

Kirk Smeaton Maths Policy -April 2020

RATIONALE.

This policy describes our values and philosophy in relation to meeting the needs of all mathematical learners at Kirk Smeaton CV Primary School. It outlines the framework within which all staff work and gives guidance on planning, teaching and assessment.

The new National Curriculum states that:

"Mathematics is a creative and highly inter-connected 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 and most forms of employment. A high-quality mathematics education therefore provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject."

It is our belief that all pupils, regardless of ability, race or gender, should be encouraged and helped to realise their full potential in Maths. We want the children to see Mathematics as being relevant to their world and applicable to everyday life as well as being something that they will need as they move on through their school life and ultimately to the world of employment. To that end, a high-quality, inter-related and creative Maths experience should be one that develops the children's ability to think mathematically and one which allows them to apply the tools to which they have been exposed in a variety of ways. We place a strong emphasis on teaching Mathematical skills and concepts in concrete and practical contexts. Teachers should use models and practical activities which enable the children to use and apply skills, knowledge and understanding.

Planning

Teachers in year 1-6 have access to the Plan B scheme of work , White Rose Mastery ,ENRICH, Testbase and topical maths arithmetic schemes of work.

Following the introduction of the new National Curriculum in 2014 the emphasis has been to ensure that all children:

- Become FLUENT
- REASON and EXPLAIN mathematically
- Can SOLVE PROBLEMS

This means that children need to be regularly exposed to opportunities involving increasingly complex problem solving which allows them to apply their Maths knowledge. In doing so they should be encouraged to develop an argument and line of enquiry which they can prove and justify using mathematical vocabulary. This includes the ability to break down problems, both routine and non-routine into a series of steps.

Aims/Objectives

Using the Programmes of Study from the National Curriculum the aims of mathematics are:

- To promote enjoyment and enthusiasm for learning through practical activity, exploration and discussion
- To create a lively, exciting and stimulating environment in which all children can learn Maths
- Ensure the delivery of Maths is filled with cross curricular opportunities
- To promote confidence and competence with numbers and the number system and to use mathematical vocabulary to reason and explain
- To develop the ability to solve problems through decision making and reasoning in a range of contexts
- To develop a practical understanding of the ways in which information is gathered and presented.
- To explore features of shape and space and develop measuring skills in a range of contexts
- For children to challenge and stretch themselves and take risks in their learning
- To promote the concept that acquiring mathematical knowledge and skills provides the foundation for understanding Maths in everyday life.

Strategies and teaching

It is important that children are allowed to explore Maths and present their findings not only in a written form but also visually; to that end the school will adopt the CPA approach: concrete, pictorial, abstract. This will allow the children to experience the physical aspects of Maths before finding a way to present their findings and understandings in a visual form before relying on the abstract numbers.

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We carry out curriculum planning in mathematics in three phases (long-term, medium-term and short-term). (See Plan B yearly POS.Y3-6 Or WR for foundation and y1/2) Our mathematics curriculum is delivered using the new Early Years Learning goals and Plan B schemes of work with Reasoning and Problem Solving through ENRICH, Test Base and other schemes teachers find appropriate, to ensure appropriate pace, progression and coverage of the subject. This coverage is reviewed continually by class teachers and planning is adjusted accordingly to ensure appropriate coverage of all mathematical strands. Once they understand a mathematical concept, they are then required to solve problems and carry out investigations- deepen their conceptual understanding while also becoming more sophisticated in their Mathematical approach.

The curriculum is delivered by class teachers. All work is differentiated in order to give appropriate levels of work and children are taught in ability groups from the end of Foundation.

At Kirk Smeaton C of E Primary School we follow the Kirk Smeaton Calculation Policy

Nursery: Maths is taught through all areas of play.

Reception: At the start of the year Maths is taught as a daily lesson and guided maths sessions take place each day. Maths games are played weekly across the phase and there are mathematical opportunities offered daily throughout the learning environment, both inside and outdoor and as a small guided group sessions-taken by the teacher/support staff and is differentiated to challenge and engage all children. The WR mastery scheme is used to develop the teaching.

Year 1-6: There is an hourly maths lesson each day, which includes basic skills revision/fluency teaching and main learning which includes individual, paired and group work. There is also 5 x 10 minute basic skills sessions per week which may include tables multiplication skills in y1-4 or arithmetic skills in Y5/6. There are also weekly arithmetic lessons in Y1-6.

We place a strong emphasis on the teaching of basic Maths skills, knowledge and understanding (times tables, calculation methods etc.)

In year 5/6 there is also a weekly reasoning session looking at SAT style problem solving. At least once a month an ENRICH investigation is carried out in each class and children are challenged to take this further if this allows.

Corrections are done, where- ever possible, as the children are working, with impact marking by the teacher during, or at the end of a session. This might include stopping their independent work after 10 minutes to check each pupils understanding and if there are any problems, then intervention from teacher/support staff can happen straight away with individuals or a target group.

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Display /Resources

In the classrooms there should be, either on display or easily accessible to children, appropriate resources, particularly concrete and pictorial apparatus to support children so they can grasp the concepts.

Mathematical vocabulary should be displayed so that children use this in the communication of their understanding.

There should be maths work on display in classrooms and in other areas of the school in order to encourage a positive attitude and enthusiasm towards mathematics for all groups of children

Mathematical materials, equipment and Basic resources are stored in each classroom. The maths Co-coordinator should be informed when equipment needs replacing or supplementing. The children are shown how to take care of equipment and resources and progressively encouraged to select materials suitable for the task in which they are engaged.

Links to other curriculum areas

Throughout the whole curriculum, opportunities to extend and promote Mathematics should be sought. Within every Science/DT topic, children will also develop their mathematical skills. This will help children appreciate how to Work Scientifically and skilfully, but also practise discrete mathematical skills.

Mathematics contributes to the children's spiritual development, finding shapes and pattern in nature, seeing order, logic and pattern that number offer. Opportunities to reinforce mathematical concepts in other subject areas as well as in the outside environment will be encouraged and provide.

The role of the subject/SLT leader:

The role of the subject leader/SLT is to:

- to provide a strategic lead and direction for the subject
- to support and offer advice to colleagues on issues related to the subject;
- to monitor pupil progress in that subject area;
- to provide efficient resource management for the subject.

It is the role of the Maths subject leader to keep up to date with developments in Maths, at both national and local level. They review the way the subject is taught in the school and plan for improvement. They review the way the subject is taught in the school and plan for improvement. This development planning links to whole-school objectives reviews the curriculum plans for their subject, ensures that there is full coverage of the National Curriculum and that progression is planned. They must then monitor and review this on a regular basis, by conducting book scrutiny, learning walks and through discussion with both pupils and staff.

Parental Support and Homework

We recognise that parents make a significant difference to the pupils' progress in maths and encourage this essential partnership. Homework follows the school's Homework Policy and is used for the following purposes:

- To practice a skill

To learn something by rote such as times tables and formulae

- To revise for an assessment
- To help target children improve in the area they need reinforcement.

In Y6 pupils will take various work home during the year that will help them with Reasoning and arithmetic this will increase for Y6, as SATs approach to help with revision. They also will be sent revision skills practice.

Intended Outcomes Our pupils will learn to:

- Develop the appropriate mathematical language associated with number, shape and position;
- Use and apply mathematics in practical tasks, in real life problems and in acquiring further knowledge, skills and understanding in the subject itself;
- Understand and use the four operations of number in relevant contexts;
- Understand relationships between numbers, learn basic number facts and develop a range of computational methods;
- Understand place value in our counting system and understand how it can be extended into numbers below zero.
- Use their mathematical skills in simple problem solving;
- Collect, interpret and represent data in tabular, graphical and diagrammatic form;
- Develop mental methods of calculation;
- Recognise, describe and represent shapes and patterns in terms of their properties, location and movement;
- Measure quantities including length, area, volume/capacity, angle, temperature, time and mass;
- By the time children reach Year 6 they will be introduced to ratio/ proportion and language of algebra as a means for solving a variety of problems.
- Pupil to be at the Age- Related Expectations (ARE) at the end of their appropriate school year with some children expected to be GD.

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Monitoring and Assessment

Teachers will work independently with in their mixed year groups to plan and deliver lessons that suit the particular learning styles of the children within the year group. Teachers and support staff continuously assess the children informally (formative assessment) through their marking and interactions with the pupils during lessons. They then complete an 'objective assessment' record on an ongoing basis. These are reviewed once per term as part of our Whole School Pupil Progress Procedures.

In EYFS children's attainment and progress is tracked on a daily and weekly basis.

As part of our formative assessment year's 3, 4 & 5 conduct assessment tests in the autumn term, as a baseline assessment, and then again in the Spring and Summer term to identify progress and inform attainment standards.

Other assessments carried out

Y1-4 Weekly times table scores are scrutinised from the Rock Stars data and weekly tests. Weekly arithmetic scores are scrutinised and used for assessment.

Y5-6 Weekly arithmetic scores and Monday CPG reasoning scores are scrutinised weekly to check understanding, gaps and progress.

Termly Assessments

Y1 WR/Twinkle assessments

Y2 - SAT past papers

Y3 and Y4 Rising Stars assessment papers

Y5- Past SAT papers starting in Autumn with the paper from previous 5 years ago and onwards. Therefor providing the most up to date assessments.

Y6 - Last 2 Year SAT papers and formal SATs in the summer.

Calculation Policy

Please see calculation policy updated April 2020

Inclusion and equal opportunities

All children are provided with equal access to the mathematics curriculum. We aim to provide suitable learning opportunities regardless of gender, ethnicity or home background.

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Special Educational Needs

All children will have their specific needs met through differentiated work in conjunction with targets. TA support time is planned for and provided in relation to identified needs for individuals and groups.

Marking and presentation

Teachers are expected to adhere to the schools marking policy when marking books and presentation policy when guiding children as to how to present their work. It is expected presentation to be of a high standard, showing working out in an organised manner. Marking is carried out at the end of a lesson/ specified time in lesson by children/teacher or support staff with impact marking whenever possible.

Review

The mathematics policy will be reflected in our practise. The policy will be reviewed April 2021