

THAKEHAM PRIMARY SCHOOL

"Small School, Big Opportunities, Great Achievements"



Maths Policy

Thakeham Primary School

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Signed

Headteacher: *S. Norton*

Chair of Standards, Teaching and Learning Committee:

Ref Rini

Introduction

At Thakeham Primary School we value every pupil and the contribution they have to make. As a result we aim to ensure that every child achieves success and that all are enabled to develop their skills in accordance with their level of ability in accordance with our School Vision:

“High quality learning and teaching are at the heart of our school. We nurture and celebrate each child’s individual talents and skills to enable them to be happy, confident and resilient individuals with a passion for learning, inspired to achieve their very best. Through encouraging a strong sense of respect and responsibility, both within our local community and the wider world, we support our children to be co-operative, caring citizens for the future.”

Mathematics is both a key skill within school, and a life skill to be utilised throughout every person’s day to day experiences.

Mathematics equips pupils with a powerful set of tools to understand the world around them. These tools include logical reasoning, problem solving skills and the ability to think in abstract ways. Mathematics is important in everyday life. It is integral to all aspects of life and with this in mind we endeavour to ensure that children develop a positive and enthusiastic attitude towards mathematics that will stay with them. ‘Learning for Life’ is also one of our Curriculum Drivers.

The National curriculum for mathematics (2014) describes in detail what pupils must learn in each year group. Combined with our STARS Schools calculations policy, this ensures continuity, progression and high expectations for attainment in mathematics.

Maths Aims and Objectives

- To promote enjoyment and enthusiasm for learning through practical activity, exploration and discussion
- To promote confidence and competence with numbers and the number system
- To develop the ability to solve problems
- To develop a practical understanding of the ways in which information is gathered and stored
- To explore features of shape and space, and develop measuring in a range of contexts
- To develop the ability to apply knowledge, skills and idea in real life contexts outside the classroom, and become aware of the uses of mathematics in the wider world.
- To develop personal qualities such as perseverance, independent thinking, cooperation and self-confidence through a sense of achievement and success.
- To understand the importance of mathematics in everyday life.

Teaching and Learning

Pupils are provided with a variety of opportunities to develop and extend their mathematical skills in and across each phase of education. It is taught following the National Curriculum 2014, the West Sussex guidelines and appropriate teaching resources.

The lesson format we follow includes a mental/oral starter, a main teaching activity and a plenary session. The teaching of mathematics at Thakeham Primary School provides opportunities for:

- Group work
- Paired work
- Individual work
- Whole class teaching.

Work is differentiated to suit the needs of the various levels of ability within a class. Differentiation may be by task, outcome, resources provided or support given. We ensure that work is matched to the needs of each child.

Questioning is a vital part in all our mathematics sessions and questions will be continuously adapted by the teacher and support staff based on assessment for learning.

Within mathematics lessons, through careful planning and preparation, pupils engage in:

- The development of mental strategies
- Written methods
- Practical activities and mathematical games
- Investigational work
- Problem solving
- Mathematical discussion
- Consolidation of basic skills and number facts
- Working with computers as a mathematical tool.

At Thakeham, we recognise the importance of establishing a secure foundation in mental calculation and recall of number facts before standard written methods are introduced. We use the appropriate terminology in our teaching and children are also expected to use it in their verbal and written explanations.

To ensure there is adequate time for developing these mathematical skills, each class has a dedicated maths lesson each day. Each lesson is 60 minutes long. Children also have the opportunities to develop and apply these skills across the curriculum.

Cross Curricular Links

Mathematics is used in other curriculum areas wherever possible or appropriate. Children are expected to use and demonstrate their skills in mathematics through other areas of the curriculum such as science, geography, art and computing. This helps to expand and consolidate mathematical concepts and using maths in a purposeful way in real contexts helps the children to realise that mathematics is important in the real world. Wherever possible we utilise cross-curricular links.

For example:

- Draw and interpret graphs in geography

- The study of maps includes the use of coordinates and ideas of direction, position, scale and ratio.
- Roman, Greek or Egyptian activities during topic work
- Construct and interpret charts and tables in science
- The study of patterns in art
- Money management in PHSCE

We endeavour to set work that is challenging, motivating that encourages pupils to talk about what they have been doing.

Planning

Mathematics is a core subject of the National Curriculum, and we use the National Curriculum 2014 as the basis of our implementation of the programme of study for mathematics. Planning is done in three phases – long term, medium term and short term.

- Long term planning
The National Curriculum and the West Sussex guidelines give details of what we teach in the long term. Teachers use this to create an overview for the year.
- Medium term
Our medium term plans are in the form of a Learning Journey. These provide a cross-curricular or contextual theme for the (half) term's maths and ensures an investigative and real-life approach to engage pupils in line with our Curriculum Drivers 'Learning for Life' and 'Inspired Learners'. These outline the main objectives for the (half) term and define what we teach. They ensure an appropriate balance and distribution of work across each year. These are adjusted according to the needs of the class.
- Short term
Class teachers complete the weekly plans for the teaching of mathematics. These plans show the specific learning objectives for each lesson and give details of how the lessons are to be taught.

Inclusion

Through mathematics teaching we provide learning opportunities that enable all pupils to make progress. We do this by setting suitable learning challenges and responding to each child's individual needs. Extra support is in place for children with SEN&D, including adult support where necessary. Similarly, the needs of our 'Most Able Pupils' are met through effective in-class differentiation, specific enrichment and extension courses available through www.e-pd.org.uk and through opportunities in-house and within the STARS locality, including Steyning Grammar School. We make good use of our Disadvantaged (Pupil Premium) funding to support the needs of these children and our Children Looked After (CLA). Details of this and the impact are published on our website.

- All pupils take part in the daily maths lesson.
- Teachers plan lessons so that all pupils can be included and can make progress in the lesson.
- In oral work teachers plan a range of differentiated questions, with some targeted at specific pupils.

- Teachers also ask open questions to allow all children to take part.
- Teachers use a wide range of visual resources to illuminate meaning.
- Appropriate resources such as numicon, dienes, and hundred squares are planned in.
- During whole class teaching and activities, help is given to particular children by teaching assistants where available, the importance of ensuring pupils have opportunities to work and achieve independently is however of great importance, as is access to the teacher.

Children will be identified every term for support or whether they meet our MAP criteria for further enrichment. In addition to support in every day mathematics lessons, children may access pre/post session teaching as means of support. Booster groups may also be used as a means of support to enable them to reach age related expectations.

ILPs are drawn up on a termly basis for children with special educational needs in collaboration with the Inclusion Co-ordinator. Work is differentiated according to individual needs by the class teacher.

Resources

Pupils should engage in activities from a variety of sources using a range of equipment.. Through regular access to computers and tablets they will experience the fascination of mathematical exploration and investigation. They should also have the power to solve real and challenging problems.

Each classroom has a variety of teaching aids to support mathematics.

All classes have access to a range of equipment including multilink, Numicon, number lines as well as measuring and weighing equipment.

Pupils are encouraged to choose resources which are relevant to their work, take care of and return them.

Assessment, Recording and Reporting

Assessment

To develop learning, pupils will be continuously assessed using a variety of strategies – observation, questioning, marking in accordance to our school Assessment and Feedback Policy. In EYFS, pupils will be assessed and the Foundation profile completed throughout the year.

Children's work is marked on completion of a lesson or a task. Comments on pupils work should include praise for accuracy, effort and achievement of the learning objective. In addition, where focus marking is due, there should be a mathematical 'next steps' pointer towards improved performance ('Green for Growth' in line with our Assessment and Feedback Policy. This may include a 'try me now' question to help inform future planning, improve confidence or provide an extra challenge.

All lessons are evaluated on planning sheets and teachers record the names of children not meeting the lesson objectives as well as those exceeding them in order to inform future planning.

Statutory Assessment at Thakeham Primary School

- EYFS: Children are assessed in The early learning goals (ELGs) in the three prime areas of learning (communication and language; physical development; and personal, social and emotional development) and the ELGs in the specific areas of mathematics and literacy
- In year 2 children take end of Key Stage 1 SATs which assess their mathematical skills and knowledge. This involves an arithmetic paper and a second paper that will assess children's ability to apply mathematics to problems and to reason.
- In year 6 children take end of Key Stage 2 SATs which assess their mathematical skills and knowledge. This consists of 2 components as in Key Stage 1 (arithmetic and reasoning) but there are 3 papers in total (2 reasoning papers and 1 arithmetic paper).

Recording and reporting

- Each term teachers meet with the Headteacher and the Inclusion Co-ordinator to discuss each child's progress in mathematics to identify whether children are 'on track' to meet their age related expectations and to monitor the rate of progress. For those who are identified as 'not on track' to reach their target, support and intervention are implemented in order for progress to be made towards this.
- Teachers use an electronic tracking system to record children's progress against the National Curriculum objectives for mathematics (SIMS). This reports whether a child is 'Emerging', 'Developing' or 'Secure' with each objective. This can be used to help inform target setting, support and to report final year outcomes. School Analytics is used to calculate individual, cohort and group progress across each term to help identify those who are on track and those who may need further support/enrichment. Outcomes are reported to parents as outlined in our Assessment and Feedback Policy.
- In EYFS, children's attainment against their Early Learning Goals is tracked each term (in months) and progress calculated. Again support is implemented where a need is identified. Outcomes are reported to parents as outlines in our Assessment and Feedback Policy. Children's attainment in each area is recorded as 'Emerging' (1), 'Expected' (2) or 'Exceeding' (3). Whether a child has achieved a 'Good Level of Development' is also measured and reported.
- In accordance with statutory requirements an annual report is sent to parents towards the end of the summer term. This report covers progress and achievements in mathematics, setting targets for future improvements and includes the level achieved in the SATs if appropriate.

Moderation

We participate in moderations of our children's work in mathematics throughout the year at a school level and with our locality group of schools. The purpose of moderation is to ensure that an agreement on standards of teacher assessment can be reached. As a result teachers are confident that their assessments are accurate

and consistent with the national picture. The discussion focuses on evidence teachers have used to reach their judgment and offers them an opportunity to demonstrate their understanding of standards by focusing on a small number of children and their work. The Local Authority undertakes monitoring and quality assurance for EYFS, Key Stage 1 and 2..

Staff Development

Teachers are expected to keep up to date with subject knowledge and use current materials that are available in school or online.

Training needs are identified as a result of whole school monitoring and evaluation, performance management and through induction programmes. These will be reflected in the School Strategic Development Plan. The Maths Leader will arrange for relevant advice and information, such as feedback from courses or newsletters, to be disseminated. Where necessary, the Maths Leaders organise school based training through staff meetings/INSET. They will play an important role in communication with parents/carers to support effective partnerships to help facilitate effective learning at home as well as school.

Additional adults who are involved with intervention programmes will receive appropriate training that may be school based or part of central training.

Monitoring and Evaluation

The Headteacher and Maths Leader all work together to monitor Maths with the involvement of the governor linked to this area. Having identified priorities, the Maths Leaders formulate the appropriate section of the School Strategic Development Plan. This forms the basis for any monitoring activities and will clearly identify when, who and what is to be monitored and how this will take place e.g. classroom observation, planning scrutiny, work sampling etc.