

# HURLEY PRIMARY SCHOOL

## MASTERY MATHS POLICY



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Reviewed by:

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Friday 9<sup>th</sup> February 2018

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Friday 9<sup>th</sup> February 2018

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# MATHS MASTERY POLICY

At Hurley Primary School we aim to enable children to be confident, fluent and risk-taking mathematicians. The children will need to be responsible and independent mathematicians who are capable of explaining their ideas, reasoning and solving a variety of problems in different contexts. This will be achieved by children developing excellent recall of number facts, making links between different areas of maths and solving a range of problems based on the curriculum for their year group.

## Curriculum and Planning

Long/medium term planning: all year groups will use the national curriculum as the basis for their planning in conjunction with the Updated White Rose Medium Term Plans. These plans provide an approximate guide for teachers on how long they should spend teaching different topics and in what order they could be taught. However, teachers may adapt the order of these topics if they feel that this will enhance children's understanding or will be more beneficial to their learning (e.g. if children will be measuring in science, it may be beneficial to teach measure in maths prior to the science).

Also, teachers may adapt the length of time spent on different mathematical areas and topics but must maintain an overview of general coverage in order to ensure children cover all relevant topics by the end of the academic year.

Short Term Planning: all year groups will be expected to use the new planning format provided. This format is designed to give a clear structure to each lesson. It is also designed to help teachers plan the most effective questions and spend more time resourcing lessons. Although this is a set format, there may be times when this format may not be wholly followed e.g. as children become more secure or when carrying out investigations.

## Lesson Structure

Lessons will usually start with a problem and children will be encouraged to discuss this with their peers. Subsequent discussion and modelling during guided practise will lead the learning into how to solve this problem. Children will then be given time to work independently on the topic covered.

During modelling a CPA (concrete, pictorial, abstract) approach will usually be used, especially when introducing new concepts. Most lessons will Teachers will model the most effective approach to the problem using concrete materials (e.g. multilink, numicon, real-life objects), then pictorial representations (pictures and diagrams) followed by abstract representations (e.g. number sentences with calculations when appropriate). This may happen in a single lesson or across a series of lessons, but most topics should have some form of concrete introduction to make the maths real for children.

Children will be given the time to practise ideas either alone or with a maths partner. The teacher can then assess understanding during the lesson. At this point the class teacher can identify children who aren't grasping the topic with a view to working with them during the independent learning part of the lesson.

Mini plenaries should be used to address any wider misconceptions.

All children will usually start of on the same work which will build upon the concept taught within the lessons.

This independent work will develop in one of two ways:

1. The work that all children complete will increase in complexity and require deeper level of understanding to access. Children will be expected to work from the beginning and attempt the more challenging work too. Rapid graspers will move quickly on to the work that requires a greater level of thinking.
2. Children will work on a few examples which reinforce the concept in the lesson. They will then be offered three levels of challenge – Mild, Spicy and Hot questions. These challenges are set to give children the opportunity to stretch their understanding within the topic being covered. Ideas and content for these sections can be found in White Rose and NCETM materials. Children will be expected to pick a suitable level of challenge. Rapid graspers should pick the hot challenge and children who are struggling might pick the mild challenge. If children feel a need to lower their challenge level (due to being unsure/lacking confidence), they will need to check with their teacher/TA.

## Planning Storage

All planning must be stored on the school portal in the folders for their relevant year group.

## Mathematical Language

The correct and frequent use of mathematical language should be evident throughout the maths lesson. A shared vocabulary will be generated in conjunction with staff to ensure consistency through school. This vocabulary should be on display on the interactive whiteboard during all parts of the lesson, and most importantly, should be used by all participants in the lesson when discussion or explanations are taking place. Stem sentences should be used in most lessons. These are sentences which should hook children to a specific element of their learning. They should be referred to frequently and used to support and reinforces children's understanding.

## Mental Orals

Class counting may be used during transitions in lessons.

## Maths Meeting

In order to promote fluency, a 15-20 minute, daily maths session has been introduced. During this session, children will be taught and revise key mathematical topics and practise them during the sessions. Most of these topics will be mental maths based although this could also include practise of a written method. Each topic should be taught for all three-five days of the week. This topic can be revisited the following week or at a later time in the year.

## Arithmetic

Written methods will be taught as outlined in the calculation policy. A significant emphasis should be placed upon fluency and conceptual understanding when solving calculations. However, children need to have a secure understanding of formal written methods for addition, subtraction, multiplication and division as outlined in the calculations policy.

## Marking, Feedback and Misconceptions

AfL and quick feedback to children is vital to address misconceptions. Using a mastery approach, all children (except SEN) should be able to access the learning within the lesson. The role of the teacher and TA is to address any misconceptions and provide additional support throughout the lesson. Children who are struggling to grasp a concept should be provided with support in the form of additional explanation or scaffolding provided by an adult. Marking work should be a quick process and used to confirm a teacher's knowledge about pupil achievement, understanding and any misconceptions. Challenge should be provided within the lesson, not as a response to feedback. Children who are still struggling will be supported either through quick catch-up or in intervention sessions.

Following daily marking, the start of the following lesson will begin with feedback. One of following will happen:

- a. If all children have achieved the expected outcomes of the previous lesson, teachers will explain this and begin the next lesson, moving the children on to the next step.
- b. If a small group of children have struggled with a particular problem/have a misconception which needs addressing, the teacher and/or TA will work with this group to address the issue. The rest of the class will be set a continuation of the previous day's learning or a revision task during this time.
- c. If there is a wider misconception or learning point which needs to be addressed with all or most of the class, this will be explained by the class teacher and addressed at the start of the lesson before continuing with the next lesson.

## Differentiation

Each lesson will aim to move children forward as group. However children who are rapid graspers and have mastered the concept will be challenged at greater depth. Those that are struggling need to be supported as explained above. Chilli challenges are used to expose children to challenge at different levels as explained in the section above. Differentiation should take the form of greater challenge without moving children on to a new topic.

## Planning for SEN

It is understood that some children are not able to access a mastery curriculum and have specific needs. These children will be catered for with individual teaching support based on their needs. These children may participate in some, none or the entire maths lesson, depending on the content and pitch. However, they may also work on concepts more appropriate for their ability level.

## REVIEW FRAMEWORK

The policy will be reviewed annually (or sooner in the event of revised legislation or guidance).

REVIEWED BY:

Headteacher	Glyn Morgans	Signed		09/02/2018
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Chair of Governors	Karen Orman	Signed		09/02/2018
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REVIEW DATE: **FEBRUARY 2020**

If you have any queries or require further information please do not hesitate to contact us on **01827 872207** or email [head2032@welearn365.com](mailto:head2032@welearn365.com)

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