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Maths Lead Governor: Mrs L Smith
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St. Peter's CE Primary School

Mathematics Policy

Rationale

Mathematics is a powerful means of communication and a tool for everyday life. It is used to provide the means by which we can convey thoughts and ideas. Information and concepts can be presented by the use of numbers, letters, drawings, charts and diagrams.

By using examples and applying logic, generalised principles can be deduced. This requires the need to check and make hypotheses. Mathematics can, therefore, be a useful tool to communicate information required in other subjects, in everyday life and the world of work.

Appreciating mathematical principles expressed in art, literature, music and the way things work adds another dimension to interpreting the world in which we live.

Aims

Our aim is to help each pupil develop as far as possible the knowledge, skills and understanding in mathematics which will be required in further study and adult life.

All staff have high expectations for all our pupils.

We also aim to engender a fascination with the subject and give all children the confidence to use their mathematical knowledge and understanding with fluency and accuracy.

Objectives

How do we intend to achieve these aims?

There are three main areas for development:

- Conceptual development - the understanding of concepts in mathematics that require the learning of facts and knowledge
- Reasoning - the skill to apply knowledge of a concept to deepen understanding and to extend the understanding of a concept
- Problem solving - the ability to use mathematical skills and concepts to solve mathematical problems or to carry out mathematical investigations.

The National Curriculum 2014 for mathematics is used as the basis for planning the programme. The subject will be taught using 'Maths, no problem' It is our day to day reference point and enables us to set appropriately high expectations for all pupils in our school through a mastery-based approach to Mathematics.

The main emphasis throughout the school is on learning and understanding Mathematical concepts through the use of a concrete - visual - abstract approach, with problem solving and reasoning at the core of every lesson. We develop a range of mental and written strategies to solve problems and to know the appropriate strategy to apply in different situations.

Through the use of Maths, no problem we then enhance our curriculum through the use of further challenges and appropriate mathematical equipment to enable children to support themselves within their learning. Each member of staff is also able to access online training materials within the programme as well as receiving termly training through our teaching school alliance cluster. Further longer-term needs are addressed via our annual School Development Plan, including a specific Maths action plan.

Schemes of work

Our scheme of work is Maths, No Problem. <https://mathsnoproblem.com/>
This ensures good coverage of the year group objectives laid out in the National Curriculum 2014.

Cross-Curricular Teaching

Throughout the whole curriculum, opportunities to extend and promote Mathematics are exploited and explored. Teachers seek to take advantage of all opportunities to advance the children's enjoyment and understanding of Mathematics. We particularly promote the development of number through enterprise skills and data handling, shape and measures through the teaching of Science, Music, Design and Technology and Art. However, there are endless mathematical links to all the subjects within the curriculum.

Teachers' Planning and Organisation

Each class teacher is responsible for the mathematics in their class, in consultation with and with guidance from the mathematics subject leaders.

The approach to the teaching of mathematics within the school is based on three key principles:

- A mathematics lesson five times a week (approx 1 hour in KS1 and KS2 and a daily carpet session within EYFS with learning provided for pupils through continuous provision and adult led tasks).
- Each lesson begins with an 'in focus' problem, followed by teaching within 'Let's Learn and a supported session within 'guided practice' before completing an independent 'workbook' task
- An emphasis on mental calculation is also taught within a 'number fun' mini session at the end of the school day.
- The use of ICT is built into the daily lesson when beneficial to the learning.

Lessons are planned using the school's agreed methods of adapting and annotating within a text book while referring to the Maths-No Problem Lesson guidance and supporting video support.

Progression of Written Calculations

Progression of written calculation is guided by the Written Calculation policies and each individual teacher's professional judgement. These were last reviewed in 2017.

Special Educational Needs, Disability and Intervention

Equal opportunities are a fundamental principle in this school and the mathematics programme is in line with the school's statement of equal opportunities for all our children as their right of entitlement.

Special Educational Needs are accounted for in the SEND policy.

School pupil passports and learning programmes are drawn up for those children on the special needs register with the guidance of the SENDCO and reviewed on a half-termly basis. The school uses intervention support and pre-learning based upon the Maths No Problem concepts to support pupils.

Each class teacher is also supported by a classroom assistant during Mathematics lessons, such as to provide support for those children that might need it, or to challenge others to develop their thinking further.

Within each Mathematics lesson, resources and visual guidance are used to support pupils as they all work to complete the same core tasks, with further challenges to enable children to develop their understanding in different contexts.

The children's performance within lessons is monitored and children receive targeted intervention where gaps in understanding are found. This is as immediate as can be catered for and, ideally, delivered by the teacher. This is in addition to the daily Maths lesson.

Pupils' Record of Work

Pupils record their work in various ways within both their Maths journals, as well as within the workbooks themselves. Independent informal methods of recording are encouraged as part of the learning process to explain and demonstrate their mathematical thinking and understanding. (see calculation policy).

All children have Mathematics Journals and work books to record work, while in EYFS, evidence from continuous provision is recorded in their Learning Journey's.

The children are encouraged to record their work neatly in line with the teaching and learning policy.

Marking

Work in mathematics should be closely monitored by the teacher and with the help of support staff. The marking policy provides guidance on how staff should mark within mathematics. Essentially, marking and feedback should take place at all times within class sessions, however this won't always be written.

Teachers and support staff are encouraged to feedback to pupils, provide scaffolded comments/prompts, particularly during the lesson as 'live marking'.

However, the teacher oversees the progress of pupils and will comment on attitude and attainment, seek to deepen learning and to prompt or scaffold support.

Where appropriate, next steps are indicated and children are asked to work on next steps during the next lesson. The school uses a set of colour coded stamps to give feedback and to alert children to work on their next step.

Assessment and Record Keeping

Teachers are expected to make regular assessments of each child's progress and to record these systematically. Assessment in mathematics takes the form of formative assessment for all pupils, including a baseline assessment in EYFS followed by moderated judgements against the Early Years Outcomes for Number and Shape, Space & Measure and end of Key Stage testing in KS1 and KS2 (SATS).

From 2019-2020, Year 4 pupils will also be tested on their times tables knowledge through the introduction of a new statutory Government assessment.

Teachers assess the attainment of objectives and record whether children are entering, developing or secure with key mathematical objectives. These are recorded on a class mark sheet within the front of children's journals. The assessment judgements are also supported by the completion of 'reviews' at the end of each chapter of Maths, No Problem.

Extra-Curricular Activities

Financial capability and enterprise are encouraged and entered into enthusiastically. During the course of the year, individual classes and groups might run fund-raising projects often requiring the manufacture of goods. On occasion, further development of this can include activities such as all classes running stalls at the summer fair to raise money for school council initiatives. Some classes might also manufacture their goods based on a 'Dragon's Den' type exercise and raise a loan from the school bursar which they must then repay in order to calculate profit.

All the children from Year 3 upwards can access the Mathletics website which contains a wide variety of fun mathematical opportunities and exercises. Pupils can also access the site from home.

All the children participate in Rainbow Maths. This is a home learning project which aims to reward children for their efforts to be practical and creative with mathematics at home. A practical task or game is set each week and parents and pupils are asked to feedback on home learning. Children then share their learning back in class.

Reporting to Parents

Parents are given the opportunity to discuss their child's progress in detail during the middle of the autumn term and Spring terms.

Interim reports of children's progress are sent out half way through the academic year and parents are given the opportunity to discuss their child's progress thereafter.

Detailed annual reports are completed before the end of the summer term and parents may have additional feedback if they so require.

All teachers operate an open-door policy and parents are welcome into class at any appropriate time, as well as to communicate via Class Dojo.

Monitoring and Evaluation

The Maths subject leaders, Headteacher and Deputy Headteacher monitor and evaluate the quality of teaching and learning and standards via regular contact with colleagues; scrutinising attainment against targets; termly book scrutinies and by monitoring children's responses to their learning.

Opportunities for discussion of progress and review of schemes and policies are offered regularly at staff meetings.

Staffing and Resources

All teachers have a dedicated maths resource area within their classrooms. Additionally, centrally used resources are housed in the key stage departments.

The Governing Body

We have a designated Mathematics member of the governing body, Mrs L Smith, who visits school to monitor the teaching within mathematics and to challenge and support the school in raising standards in mathematics.

The Mathematics governor reports back to the curriculum committee on a regular basis, while also setting areas of focus for future terms and contributing to the Maths action plan.

Homework

In line with our home/school contract we set out of school activities linked to learning in class. Pupils are set short and focused tasks that are varied, interesting and fun. The tasks are intended to stimulate learning and enhance a range of study skills. All children at KS2 are expected to learn their times tables and other mathematical facts, which are tested at regular intervals. All children are expected to participate in Rainbow Maths. A homework club is provided to offer support and a time to complete tasks in school if they prefer.

Activities and suggestions for parents and carers to develop children's mathematical ability are shared on the school website, including links to Maths No Problem guidance videos for families.

A leaflet is provided for parents on the objectives taught in Mathematics and this is shared in the Autumn term.

Conclusion

The Mathematics Policy addresses the issues relating to equal opportunities, children with special educational needs, the health and safety of pupils and staff and teaching and learning by incorporating the principles, values, aims and objectives in the following school policies:

- Equal Opportunities
- Special Needs
- Health and Safety
- Teaching and Learning
- Gifted and Talented

Update to Policy Record Sheet

Date	Reference / aspect of policy to update	Suggested amendments to consider at next review.