



Paulton Junior School

SCHOOL POLICY STATEMENT FOR MATHEMATICS.

School Aims

Mathematics is an essential tool for everyday life. It is a whole network of concepts and relationships which provide a way of viewing and making links and 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. Our aim is for all our pupils to develop:

- A positive attitude towards mathematics as well as provide fun, creativity and enjoyment to their learning
- Confidence and competence in the pupils' mathematical knowledge, concepts and skills
- An ability to solve problems, to reason, to think logically and to work systematically and accurately.
- An ability to communicate mathematics; being exposed to the language of maths, using subject specific vocabulary, as this is integral to accessing the subject.
- An ability to use and apply mathematics across the curriculum and in real life
- Initiative and an ability to work both independently and in cooperation with others
- An understanding of mathematics being through a process of enquiry, exploration and experiment

TEACHING and LEARNING

Knowledge, Skills and Understanding

At Key Stage Two, teachers use the National Curriculum 2014 Mathematics, to ensure that all the Programmes of Study and attainment targets are taught.

Through careful planning and preparation, we aim to ensure that throughout the school, our children are given opportunities for learning:

- recall arithmetic skills, with fluency
- a range of methods of calculating
- the use of manipulatives
- a development of Concrete, Pictorial, Abstract approaches
- practical activities and mathematical games and puzzles
- problem solving and reasoning
- individual, group and whole class discussions and activities
- to solve open and closed tasks
- to work with computers as a mathematical tool
- relating mathematics in the context of real-life experiences
- using the outdoor environment

Mastery

At Paulton Junior School we believe that every child can succeed in maths, and we aim to provide a curriculum that allows the majority of children in the class to progress and move at the same pace. In practice, this means that children who have mastered concepts or skills quickly should be challenged further, through activities and investigations that deepen their understanding of that idea, rather than moving on to new content. Children who do not master a concept as quickly as the rest of the class are then supported to enable them to keep up. This is effectively done either through a same day intervention, which helps children who need more time and support in order to achieve mastery, a specific, systematic intervention or during the next lesson.

Schemes of work and planning

The teachers within each year group are responsible for providing a medium-term plan, which is an overview of the whole term's work and includes Learning Objectives taken from the White Rose Maths Scheme of Learning and linked to the National Curriculum for Mathematics.

When planning, teachers are expected to use the Yearly Overview planning structure of White Rose Maths for each year group. This allows for a clear coverage and progression to be monitored. Teachers are encouraged to supplement and use a variety of resources for lesson content, and not to be wholly dependent on White Rose Maths and children who learn in varying ways and therefore this must be considered.

Each class teacher is responsible for the delivery of a daily mathematics lesson (up to 60 minutes) in their class. This must be planned in accordance with the guidance set out by the National Curriculum in Mathematics and published in the agreed school weekly planning format. Including: Learning Objectives, stem sentences, hinge questions, differentiation; with opportunities to apply the learning, TA support and any relevant vocabulary. It must have a clear focus on the direct, instructional teaching and the activities that will follow. If relevant, it may also include any necessary classroom management notes or a resource list.

The curriculum co-ordinator will monitor the medium term and the weekly planning twice a year to ensure consistency, progression and that there is a broad and balanced range of skills, concepts and knowledge being delivered across the Key Stage.

Daily Lesson

Each lesson begins with either a fluency revision task (often a Flashback 4) or a fluency activity that can be linked to the main objective, to engage the pupils and allow them to be ready for learning. This is followed by the main teaching and objective lead activities. At the start of this session, the pupils are exposed to the learning objective or at the end of a lesson, involved in reasoning and explaining what they think the focus of learning has been. Within the lesson, the class teacher must model, demonstrate and clearly explain the concepts being taught, allow pupils to practice collaboratively or individually.

Throughout the lesson, the class teacher is responsible for continuous assessment of the pupils. This involves asking a range of questions, taking mini-plenaries to consolidate, revise and develop individuals, groups or the whole class, according to the teacher's observations and general sense of the lesson.

Within the lesson and when appropriate, the class teacher will be aware of their role, and choose to continue to teach and support certain individuals or in a guided group setting. This group will often be established from the Hinge Question. Working either on the same set task from the

lesson or to work specifically on a related investigation or revise mistakes and weaknesses from previous lessons.

Mathematical vocabulary, as specified in the National Curriculum 2014 and White Rose Maths, will be introduced in the appropriate lessons and when necessary, be visibly displayed to enhance the teaching and learning for that week or term.

Resources

The White Rose Maths Premium online subscription is renewed annually, until further notice and provides the class teachers, TAs and pupils with interactive resources and the whole planning scheme.

Large resources; scales, capacity, money, shapes, tape measures are stored centrally in the main Maths and Science cupboard within the Library. Lower and Upper school have other specific resources available in year groups that support the pupils' learning, such as place value counters, number frames, dice, one hundred squares, multiplication squares, multilink, diennes, base ten and number fans etc.

The Maths Coordinator is responsible for organising, auditing, replenishing or purchasing any items, using the yearly budget.

Pupils' Recording of their work

Children will record their class work neatly in an A4 Maths Book, provided by the school.

All work is to be dated and given an objective lead title (when appropriate). All children are encouraged to work tidily and neatly, in compliance with the Presentation of Work Policy. When using squares, one square should be used for each digit. Worksheets are to be kept to a minimum; they can be filed individually or stuck into the Maths book, if it supports the activity.

A Morning Maths book is also provided to allow pupils to record any work carried out during registration or to be used in support to the Maths Book.

Whiteboards are encouraged for recording any jottings, practice of methods, writing answers and responding to any mathematical activity, during the daily lessons.

Computer skills will be used to support the delivery of maths. Work can be printed and displayed, or saved in a pupil's folder as evidence of attainment.

Differentiation.

Children will be sat in class places for independent and group work. They will not always be sat in ability pairs, as this allows flexibility and free flow of children between the groups. Children will also be 'paired' for mental maths activities and games - the pairs will not always be based on attainment but at times, on the children's ability to work well together or to mix with their peers.

The lesson will be aimed at raising attainment and therefore pitched at a high level. All pupils will be taught the same curriculum and our teachers' expectation is for pupils to achieve or master the Learning Objective. Any pupils who are not meeting the expected standard within the lesson will have several opportunities to work with the teacher in a guided group, or they will be taught and supported in an intervention group, before the next lesson. Pupils who struggle to attain the concept will have visual or concrete resources to aid their learning.

SEND & Stretch and Challenge

Pupils with Special Educational Needs; including those working to a higher standard, will have opportunities to work within their personalised needs. Teachers will plan tasks accordingly with specific differentiation, providing a range of challenge and tasks related to the child's targets stated in their Single Support Plan (SSP) or to allow pupils to deepen their understanding and achievement.

When additional support staff are available (Teaching Assistants) in the classroom, they are used at the discretion of the class teacher, to support groups or individual children, wherever the need may be. Specific concrete resources and visual representations will be used to enhance the learning, when required.

Progression in Methods of Calculations

All year groups are taught a progressive range of methods, for carrying out mental and written calculations. They are encouraged to use mental strategies before resorting to a written formal method, as well as use the most appropriate and convenient way of recording.

Refer to the to the agreed progressive methods of calculations in the White Rose Maths scheme of learning, taught within Key Stage Two. Parents are informed of these methods and can access the Help with Maths at Home booklet on the school's website.

Cross Curricular

We incorporate mathematics into a wide range of cross curricular subjects and seek to take advantage of multi-cultural aspects of mathematics. Throughout the whole curriculum opportunities exist to extend and promote mathematics. Teachers seek to take advantage and plan creatively as the opportunities arise, to make mathematics relate to real life contexts; money, travel, currency, grand designs, orienteering, compass and map work, data collection, measuring, cooking, science; shadows, pulse rates, data logging, rocks and soils.

Each class is equipped with an Interactive Whiteboard which can be used solely by the teacher and, or the pupils to enhance the cross curricular teaching and learning within mathematics. Many resources are available on line for teachers to use in their planning, the delivery and main teaching activities. Laptop Computers and ipads are accessible for the use in the classroom and stored conveniently in the corridors.

Many teaching resources have been purchased by school to be used in daily lessons resources.

Assessment and Record Keeping

Marking

All children's work should be marked in accordance with the feedback/marking policy. Children are encouraged to self-mark to gain instant feedback. Where a member of staff has worked alongside a group or individual and given verbal feedback, then it is appropriate to sign the work with a V. Class teacher will encourage the use of marking stations. Reward stickers and praise comments for effort are also used.

Written assessments

End of block assessments, taken from the White Rose Scheme, are carried out and based upon the relevant Term's lesson objectives

NFER Mathematics Progress tests are given in September, February and June to provide a formative assessment. This provides the class teacher a comparative standardised score with

the previous years and informs the class teacher of any discrepancies in the child's level of achievement, from year to year.

For School reporting purposes, Teacher Assessments of each individual pupil are made by class teachers, alongside the Summer Nfer Test in June. These are recorded in the pupils' school report and shared with parents. These teacher assessments are based upon the pupil achievement in class and data collected and completed throughout the year.

Record Keeping

All maths results and data is recorded by the class teacher along with the Nfer standardised Excel sheets, and kept on the T- drive in a class assessment folder, which is a working document.

Refer to the Assessment Policy for all further details.

Year 4 Timetable Test

From June 2020, all Year 4 pupils will be tested on their Times tables via an online DFE Test.

Homework

All pupils in Key Stage Two receive homework each week. However, Mathematics and English Homework alternates on a fortnightly basis. The Mathematics homework is mainly based upon the concepts learned the previous week, in lessons. It is hoped that parents and carers will be able to share this opportunity to work together and support their child in their learning in mathematics. Also, children are expected to practice and learn their times tables and have fun and enjoyment with games, puzzles and real-life experiences within the home to enhance their understanding of various aspects of Maths. On occasions, homework may only be accessed through the school's website, or TT Rock Stars.

Written By- Amy Russett (Maths Lead)

Agreed by Governing Body-

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