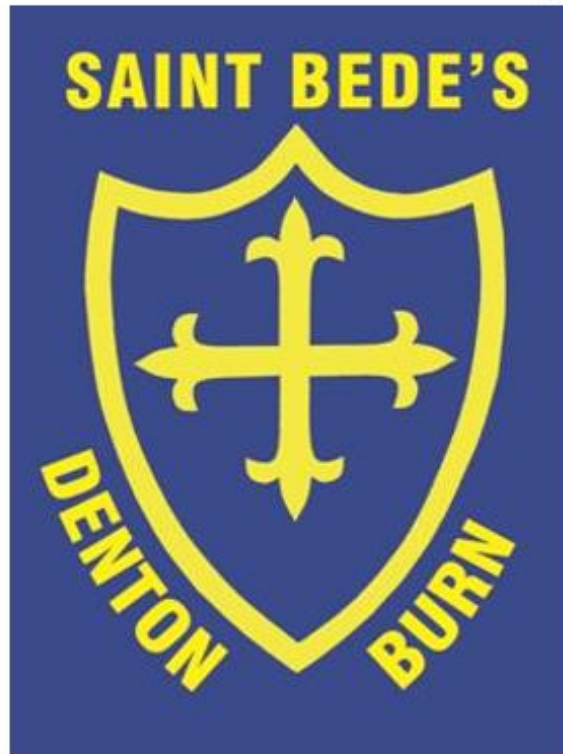


St Bede's Catholic Primary School



As one

we learn together,

play together,

pray together,

as one

Mathematics Policy and Guidance

Date reviewed: June 2023

Date of next review: September 2024



Introduction

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. (National Curriculum 2014)

Intent, implementation and impact.

- Intent: All children to have a secure understanding in Maths through manageable steps and being able to apply their knowledge
- Implementation: National Curriculum is taught through a clear progression of skills and knowledge that is mapped out across each year group using White Rose small steps (adapted for our school to revisit topics)
- Impact: By the end of KS2, children should be fluent in the fundamentals (number) and able to recall knowledge rapidly and accurately. They should have the skills to solve problems by applying their knowledge and reason mathematically.

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

- Calculation Policy
- Assessment Policy
- Marking Policy
- SEND Policy
- Equality Policy

The National Curriculum sets out year-by-year programmes of study for key stages 1 and 2. This ensures continuity and progression in the teaching of mathematics.

The aims of the 2014 National Curriculum are for our pupils to:

- Become fluent in the fundamentals of mathematics through varied and frequent practice with complexity increasing over time.
- Develop conceptual understanding and ability to recall and apply knowledge rapidly and accurately.
- Reason mathematically; follow a line of enquiry, conjecture relationships and generalisations.
- Develop an argument, justification and proof by using mathematical language.
- Problem solve by applying knowledge to a variety of routine and non-routine problems. Breaking down problems into simpler steps and persevering in answering

EYFS curriculum

EYFS follow medium-term plans which are based on the EYFS framework and the White Rose curriculum. They incorporate Early Learning Goals (ELGs) which show the level of development



children should be expected to have attained by the end of the EYFS. The ELGs support teachers to make a holistic, best-fit judgement about a child's development, and their readiness for year 1.

EYFS framework 2021

The EYFS Framework in relation to mathematics aims for the pupils to achieve the following:

ELG: Number

- Have a deep understanding of number to 10, including the composition of each number;
- Subitise (recognise quantities without counting) up to 5;
- Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts.

ELG: Numerical Patterns

Children at the expected level of development will:

- Verbally count beyond 20, recognising the pattern of the counting system;
- Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity;
- Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally

Mathematics Developing a strong grounding in number is essential so that all children develop the necessary building blocks to excel mathematically. Children should be able to count confidently, develop a deep understanding of the numbers to 10, the relationships between them and the patterns within those numbers. By providing frequent and varied opportunities to build and apply this understanding - such as using manipulatives, including small pebbles and tens frames for organising counting - children will develop a secure base of knowledge and vocabulary from which mastery of mathematics is built. In addition, it is important that the curriculum includes rich opportunities for children to develop their spatial reasoning skills across all areas of mathematics including shape, space and measures. It is important that children develop positive attitudes and interests in mathematics, look for patterns and relationships, spot connections, 'have a go', talk to adults and peers about what they notice and not be afraid to make mistakes.

Teachers planning and organisation

Long-term planning

The National Curriculum for Mathematics 2014, Development Matters and the Early Learning Goals (Number, Shape Space & Measure) provide the long-term planning for mathematics taught in the school.

Medium-term planning



EYFS and Years 1-6 use an **adapted** scheme which incorporates White Rose Maths Hub schemes of learning as their medium-term planning documents. The medium-term planning embeds the St. Bede's calculation policy as well as extra opportunities to revisit topics through oral/mental starters throughout the year.

These schemes provide teachers with exemplification for maths objectives and are broken down into fluency, reasoning and problem solving, alongside key aims of the National Curriculum. They support a mastery approach to teaching and learning and have number at their heart. They ensure teachers stay in the required key stage and support the ideal of depth before breadth. They support pupils working together as a whole group and provide plenty of time to build reasoning and problem solving elements into the curriculum.

Short-term planning

All classes have a daily mathematics lesson where possible. In key stage one lessons are around 45-60 minutes and in key stage two at least 50-60 minutes.

The schemes of learning support daily lesson/flipchart planning. Lessons are planned using a common weekly planning format and are saved on the system to be monitored at intervals by the mathematics subject leader. EYFS planning is based on the medium-term plans and delivered as appropriate to individual children with thought to where the children are now and what steps they need to take next. Within the daily mathematics lesson, teachers have a responsibility to not only provide differentiated activities to support children with SEND but also activities that provide sufficient challenge for children who are high achievers. It is the teachers' responsibility to ensure that all children are challenged at a level appropriate to their ability. Where objectives are not met, children should revisit.

Teachers of the EYFS ensure the children learn through a mixture of adult-led activities and child-initiated activities both inside and outside of the classroom. Mathematics is taught through an integrated approach.

Lessons

In all lessons, learning objectives and success criteria are clearly displayed and discussed.

The emphasis in lessons is to make teaching interactive and lively, to engage all children encouraging them to talk about mathematics. Lessons involve elements of:

- * Instruction – giving information and structuring it well;
- * Demonstrating – showing, describing and modelling mathematics using appropriate resources and visual displays;
- * Explaining and illustrating – giving accurate and well paced explanations;
- * Questioning and discussing;
- * Consolidating;
- * Reflecting and evaluating responses – identifying mistakes and using them as positive teaching points;



* Summarising – reviewing mathematics that has been taught enabling children to focus on next steps

Morning task books

Every morning, Y2-Y6 children complete maths revision in their morning task books. They should revisit areas of need as well as the objectives from the medium-term planning

Weekly basic skills

Every week –possibly Friday - Y2 (Summer term), Y3, Y4, Y5 and Y6 practise the weekly basic skills rapid recall sheets This does not replace the maths lesson and should only take 30 minutes maximum. Year 2/3 may introduce parts of the sheet so children become accustomed to completing it quickly. When marking the sheet, teachers/children should model how to answer selected questions so there is a focus on skills. Copies are saved in S: Maths/Resources/Weekly Basic Skills so access to other levels are available if more differentiation is required. There should be a folder of these in every classroom.

Year 2 – Level 2

Year 3 – Level 2/3, Level 3

Year 4 – Level 3, Level 3/4

Year 5 – Level 3/4, Level 4

Year 6 – Level 4/5, Level 5

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Multiplication tables

Pupils should be able to recall their times tables fluently by the end of year 4, which is essential for future success in mathematics. The multiplication tables check (MTC) in year 4 is statutory for primary schools. The MTC will help schools to identify pupils who have not yet mastered their times tables, so that additional support can be provided.

Children should regularly access Times Tables Rock Stars (TTRS) and home learning will be set by Miss Dixon each week for each year group.

Teachers in y2-y6 must carry out the TTRS baseline in the first week. The purpose of the baseline is to establish an average response time to multiplication questions at the start of TT Rock Stars.

Every term, pupils repeat the same exercise but rather than calling it a “Baseline”, it is a “Check” Teachers should **carry out** and **record** a Check towards the end of every term: December, March and June. This should be recorded on TTRS (instructions given to teachers at the start of the year).

Times tables intervention

- For children who do not know the times tables for their year group, regular intervention is given ideally in the form of at least 3 x 10 minute intervention sessions in addition to whole class teaching.
- 1 minute Times Tables Mountain checks can be carried out to determine if the children know that particular multiplication table or need further intervention.



- Their progress should be recorded on a record sheet. This should be an ongoing record where the children should achieve the expected for their year groups. They will need 3 ticks before they can move on to the next level. (They may make 1 mistake)

Special educational needs & disabilities (SEND)

Daily mathematics lessons are inclusive to pupils with special educational needs and disabilities. Where required, children's SEND plans incorporate suitable objectives from the National Curriculum for Mathematics, SCP Assessment Tools or development Matters and teachers keep these in mind when planning work. These targets may be worked upon within the lesson as well as on a 1:1 basis outside the mathematics lesson. Maths focused intervention in school helps children with gaps in their learning and mathematical understanding. These are delivered by trained support staff and overseen by the maths co-ordinator/SEND/CO/class teacher.

Equal Opportunities

Positive attitudes towards mathematics are encouraged, so that all children, regardless of race, gender, ability or special needs, including those for whom English is a second language, develop an enjoyment and confidence with mathematics

The aim is to ensure that everyone makes progress and gains positively from lessons and to plan inclusive lessons. Lessons involving lots of visual, aural and kinaesthetic elements will benefit all children including those for whom English is an additional language (EAL).

Differentiated questions are used in lessons to help children and planned support from teaching assistants and other adults.

Marking

Marking of children's work is essential to ensure they make further progress. Work is marked against success criteria, in line with the school marking policy, and includes next steps where necessary. They should be given time to read teachers' comments and make corrections or improvements. Responses to marking are made as close to the work as possible, ideally at the start of the next lesson. Children are encouraged to peer mark and self-assess their work., Exercises involving routine practice with support and guidance from the teacher – particularly in years 5 & 6.

Assessment

Assessment is an integral part of teaching and learning and is a continuous process.

Teachers make assessments of children daily through the following:

- regular marking of work
- analysing errors and picking up on misconceptions
- asking questions and listening to answers
- facilitating and listening to discussions
- making observations

These ongoing assessments inform future planning and teaching. Lessons are adapted readily and short-term planning evaluated in light of these assessments.



Teachers regularly assess using the National Curriculum objectives on the **Insight Tracker**. This process of careful tracking adds to helping teachers form an assessment for each child. Every term, the data will be tracked and monitored by the curriculum leader.

Children working more than two years below are assessed and monitored using objectives from the SCP Assessment Tools.

Resources

Each class has a stock of core resources that are age appropriate. Additional mathematical equipment and resources are stored centrally in the resources room.

Role of the Maths Subject Leader

- To lead in the development of maths throughout the school.
- To monitor the planning, teaching and learning of mathematics throughout the school.
- To help raise standards in maths.
- To provide teachers with support in the teaching of mathematics.
- To provide staff with CPD opportunities in relation to maths within the confines of the budget and the School Improvement Plan
- To monitor and maintain high quality resources.
- To keep up to date with new developments in the area of mathematics

