



Winterton Junior School Mathematics Policy

Introduction

This policy outlines the teaching, organisation and management of the mathematics taught and learnt at Winterton Junior School. The school's policy for mathematics is based on the 2014 expectations and aims of the 'New Curriculum' for mathematics. This ensures continuity and progression in the learning and teaching of mathematics. The policy has been drawn up as result of staff discussion and has full agreement of the Governing Body. The implementation of this policy is the responsibility of all the teaching staff.

Purpose

Mathematics is a creative and highly interconnected discipline that has been developed over centuries, providing the solution to some of history's most intriguing problems. It is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy in all forms of employment. A high-quality education in maths therefore provides a foundation for understanding the world, ability to reason mathematics, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity of the subject.

Aims

The National Curriculum for mathematics aims to ensure that all pupils:

- Become fluent in the fundamentals of mathematics, including through varied and frequent practise with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately;
- Reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language;
- Can solve problems by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solution.

Mathematics is an interconnected subject in which pupils need to be able to move fluently between representations of mathematical ideas. The programmes of study are, by necessity, organised into distinct areas, but pupils should make connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems. They should apply mathematical knowledge to science and other subjects.

The expectation is that the majority of pupils will move through the programmes of study at broadly the same pace. However, decision about when to progress should always be based on the security of pupils' understanding and their readiness to progress to the next stage. Pupils who grasp concepts rapidly should be challenged through being offered rich and sophisticated problems before any acceleration through new content. Those who are not sufficiently fluent with earlier material should consolidate their understanding, including additional practice, before moving on.

Use of ICT

Calculators should not be used as a substitute for good written and mental mathematics. Therefore, they should only be introduced towards the end of Year 6 to support pupils' conceptual understanding and exploration of more complex number problems.

Spoken Language

The National Curriculum for mathematics reflects the importance of spoken language in pupils' development across the whole curriculum – cognitively, socially and linguistically. The quality and variety of language that pupils hear and speak are key factors in developing their mathematical vocabulary and presenting mathematical justification, argument or proof. They must be assisted in making their thinking clear to themselves as well as others and teachers should ensure that pupils build secure foundations by using discussion to probe and remedy their misconceptions.

For parents to:

- Be actively involved in their children's mathematical learning both in school and at home.
- Understand and support the school's mathematics and homework policy and scheme of work

Teaching Mathematics

A Typical Lesson

- Planning will allow for children to begin learning as soon as the lesson starts with open ended thinking activities, times tables activities or consolidation of learning to warm them up. Lessons will then include knowledge, reasoning and problem solving activities, all of which will have a purpose – a real life connection and a reason for learning. Mini plenaries will be planned for and implemented throughout the lessons to ensure and develop children's understanding further and allow for progression through activities to develop at the appropriate pace for each individual child. Final plenaries will be planned for and used effectively to consolidate, reflect and take learning forward.
- Questioning is the key to success in all our mathematics sessions and questions will be continuously adapted by the teacher and support staff based on assessment for learning.
- Mental maths should be incorporated throughout all lessons and mental strategies for solving all mathematical concepts will be discussed and developed based on continuous assessment for learning.
- Use of teaching assistant support is planned for in every part of the mathematics lesson to ensure they are used effectively in supporting, developing and assessing pupil progress throughout. At Winterton Juniors we value the impact that TA support has on all our children's learning. Regular training opportunities are given to keep them fully updated and develop their skills further. They are encouraged to share assessment observations made in mini-plenaries, final plenaries and through discussions with teaching staff to have a shared impact on children's progression.

Progression of Calculation Methods

We have a policy for progression in calculation methods to ensure continuity and consistency throughout school.

Differentiation and Support: (including provision for SEND, More Able and P.P pupils)

This is incorporated into all mathematics lessons and is done in various ways, such as:-

- Setting challenging age related knowledge, reasoning and problem solving tasks based on systematic, accurate assessment of pupils' prior skills, knowledge and understanding;
- Small differentiated target steps for all children to move through at a pace that suits their needs;
- Timely support and intervention; systematically and effectively checking pupils' understanding throughout lessons;
- Ensuring that marking and constructive feedback develop their work – with planned time for children to respond to feedback;
- Real life, practical links throughout all knowledge, reasoning and problem solving tasks, with whole class activities.
- Range of practical-real life resources used to support all stages of learning within the class;

- Intervention programmes/extra teacher support delivered where and when needed both in class and through extra sessions planned outside the lessons;
- Visual stimulus aids are provided where needed.

Marking

The main purpose of our marking is to ensure that as children progress through the school they benefit from constructive guidance and next step questioning to challenge and consolidate their learning further.

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. This is mainly achieved through mini-plenaries, questioning, marking, TA feedback and pupil self-assessment.

In addition to the assessment opportunities all pupils' attainment and progress will be recorded on Class Track. Class Track is monitored by the Mathematics subject leader and Senior Leadership through termly pupil progress meetings.

Homework

- Times tables are set on a weekly basis.
- Other homework activities will be set as and when required (in line with school homework policy)

Monitoring and Review

The monitoring of the standard's of children's' work and the quality of learning and teaching mathematics is the shared responsibility of the SLT and the subject leader. The work of the subject leader involved supporting colleagues in the teaching of maths, being informed about current developments in the subject, and providing a strategic lead and direction for the subject in school.

Governors are briefed on the overview of teaching mathematics in the school through curriculum focus groups.

This policy must be used in conjunction with the:

- Calculation Method policy
- New Maths Curriculum 2014 government documentation
- Intervention groups/timetables (updated regularly)
- Staff non-negotiables
- Winterton Junior assessment and marking policies

Policy reviewed by Ros Taylor: Autumn 2017

Policy agreed by Staff: Autumn 2017

Policy agreed by Governors: Autumn 2017

Policy review date: Autumn 2019