St Augustine's Catholic Primary School and Nursery

Mathematics Policy

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)

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.

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 purpose of mathematics in our school is to develop:

 positive attitudes towards the subject and awareness of the relevance of mathematics in the real world competence and confidence in using and applying mathematical knowledge, concepts and skills an ability to solve problems, to reason, to think logically and to work systematically and accurately initiative and motivation to work both independently and in cooperation with others confident communication of maths where pupils ask and answer questions, openly share work and learn from mistakes an ability to use and apply mathematics across the curriculum and in real life an understanding of mathematics through a process of enquiry and investigation

We aim to provide a stimulating and exciting learning environment that takes account of different learning styles and uses appropriate resources to maximise teaching & learning.

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
Reception to Year 6 use the White Rose Maths Hub schemes of learning, particularly the Small Steps documents alongside Mastery Materials from sources such as NCETM to inform planning

These schemes provide teachers with exemplification for maths objectives and are broken down into fluency, reasoning and problem solving, 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
The above schemes of learning support daily lesson/flipchart planning. Lessons are planned using a common planning format and are

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.

All classes have a daily mathematics lesson lasting for 60 minutes. 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.

Special educational needs & disabilities (SEND)
Daily mathematics lessons are inclusive to pupils with special educational needs and disabilities. Where required, children's IEP's incorporate suitable objectives from the National Curriculum for Mathematics 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 SENCO and/or the class teacher. 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. Individual Maths targets are highlighted in children's Passports to Success.

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

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

Pupils' Records of work

Children are taught a variety of methods for recording their work and are encouraged and helped to use the most appropriate and convenient. Children are encouraged to use mental strategies and their own jottings before resorting to more formal written methods. Children's own jottings to support their work is encouraged throughout all year groups.

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. Children are encouraged to self-assess their work and given time to read teachers' comments and make corrections or improvements. Live marking is embedded across the school in Mathematics. Responses to marking are made as close to the work as possible, ideally at the start of the next lesson. Some pieces of work in mathematics can be marked by children themselves, 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; 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.

Medium term

Termly assessments are carried out across the school using the assessment materials for each year group (NFER for Years 1, 3,4 and 5) and SATs tests for Years 2 and 6. End of unit summative assessments from White Rose allow teachers to identify gaps in learning and assess pupil's progress.

Pupil Progress meetings are timetabled each term for all classes. Progress of pupils is discussed and appropriate intervention considered and put in place where appropriate. Long term Y2 and Y6 complete the national tests (SATs) in May.

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