure pupil progress in Mathematics is closely monitored.

#### **Class Teachers**

- To use a range of planned active learning approaches, providing opportunities to observe, play, explore, investigate, experiment, discuss and reflect
- To ensure pace and challenge, teachers should carefully monitor pupil's progress within each level
- To provide opportunities for pupils to learn collaboratively and independently
- To provide opportunities for pupils to develop their mental agility
- To provide opportunities for pupils to develop their problem solving capabilities and critical thinking skills.

- To provide opportunities for pupils to engage in high quality discussions whilst being able to explain their thinking
- To make links across the curriculum to show how mathematical concepts are applied in a wide range of context, such as those provided by science and social studies.
- To use technology in appropriate, innovative and effective ways.

### **Support Assistants**

- Supporting children across the curriculum, with a particular focus on Mathematics
- To deliver necessary interventions in order to best support children with specific learning needs
- To help deliver programmes of learning activities and adapting appropriate resources
- To motivate and encourage pupils.

### **Early Years Practitioners**

- To encourage children’s confidence and ability in being able to take risks, ask questions and explore alternative solutions without fear of being wrong.
- To plan high quality play based tasks and make observations which influence planning and next steps.
- To work with colleagues to plan coherent, progressive and relevant learning opportunities.
- To provide learning experiences for children to reason logically and creatively through discussion of mathematical ideas and concepts.

### **RESOURCES**

Teachers should not be driven by resources but instead match available resources to meet the teaching needs of their pupils

Our core mathematics resources are:

Little Big Maths EYC & P1	Big Maths, Beat That (CLIC)	Heinemann Maths	Heinemann Active Maths	TJ Maths	Maths Box	Problem Solving Box
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### **LEARNING & TEACHING**

The outcomes for Numeracy and Mathematics within CfE provide guidance for continuity of progression within our mathematics programme. Teachers should be clear about learning intentions for individuals and groups within their own class, taking prior learning into account.

Planning should be undertaken on a termly and weekly basis, with learning outcomes and experiences clearly identified. Plans will be monitored three times per year.

Tasks and learning intentions for mathematics should be clearly identified on a daily basis in teacher’s daily plans.

A variety of teaching and learning approaches should be adopted with an emphasis on active learning.

To ensure pace and challenge, teachers should carefully monitor pupils’ progress within each level.

Differentiation should be evident in planning, teaching and work produced. There should be a range of differentiation to include expectation of completed task, level of adult intervention and variation of activity.

### **LITTLE BIG MATHS (EARLY YEARS & P1)**

Little Big Maths is used within both our Early Years and P1 classes. Little Big Maths follows the same basic principles of Big Maths Beat That and ensures smooth continuity and progression within the context of child’s play and self-discovery. The framework is known as A-CLIC (Amounts – Counting, Learn Its, It’s Nothing New and Calculation) and provides accurate steps of progression as well as a seamless transition into the Big Maths programme into P2 and beyond.

## **BIG MATHS BEAT THAT (CLIC) P2-**

Big Maths, Beat That is used across P2-P7 stages of the school and provides children with a fun and motivational way to track their own progress and set their own targets for Numeracy. Every question in the Big Maths Beat That challenges is linked to a specific step of learning from the Big Maths framework. Gaps in learning are easily identified as each pupil enters an answer.

There are 3 sets of challenges:

- Learn Its (16 challenges culminating in the Learn Its Ultimate challenge)
- CLIC (Counting, Learning, It's Nothing New, Calculations – 19 challenges)
- SAFE (20 challenges)

Typically, pupils stay on a challenge for 1 term, improving their score each week as each new skill is taught.

Class celebrations are provided for each child who:

- Beats their best ever score
- Gets full marks on a challenge
- Moves up to a new challenge

## **HEINEMANN ACTIVE MATHS (P2-7)**

Heinemann Active Maths is used throughout all stages in the school and uses a variety of progressive, active learning and teaching approaches for pupils to develop a concrete understanding of a variety of concepts.

Pupils have their individual log in details in order to access Active Learn on ICT devices.

## **TJ MATHS (P3-7)**

TJ Maths scheme is used across P3-P7 stages of the school. The TJ Maths books are enhanced by corresponding homework and assessment to ensure pace and challenge with careful monitoring of pupil's progress within each level.

## **MATHS BOXES (P1-7)**

Maths boxes are used from P1-P7 and contain several high-interest, brightly coloured cards which encourage pupils to work independently, at their own pace whilst keeping a record for their own and class teacher reference. The maths box used in P1 is interactive and engaging for the pupils.

## **ASSESSMENT**

Assessment should focus on pupils' abilities to work with numbers, data and mathematical concepts and use them in a range and number of contexts. Teachers should plan a holistic assessment prior to covering a new concept and should gather evidence of progress as part of day-to-day learning about number, money and measurement, shape, position and movement and information handling.

When teachers feel confident that pupils are secure within a level, they will use a range of assessments, including those from the South Ayrshire assessment bank or other National Assessment Resource bank (NAR).

Review: April 2023