Jacksdale Primary School & Nursery

MATHEMATICS POLICY

Reviewed: September 2024

Next review due: September 2026

Jacksdale Primary School & Nursery Mathematics Policy

1.1 Introduction

This Mathematics Policy outlines the principles and practices for delivering high-quality mathematics education at Jacksdale Primary School and Nursery, in alignment with the 2014 National Curriculum for England and expectations set forth by Ofsted. Our aim is to ensure that all pupils develop a positive attitude towards mathematics, foster confidence in their mathematical abilities, and achieve excellence in this subject.

1.2 Vision and Aims

At Jacksdale Primary School and Nursery, we aspire to cultivate mathematical understanding through engaging and stimulating activities that cater to the diverse needs of our pupils. We aim to:

- Instil a love for mathematics.
- Encourage logical reasoning and problem-solving skills.
- Develop fluency in mathematical concepts and procedures.
- Promote the application of mathematics in real-life contexts.
- Provide a supportive environment enabling all learners to thrive.

1.3 Curriculum Overview

According to the 2014 National Curriculum, the teaching of mathematics should encompass the following key areas:

1. **Number and Place Value**

a. Understanding numbers, ordering, and number representation.

b. Exploring place value through various manipulatives.

2. **Addition and Subtraction**

a. Strategies for mental and written calculations.

b. Problem-solving involving addition and subtraction in real-life contexts.

3. **Multiplication and Division**

a. Mastery of times tables by the end of year 4.

b. Understanding multiplication as repeated addition and division as sharing.

4. **Fractions (Including Decimals and Percentages)**

a. Recognising, comparing, and manipulating fractions, decimals, and percentages.

b. Real-world applications of fractions, such as cooking and sharing.

5. **Measurement**

a. Understanding and using standard and non-standard units of measurement.

b. Practical experiences measuring length, weight, volume, and time.

6. **Geometry (Properties of Shapes, Position and Direction)**

a. Identifying and describing 2D and 3D shapes.

b. Exploring symmetry, transformations, and positioning using coordinate systems.

7. **Statistics**

a. Collecting, presenting, and interpreting data using charts and graphs.

b. Developing skills in making predictions and drawing conclusions from data sets.

Early Years Foundation Stage

In the Early Years Foundation Stage (EYFS), mathematics coverage aligns with the Early Learning Goals, focusing on developing children's understanding of numbers, patterns, shapes, and measures. Teachers will provide opportunities for children to:

- Engage in counting, comparing, and sequencing.
- Explore shapes and their properties through practical activities.
- Solve simple problems using mathematical language.

Each area will be taught through a combination of direct instruction, collaborative learning, and exploration to ensure that pupils grasp fundamental concepts and develop critical thinking skills. We will incorporate the White Rose Maths scheme, which provides a comprehensive and structured approach to teaching mathematics, ensuring consistency and progression across year groups.

1.4 Teaching and Learning Strategies

To achieve our aims, a variety of teaching and learning strategies will be employed:

- **Concrete-Pictorial-Abstract (CPA) Approach:** Utilising physical objects, visual representations, and abstract symbols to deepen understanding and allow pupils to move from tangible objects to more abstract concepts progressively.
- **Differentiation:** Implementing tailored tasks to meet varied learning needs and abilities, using learning objectives, success criteria, and varied resources and support to cater for all.

- **Engagement with Technology:** Integrating digital tools and resources, such as educational software, interactive whiteboards, and online learning platforms to enhance learning engagement and motivation.
- **Mathematical Discussions:** Fostering an environment for pupils to articulate their thinking and reasoning through structured talk, peer collaboration, and rich questioning techniques to deepen understanding.
- **Problem-Solving:** Encouraging pupils to tackle real-life mathematical problems and develop resilience through the use of open-ended problems that promote investigation and conceptual understanding.

1.4.1 Homework

To further support mathematical fluency, we will utilise online platforms such as **Times Tables Rock Stars** and **NumBots** as optional homework. Pupils will be encouraged to engage in these platforms to advance their multiplication skills and number fluency in an enjoyable and interactive way.

1.5 Assessment and Monitoring

Assessment will follow the principles of formative and summative approaches:

- **Formative Assessment:** Ongoing assessments through observations, quizzes, and feedback to gauge understanding, inform instruction, and identify areas for development. Teachers will utilise tools such as exit tickets and mini-whiteboards for instant feedback during lessons.
- **Summative Assessment:** Termly assessments, including the use of NFER tests and end-of-term evaluations, to evaluate pupils' progress against national expectations. Standardised tests will be reviewed, and data will be used to track progress and identify gaps in learning.
- **Pupil Progress Meetings:** Regular discussions between staff to monitor pupil progress through data analysis, focusing on data trends, interventions for underperforming pupils, and strategies to enhance learning outcomes across all ability ranges.

1.5.1 Record Keeping

Teachers will maintain detailed records of pupil assessments, tracking progress over time and identifying areas needing further attention. An online tracking system will be implemented to facilitate easy monitoring and reporting of achievement levels, enabling data-driven decisions for teaching interventions.

1.6 Parental Engagement

We strongly believe in the importance of engaging parents in their children's mathematical education. Strategies to foster this engagement include:

- **Workshops:** To help parents support their children's learning at home, we will host interactive workshops focusing on curriculum content and effective strategies for supporting mathematical development.
- **Regular Communication:** Through newsletters and parent-teacher meetings, staff will provide updates on learning objectives, upcoming assessments, and strategies for supporting learning at home.

- **Online Resources:** Providing parents with access to online resources, including video tutorials and practice worksheets, to assist them in helping their children with mathematics homework and concepts.

1.7 Professional Development

Ongoing professional development for staff is crucial for sustaining high standards in the teaching of mathematics. We will:

- **Invest in Training:** Provide opportunities for staff training in current best practices and pedagogical approaches, ensuring they receive support in the delivery of mathematics through partnerships with external educational consultants.
- **Encourage Collaboration:** Foster collaboration through peer observations and sharing of resources during staff meetings, encouraging a culture of sharing good practice and continuous professional growth.
- **Promote Reflection:** Engage staff in regular discussions focused on reflecting on the effectiveness of teaching strategies and share experiences related to engaging students in mathematics.

1.8 Monitoring and Evaluation

The effectiveness of our Mathematics Policy will be monitored through:

- **Regular Lesson Observations:** And learning walks by the Maths Subject Leader and senior leaders to ensure consistent high-quality teaching across the school.
- **Pupil Feedback Sessions:** Gather insights on their experiences in mathematics through structured feedback surveys to reflect on their learning experiences and the effectiveness of teaching practices.
- **Analysis of Assessment Data:** Identify trends and make adjustments to teaching and learning practices based on performance data, including group and individual progress to ensure that every pupil reaches their potential.

1.9 Conclusion

This Mathematics Policy is designed to ensure that Jacksdale Primary School and Nursery delivers a robust and aspirational mathematical education that meets both the needs of our pupils and the expectations of Ofsted. We aim for our maths curriculum to be dynamic, inclusive, and above all, a catalyst for lifelong learning and enthusiasm for mathematics.

1.10 Summary of Ofsted Expectations

According to the most recent Ofsted framework, exceptional mathematics teaching should include:

- High standards of curriculum implementation, resulting in clear progression and pupil engagement through an appropriately differentiated and comprehensive curriculum.
- Effective assessment strategies driving pupil progress, ensuring timely identification of needs and intervention strategies that address gaps in understanding.
- A vibrant learning environment that promotes a love of learning, stimulates curiosity, and fosters personal development through the exploration of mathematics.

- Strong leadership and management that supports staff in delivering high-quality mathematics education, ensuring that all relationships within the school community are focused on improving outcomes for pupils.

By adhering to these principles, Jacksdale Primary School and Nursery aims to achieve excellence in mathematics education reflecting the highest standards set forth by Ofsted.