



MATHEMATICS POLICY

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Signed : House Clerk
Chair of Staffing & Curriculum

Our Philosophy

At St. Peter's our philosophy is to encourage each child to develop an understanding and appreciation of:

- The formal rules and abstract concepts of Mathematics in an age appropriate manner.
- The use of Mathematics in terms of talking about and recording their ideas.
- The scientific nature of Mathematics in terms of making and testing hypotheses.
- The vocational nature of Mathematics in terms of preparing them for work.
- The ways in which Mathematics can be applied across the Curriculum.
- The enjoyment of Mathematics.

The Aim of Mathematics

It is the overall aim of the school to provide a carefully structured and well balanced Mastery programme which will promote enjoyment, understanding and proficiency in Mathematics for all, as defined in the National Curriculum. We aim to ensure children are well equipped with a solid Mathematical foundation so they are prepared for the next stage of their education and in the long run, for their future.

Our aims are to develop in children an awareness and appreciation of:

- The importance of Mathematics and how it links to real life.
- The fascination of Mathematics and how it can be applied to all areas of the Curriculum.
- Mathematics as an essential element of communication.
- The conceptual understanding of Mathematics; its structures and its relationships.
- Imagination, initiative and flexibility of mind in Mathematics.
- The need for working in a systematic way.
- The need to work independently or co-operatively as appropriate.
- The need at times for more '*in depth*' study in Mathematics.

We aim to place problem solving and investigative skills at the heart of our mathematics teaching. We recognise that collaboration and communication are crucial life skills and should be developed in our mathematics teaching.

Through these aims, we plan to develop pupils' confidence in their Mathematical abilities.

Inclusion

At St. Peter's, one of our overriding concerns is that there is equality of opportunity throughout the teaching and learning of Mathematics. We are committed to raising standards of achievement for all pupils.

We recognise that there will be children in our care with emotional and behavioural difficulties and that there are many causes for such behaviour. However, the following principles act as our guide:

- Behaviour is always a management issue.
- Through their behaviour, children are trying to resolve problems, not to be a problem.
- That children learn best with positive consequences.

We continue to encourage a Growth Mindset and promote our School Core Values to help support children in their Mathematics learning. By always expecting the best from our children, valuing their efforts and achievements and by being flexible in our approach, we are confident that our aims in teaching Mathematics can be achieved.

Differentiation

Children learn at different rates, so work is appropriately differentiated. Teachers plan using the National Curriculum objectives and then differentiate work for each child to ensure they are working at a level that is appropriate for them, whilst still instilling an element of challenge. This is achieved by using a variety of strategies including using 'open' activities in which children can respond at different levels, ability grouping for most activities, use of the Abacus maths scheme adapted by teachers as appropriate and teachers' own differentiated activities. Children with Special Needs are supported or extended as appropriate.

To prepare children for the End of Key Stage 2 Assessments, Year 6 stream their Mathematics sets three ways.

The Agreed Methodology:

Balance of Experiences

Certain elements should be present in successful Mathematics teaching to pupils of all ages. Teaching at all levels should include opportunities for:

- Exposition by the teachers.
- Discussion between teacher and pupils, and between pupils.
- Practical application of Mathematics.
- Consolidation and practice of fundamental skills and routines.
- Using mathematical concepts, facts and procedures appropriately, flexibly and fluently.
- Recalling key number facts with speed and accuracy and using them to calculate and work out unknown facts.
- Having a sufficient depth of knowledge and understanding to reason and explain mathematical concepts and procedures and use them to solve a variety of problems.
- Problem solving and Investigational work; encouraging an investigational approach rather than just 'doing investigations' and extending investigations by children asking their own questions.

- Use of calculators and computers as and where appropriate.
- Estimation and approximation.
- Mental calculations as a normal part of Mathematical activity as well as daily practice of mental skills and strategies, with a new emphasis on times tables.
- Children first being encouraged to find and refine their own methods of mental and '*pencil and paper*' calculation, rather than being told a set method.
- Understanding a variety of methods and strategies.

Mathematics will be taught in a variety of classroom organisations including individual, paired, group and whole class work. The above points are taken into account whichever organisation is used.

Connection with other curriculum areas

Mathematics is not seen as an isolated subject, and wherever possible is applied to real life situations and integrated into other areas of the curriculum.

Most of the time the focus of work will be purely mathematical and at other times Mathematics will naturally arise in other areas of the curriculum, e.g. symmetry in art, measuring in Science or PE. This supports our cross curricular way of learning here at St Peters and you may find some Mathematics work in children's Year books if it is linked to the child's Topic.

Approaches to Assessment and Recording

Assessment is an ongoing process and children are assessed against their Year group's objectives as 'beginning', 'working within' or 'secure'. This data is recorded using Target Tracker. Half-termly assessment is carried out using which assessed tasks help to inform teacher's judgements, although they do not act as the only form of assessment. Teachers take into account tasks away from the point of teaching to help inform their decision. Children who have not made good progress or who are working below their year groups expectations are identified in Pupil Progress meetings and support is then put in place for these children. Based on these assessments, a target is set for the forthcoming half-term. This is displayed in the form of a target card on display in the child's classroom.

Thoughtful lesson planning, together with constructive assessment and evaluation by both pupils and teachers will enable pupils to become confident and independent learners, achieving their full potential.

Information relating to each pupil's achievement in Mathematics will be made available to parents at parents evening and via annual reports.

Written work

Children should be encouraged to take pride in the presentation of their work. The work should be in pencil unless it is being copied out for display purposes. The short date, WALT, WILF and any page references should be shown.

The WALT should be underlined with a ruler and should summarise the learning intention of the lesson. A ruler should also be used to indicate the answer in all formal written methods of calculation.

The jottings that are made in support of any calculation should be clearly shown and encouraged as good practice. Mistakes will be crossed out by the child with a single, straight line and not rubbed out as they provide important information for assessment.

All children will be taught and reminded about the most appropriate layout for their work. As they get older they will increasingly be engaged in discussion about the most appropriate method of working and recording their work.

Clearly, much Mathematical work is carried out mentally and orally and so the amount of written work does not reflect the amount of work covered in the lesson.

Resources

Within classes, equipment is readily available to pupils in clearly marked areas. Additional equipment is kept in the Mathematics Subject Leader's room.

Children should be encouraged to obtain their own equipment, applicable to their own needs, from the class resource area. This helps promote independence.

Class teachers are responsible for the maintenance and security of their class resources, whilst the Mathematics Subject Leader is responsible for all centrally stored equipment.

Investigator of the Week

To celebrate children's Mathematics work, teachers choose one child fortnightly to award as 'Maths Investigator of the Week'. They are presented with a certificate during whole school assembly which is displayed in the school hall along with their work. Each class teacher keeps a copy of this work and it is placed in a Maths Investigator of the week book which is put on display in the classroom.

Home Learning

Children in Years 2 – 6 are given half an hour's Mathematics home learning each week which they are able to access via Abacus Pupil World. Children in Year 1 carry out fortnightly Mathematics home learning. There is also an opportunity for children without ICT access to complete their home learning in a homework club at school.