

Yeadon Westfield Infant School Mathematics Policy 2020- Review 2023

This school is committed to safeguarding and promoting the wellbeing of all children, and expects our staff, governors and volunteers to share this commitment. This policy should be read in conjunction with all other school policies.

Introduction

The teaching of mathematics develops a child's ability to use numbers, shapes and measures effectively and competently in everyday life. Skills learned are essential to everyday life and can be used to solve problems and analyse information. They are critical to science, technology and engineering, for financial literacy and most forms of employment.

All pupils in our school are entitled to a full, stimulating and well-structured curriculum based on the Mathematics Programmes of Study (National Curriculum 2014). The core of this in our school is provided by the Little Big Maths and Big Maths pedagogy. There will be active participation in acquiring a range of mathematical skills, involving individual, group and class work. Opportunities will also be identified across the curriculum so that the children can use their mathematical skills in context.

Aims

Through our teaching of mathematics, we aim:

- To develop children's awareness of the need for, and advantage of, developing their mathematical skills, and their understanding of how mathematics is used in everyday life;
- To enable each child to develop these skills;
- To enable children to use numbers, shapes and measures with confidence in a variety of contexts;
- To ensure that our children become fluent in the fundamentals of mathematics, are able to reason mathematically, and can solve problems by applying their mathematics;
- To provide a rich variety of resources to teach mathematics;
- To help children develop an appreciation and enjoyment of mathematics, and to inspire them to become the mathematicians of the future.

Fluency, problem solving and reasoning

Fluency is made up of three main parts: efficiency, accuracy and flexibility. To increase fluency, children should become proficient at learning and using addition and multiplication facts (Learn its in Big Maths), doubles and halves facts, counting in 1s, 2s, 5s, 10s, 100s, 25s and then 3s, working towards using their knowledge of number facts and the number system to add and subtract two digit numbers mentally.

Reasoning - to be able to reason children should be able to conjecture and offer a proof and explanation of their ideas. They should be able to form links between mathematical ideas and be able to apply and test these.

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Problem solving tasks are rich tasks. This means they are problems which have multiple answers or different strategies to solve them. They are not a simple closed question, and may have several steps to complete in order to find the answer. They may use several different elements of mathematics and they are suitable for any ability level.

Objectives

By the end of KS1, most children should:

- Have a sense of the size of a number and where it fits into the number system;
- Know by heart and at speed, the 36 essential addition number facts and the 2, 5 and 10 times tables (see scheme of work);
- Use what they know by heart to figure out other number facts mentally;
- Calculate accurately and efficiently, both mentally and with pencil and paper, drawing on a range of strategies;
- Make sense of number 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;
- Suggest units for measuring and make sensible estimates of measurements;
- Explain and make predictions from the numbers in graphs, diagrams, charts and tables.

Principles which underpin our work

1. Teaching and learning will be in accordance with the Early Years Foundation Stage Curriculum and the Mathematics Programme of Study for Key Stage 1.
2. Little Big Maths and Big Maths pedagogy will underpin all our work.
3. Planning will follow the year by year scheme of work as set out on our website.
4. Developing children's using and applying skills in mathematics is considered a vital part of study, enabling children to use what they know in everyday life. Opportunities for developing these skills will be drawn on throughout mathematics teaching, and into the wider curriculum.
5. Speaking and listening are a priority of this school. There are excellent opportunities within the teaching of mathematics for promoting the skills of speaking and listening including whole class discussions, explaining methods, talking partners and problem solving.

Assessment

- Assessment for learning is an integral part of teaching and planning.

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- In-house assessment tools for data gathering combined with pupil progress meetings are used routinely to track ongoing development throughout the year.
- The "Progress Drives" from Little Big Maths and Big Maths form a finer everyday assessment of each little step a child makes towards learning a skill.
- Formal assessments may take place at agreed times.
- Big maths on-going assessments take place weekly in Years 1 and 2.
- All assessments are used to inform daily and longer term planning.
- Progress is tracked towards achievable but aspirational targets.
- Intervention is put in place as and when necessary.
- Parents are given a formal opportunity to discuss progress at consultations in November and March, at which time next steps for children are agreed.
- Parents are given half-termly opportunities to look at their child's work with their child, and are welcomed to talk about any concerns.
- Verbal feedback is routinely given to children during and after lessons, next steps are discussed, and errors or misconceptions are corrected.

Calculations Policy

The teaching of the four operations (addition, subtraction, multiplication and division) follow our Calculations Policy (available on the website). This policy is designed to ensure the children develop a deep understanding and fluency in applying a range of strategies through the use of a range of equipment, informal and more formal methods of calculation as they move through Key Stage 1 and into Key Stage 2.

Formal column methods will not be taught in the infant school.

This policy should be read in conjunction with the following policies:

- Single Equalities Policy
- Inclusion Policy
- Special Educational Needs Policy
- Assessment Policy
- and any other relevant policies.