



ST BERNARD'S PREPARATORY SCHOOL

MATHEMATICS POLICY

LENT 2017

St Bernard's Preparatory School

Mathematics Policy

Mission Statement

With God as our shelter and Christ as our guide, the mission of St Bernard's Preparatory School is to educate towards love and service to God, each other and the wider community. Through our broad balanced curriculum we will develop an understanding of each faith and the values we share. We will treat each person with respect, knowing we are special and unique.

The Bernardine Cistercians, believing that Christ is the answer to all human needs and the foundation of all truth, cooperate in the apostolic mission of the Church by their whole monastic life, with its educational work. Their schools endeavour to proclaim Christ through monastic values of prayer, work, community living and unselfish service.

INTRODUCTION

In the light of our school mission this document is a statement of the aims, principles and strategies for learning and teaching mathematics at St. Bernard's Prep School. It describes our agreed approach to the planning, delivery and assessment of the mathematics' curriculum.

The mathematics taught, and the methods used, reflect the recommendations outlined in the DfES guidance contained in the documents:

- Curriculum Guidance for the Foundation Stage
- National Curriculum in England: mathematics programmes of study
- Early Years Foundation Stage Guidance

WHAT IS MATHEMATICS?

Mathematics is an interconnected subject in which pupils need to be able to move fluently between representations of mathematical ideas. It is a body of knowledge, which provides a way of viewing and making sense of the world. It is used to analyse and communicate information and ideas and to tackle a range of practical tasks and real life problems. Mathematics also provides the means for creating new imaginative worlds to explore, and it is through this exploration that new mathematics is created and current ideas are modified and extended.

THE IMPORTANCE OF MATHEMATICS

Mathematics equips pupils with a uniquely powerful set of tools to understand and change the world. These tools include logical reasoning, problem-solving skills and the ability to think in abstract ways. Mathematics is important in everyday life, many forms of employment, science and technology, medicine, the economy, the environment and development, and in public decision making.

1. AIMS

1.1 Our aims in teaching mathematics are that all children will:

- develop an appreciation and understanding of God's creation through the nature of numbers, space and pattern and the ability to identify relationships and structures in mathematics.
- become fluent in the fundamentals of mathematics and achieve a high standard of numeracy, good arithmetical skills and have the ability to recall and apply knowledge rapidly and accurately
- learn mathematics in a meaningful way related to everyday life encouraging cross-curricular links
- develop a positive attitude and self-confidence and see mathematics as a 'tool for life', as well as a creative activity to be enjoyed in its own right
- reason mathematically by following a line of enquiry, conjecturing relationships and generalisations
- develop an ability to think clearly and logically, communicate ideas (spoken and recorded) using appropriate mathematical vocabulary and apply their skills with confidence and understanding when solving problems
- be offered 'Challenge for All' but meet the needs of each individual children

1.2 Curriculum Planning

Mathematics is a core subject and we carry out the curriculum planning in mathematics in line with the structures and recommendations outlined in the National curriculum programmes of study.

The programmes of study for mathematics are set out year-by-year for Key Stages 1 and 2. There is the flexibility to introduce content earlier or later than set out in the programmes of study.

2. LEARNING AND TEACHING MATHEMATICS

2.1 The mathematics curriculum is organised on a subject basis outside the main school theme. However, wherever possible, mathematical activities will be included in the thematic planning.

Mathematics is taught:

- for 5.5 hours in Key Stage 1 and 5.5 hrs per week in Key Stage 2
- with the whole, mixed ability class and in groups. Individual help is given when needed.
- by the class teacher, with some specialist teaching in KS2

2.2 Mathematics is taught through direct teaching and questioning of the whole class, a group of pupils, or individuals. Mathematics lessons include opportunities for:

- Demonstration, explanation and instruction by the teacher to groups, individuals and the whole class.
- Discussion and questioning between teacher and pupil, and between pupils themselves.
- Practical work to provide meaningful context
- Consolidation and practice of fundamental skills and routines
- Problem solving including the application of mathematics to everyday situations.
- Investigational work.
- On-going assessment to identify next stage in learning.
- Summarising and reviewing, during and towards the end of a lesson, the mathematics that has been taught, what the pupils have learned and the next step.
- Activities for mastery to ensure children have grasped concepts and skills securely
- Links within different areas of mathematics

2.3 Commercially available schemes of work are used in mathematics to assist the teacher in delivering the curriculum as laid out in our Long Term Plans. (**Long term** planning is based on the yearly teaching programmes set out in the National Curriculum in England: mathematics programmes of study. The principal schemes in use at St. Bernard's are:

- New Abacus
- Abacus Evolve

2.4 Pupils with special needs in mathematics receive extra support in the classroom by the class teacher and/or the teaching assistants. Pupils who need specific help will be given individual programmes in accordance with our SEND policy. Effective pupil tracking enables identification of pupils who may benefit from early 'intervention' or a Springboard programme to lay good foundations for learning. We also recognise and aim to make provision for pupils who have a particular ability in mathematics. The expectation is that the majority of pupils will move through the programmes of study at broadly the same pace. However, decisions about when to progress should always be based on the security of pupils' understanding and their readiness to progress to the next stage. Those who are not sufficiently fluent with earlier material should consolidate their understanding, including through additional practice, before moving on.

Assessment for learning (AfL) – formative assessment

“Assessment for learning is the process of seeking and interpreting evidence for use by learners and their teachers to decide where the learners are in their learning, where they need to get to and how best to get there.”

Assessment as learning (AsL)-

Assessment is an ongoing process that builds on previous learning for true mastery to happen. Children receive immediate feedback on their work and support is provided within the lesson. The next lesson’s learning intention reflects how children have progressed and further support and activities are provided accordingly.

At St Bernard’s Preparatory School we recognise that AsL lies at the heart of promoting learning and in raising standards of attainment. We further recognise that effective AsL depends crucially on actually using the information gained.

The assessment procedures within our school encompass:

- Making ongoing assessments and responding appropriately to pupils during ‘day-to-day’ teaching. These ‘immediate’ responses are mainly verbal and may not be recorded;
- Using knowledge of pupils drawn from ongoing pupil tracking records and from the ‘prior learning’ section at the beginning of each unit of work to guide our planning and teaching;
- Adjusting planning and teaching within units in response to pupils’ performance;
- Use of the ‘assessment for learning’ questions to check learning against objectives at the end of each unit of work. If necessary future planning is adapted in response to assessment outcomes;
- Use of information gained from statutory and optional tests. Analysis is done at both a quantitative and qualitative level. Information gained is used to set focused curricular targets (what to teach) and also to determine which strategies or methods are particularly effective in respect of specific areas of mathematics (the how and why).

3.4 The role of the mathematics coordinator is to:

- Take the lead in policy development and the production of long term plans designed to ensure progression and continuity in mathematics throughout the school.
- Support colleagues in their development of detailed work plans and in assessment and record keeping activities.
- Monitor progress in mathematics and advise the SLT on action needed.
- Keep up-to-date with developments in mathematics education and disseminate information to colleagues as appropriate.
- Provide Inset and lead innovative practice
- Lead as an example of best practice to enhance the practice of colleagues
- To brief the named member of the school’s governing body to overview the teaching of mathematics.
- Involve parents in their child’s learning
- Take responsibility for the purchase and organisation of central mathematical resources.

4. RECORDING AND REPORTING

4.1 Records of progress in mathematics kept for each child contain:-

- Assessment results on profile sheet.
- To ensure that our assessment continues to be rigorous we have recently adopted the NAHT framework for assessment. The key principles which underpin this are:
 - The assessment should link closely to the taught curriculum
 - Not everything that is taught should be tested
 - Key Performance Indicators [KPIs] should be selected for each year group and subject, against which teachers can make assessments.
 - Using the KPIs as a reference point means that assessment can take place throughout the year against specific objectives.
 - Over the course of the year, teachers and pupils can see progress being made against specific criteria, and can clearly identify those which still need to be covered.
 - Annual tracking of those who are, and are not, meeting the performance standard for the year group can be kept, with intervention targeted appropriately.
- Through use of internal and inter-school moderation, we can have confidence in our judgements part-way through a year and can improve our professional understanding of our children’s learning at the same time.

4.2 Reporting to parents is done three times a year through interviews and two written reports. Reporting in Mathematics will focus on each child’s:

- Attitudes to mathematics
- Competence in basic skills
- Ability to apply mathematical knowledge
- Setting targets for pupils to achieve end-of-year expectations.

End of Key Stage SATs results are reported to parents in July.

Parents are made aware that they may meet their child's teacher by appointment at any other time, to discuss particular concerns.

5. The Foundation Stage

Work undertaken within the Foundation Stage is guided by the requirements and recommendations set out in the Early Years Foundation Stage document.

We give all the children ample opportunity to develop their understanding of mathematics. We aim to do this through varied activities that allow them to use, enjoy, explore, practise and talk confidently about mathematics. The learning environment provides opportunities for mathematics learning of key early concepts/skills linked with the EYFS profile. A range of maths equipment and models/images are used to help develop children's conceptual understanding.

6. Resources

Resources for the delivery of the mathematics curriculum are stored both centrally and in classrooms. Everyday basic equipment is kept in classrooms. Additional equipment and topic-specific items are stored centrally.

Monitoring and Review

This policy will be reviewed in Lent 2020 for the purpose of monitoring the efficiency with which the related duties have been discharged or earlier if significant changes to the systems and arrangements take place, or if legislation, regulatory requirements or best practice guidelines so require.

Applies to:

Whole School including Early Years Foundation Stage (EYFS)

Related Policies:

Curriculum, Teaching and Learning, Assessment, Recording and Reporting

Availability:

This policy is made available to parents on our website www.stbernardsprep.org or a copy may be obtained from the school office on request.

Monitoring and Review:

This policy will be subject to continuous monitoring, refinement and audit by the Headmaster.

The Trustees will undertake a formal review of this policy for the purpose of monitoring and of the efficiency with which the related duties have been discharged, by no later than three years from the date shown below, or earlier if significant changes to the systems and arrangements take place, or if legislation, regulatory requirements or best practice guidelines so require.

Signed by:

Headmaster _____

Date _____

Chair of Governors _____

Date _____

Adopted: Lent 2017

Review date: Lent 2020