



# Huxley C.E. & Utkinton St. Paul's C.E. Primary Schools Maths Policy



Utkinton St Paul's  
C of E Primary School

"Developing confident children  
through creativity and choice  
within a Christian community"

"Enabling every child to fulfil  
his/her potential in a nurturing  
Christian environment"

## Introduction

At Huxley C.E. Primary and Utkinton St. Paul's C.E. Primary Schools, we aim for children to leave school at the end of Key Stage 2 with a strong ability to perform a range of mathematical skills and use and apply them across a range of contexts. We are aiming to achieve this by increasing children's number sense alongside developing their confidence and independence. A consistent and progressive approach to the teaching of mathematics, following the Singapore methods, provides children with opportunity to encounter concepts in depth. Children follow the CPA approach (Concrete, Pictorial, Abstract), meaning that, not only do they spend longer learning concepts, they also encounter them in a range of different ways. This allows all learners to access mathematics in a way that develops both understanding and accuracy, leading in turn to high quality reasoning.

## Aims

- Ensure that all children in Key Stage 1 and Key Stage 2 follow the Singapore Maths approach.
- Ensure all children, who are non-SEN and have not joined within the previous 18 months, meet at least age-related expectations by the end of their age phase.
- Ensure those children who are SEN or that have joined the school within the previous 18 months make at least good progress by the end of their age phase, from their individual starting points.
- All children develop conceptual understanding through the concrete, visual, abstract process.
- Provide opportunities for children to use and apply maths across a range of different contexts – both within problem solving and real life.
- Ensure that children have a strong number sense through regular practice and consolidation of both times table and mental calculation skills.
- Ensure that children can read, understand and use a range of age-appropriate mathematical vocabulary.
- Ensure that children follow the calculation policy to enable consistent progression.
- Provide consistent opportunity for children to reason mathematically – both verbally and in the written form.

## Planning and Delivery of Maths

Planning is based on the Singapore Maths approach. All teachers have access to the online resources as well as the textbooks and workbooks to support this.

All teachers should have high expectations of what children can achieve and should aim to pitch their lessons appropriately to the majority.

All lessons should begin with a problem that children complete, either on their whiteboards or in their books. This problem can be based on any area of the curriculum and should encourage high-level thinking and reasoning. Maths Hubs 'White Rose' resources, as well as Testbase, provide staff with ample support for this.

The main concept taught in the lesson should be delivered through the 'In Focus' task associated with the individual lesson. Significant time should be spent on this task and questioning should develop both reasoning and multiple ways of solving the same problem. Group/pair work should be encouraged at this stage.

Due to our mixed-age classes, teachers will decide how best to organise year group teaching - based on their cohort. Successful approaches have included a carousel approach, whereby one year group completes the in focus tasks whilst the other completes independent work. Others have included teachers taking one year group whilst a HLTA has taken another,

whilst finally an approach whereby the whole class complete an in focus task, based on one textbook, before completing guided practice at their own year group has also proven effective.

Children should be supported through the CPA (concrete, pictorial, abstract) approach. Decisions on differentiation, using this approach, are made by class teachers and teaching assistants – based on the needs of individual children and the concept being delivered.

All children should then progress onto the 'Guided Practice' which can either be completed individually or as a group. Teachers choose whether this is recorded in a written form.

Beyond this, teachers decide whether children move onto the workbook tasks or whether to extend pupils through the 'Fluency, Reasoning and Problem Solving' resources produced by Maths Hubs 'White Rose'. Children requiring more practice with the skills being taught within an individual lesson should be encouraged to continue with workbook tasks.

All lessons within the Singapore Maths resources should be delivered across the year. This will cover the majority of the curriculum taught.

Additional lessons should be taught on top of this. These should include whole lessons focused on solving suitable 'NRICH' problems to develop deep, extended problem solving skills as well as outdoor and practical activities.

Opportunities should also be sort to use mathematical skills in real life by extending maths across the curriculum – particularly in the area of science.

Teaching should encourage children to find multiple ways of solving calculations and problems. Embracing this philosophy will enable children to choose methods that work best for them when solving problems independently.

Marking should take place after each lesson, following the school's marking policy. It is expected that children will have the opportunity to correct misconceptions during RAR (reading and response time). There is no requirement for extensive next steps marking. Assessment from marking should, however, inform planning of following lessons.

### **Inclusion**

Use of the CPA approach enables access for all learners on a daily basis. It is expected that, unless a child is working significantly behind his/her peers, he/she will be accessing the same questions as children within their year group. Differentiation for learners then takes place within the CPA approach.

Any child working significantly behind age-related expectations will have access to earlier text book activities. However, teachers should look to move these children on once concepts have been mastered.

Some children will have access to Teaching Assistant support within lessons. It is vitally important that the role of the Teaching Assistant is seen to support learning, rather than solve problems for the children. Teaching Assistants should feed back assessment information following each lesson.

### **Intervention**

On a weekly basis, an afternoon of intervention will run for each class. This will be organised by both the Class Teacher and the HLTA delivering.

Target children should be selected based on assessment data from summative assessments as well as from daily formative assessment. Any child working below expectations, who is none SEN, must receive weekly intervention.

A gaps analysis should be carried out by either the teacher or HLTA prior to a child/group of children receiving intervention. This analysis should inform planning.

Work should be recorded in individual intervention books and these should be available for monitoring on request.

During the Spring Term, children in Year 2 and children in Year 6 will receive weekly revision sessions to prepare them for their SATS. These will be organised by the class teacher and content will be based on outcomes from the practice week.

### **Homework**

Within the Infants, homework is at the discretion of the class teacher. However, it is expected that during the build-up to the Year 2 SATS, children will undertake some revision. This will involve completing tasks from the CGP revision resources.

From Year 3-6, all children will complete weekly homework. This will be one test from the Schofield & Simms mental arithmetic books. Children should begin at Book 1 in Year 3 and work through each book across the Key Stage.

During Key Stage 2, particularly during Year 3 and 4, children will also be asked to learn individual times tables. These will feed into the weekly arithmetic tests. Individual log-ins for Times Table Rock stars will be provided for children to help them practise at home and teachers can use this resource to set a specific table for children to practise as well as monitor performance.

Children who find mathematics difficult may begin with the Introductory Arithmetic book. Additionally, individual class teachers, at their own discretion, may decide that a pupil working behind expectations completes part, rather than all, of a test on a weekly basis.

Homework should be marked on a weekly basis and teaching staff should record results.

Children in Year 6, during the Spring Term, will receive additional homework. These will be revision exercises from the CGP resources and should be completed and handed in as agreed with the teacher/teaching assistant.

### **Assessment**

Teachers should begin each unit by carrying out the diagnostic assessment from the Rising Stars Progression tests. From this, teachers will then complete a gaps analysis to support their unit planning.

It is then optional to complete the mid-topic and end of topic assessments from the Rising Stars Progression tests. These results can be used to support future unit planning and can be recorded in the spread sheet that forms part of the package.

On a weekly basis, timetabled by class teachers, children complete an arithmetic test. Content is set by the class teacher, based on aspects taught during the year, and is pitched at age-related expectations. Results are recorded by the class teacher.

Each February, children from Year 1-Year 6 complete the Maths No Problem! Mid-year assessments. These are based on the concepts taught in the 'A' textbook.

Each July, children from Year 1-Year 5 complete the Maths No Problem! End of year assessments. These are based on the concepts taught in the 'B' textbook. Year 2 children take these tests, as well as their SATs, to aid handover to Year 3 teachers. Year 6 children do not take these tests. Their end of year performance is assessed based on the SATs tests they complete in May.

Additionally, each January, children in Year 2 and Year 6 will complete a practice SATs week. During this period, children will complete the assessments from the year before. From this, teachers should complete a gaps analysis to inform their planning as well as their intervention and revision sessions. Results from these assessments will be analysed by the Maths Co-ordinator and SLT as necessary.

### **Monitoring**

Class Teachers are required to submit their mid-year and end of year assessments to the SLT at an agreed time following the administering of the tests. These are then transferred onto class tracking sheets by the Maths Co-ordinator and shared with class teachers and the SLT.

The SLT analyse returned data following each test period. Following this, discussions take place with individual class teachers in order to highlight target children and analyse provision that is/can be put in place to support their learning.

On a termly basis, the SLT complete a formal book scrutiny. Focuses for these scrutinies will be based on both whole-school aims, highlighted in the yearly action plan, and individual teacher targets. Further book scrutinies and drop-ins may also take place.

Classroom observations take place on a termly basis as agreed with the SLT. Targets for observations will be based on areas for development highlighted in previous observations and on whole-school focuses for the academic year. These are highlighted in the yearly action plan.

Planning will be scrutinised in the event of concerns about the quality of teaching in a specific class. However, the current year's planning should be available at all times, on request and the previous week's planning and outline for the forthcoming week should be sent to the Headteacher each Sunday.

This policy was written in consultation with staff and governors in May 2016 and should be read in conjunction with the Assessment, Calculation, Homework and Intervention Policies.

Headteacher Lotna Prewen

Governor (Huxley) [Signature]

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Date 14/9/16.

Review Date: Summer 2017

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