



Happy, Healthy and Fulfilled



Easington C of E Primary School Maths Implementation

What does Maths look like at Easington C of E Primary School in response to the global COVID-19 pandemic?

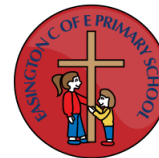
What is 'Mastery'?

The term 'mastery' refers to the ability of the children simply to have understood a mathematical idea or concept and in practical terms, have the ability to apply mathematical knowledge in different ways (fluency, problem solving and reasoning). This would mean that the children have confidently 'mastered' the concept.

Mathematics at Easington C of E

Planning

- **Long Term Planning:** The National Curriculum
- **Medium Term Planning:** White Rose Hub Yearly overviews and school's own 'in-house' tracking system of attainment (Excel spreadsheets to be annotated to show alterations due to the needs of each cohort).
- **Short Term Planning:** There is a daily mathematics lesson-60 minutes. Essential components of each lesson include a clear, year group specific Learning Objective and a clear and concise Success Criteria. This will be evident in books using the 'Success Criteria' label which will also be used by the children and teachers to show assessment within each lesson. Short term planning is supported by numerous materials from a range of sources and incorporates the Teaching Cycle (Teach, Practice, Apply and Review/Assess).
- **Daily Maths Meeting:** In response to the unprecedented COVID-19 situation, the Daily Maths Meeting (DMM-30 minutes) will be of vital importance, **specifically for Key Stage 2** children (see Curriculum Timetabling and Organisation document for September 2020 for further details). The DMM will focus on recapping and consolidating key basic skills (times tables and procedural elements) and concepts, as well as basics such as counting etc identified and highlighted by ongoing AfL. This will take place **EVERY DAY FROM 12.00-12.30**-this should be evident in classes on Learning Walks etc. This will be monitored closely by SLT. The content for this should come from AfL from lessons as well as the achievement of the children. The children will have a 'Daily Maths Meeting' exercise book for this work-the DMM should be a practical, collaborative and enjoyable session. The exercise book should be used for Guided Practice, working out, jottings etc that will allow children to understand concepts. Where procedural/fluency work has been completed, this should be marked and assessed by the teacher at the point of learning



(see Marking and Feedback policy for further guidance). Peer assessment should also be utilised during this session.

September 2020

From September 2020, for ‘single year’ year groups (EYFS, Y1, Y4), the WRH yearly overviews should still be used in order to meet the needs of the National Curriculum (see example below).

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number: Place Value		Number: Four Operations					Number: Fractions				
Spring	Number: Decimals and Percentages			Y5: Number: Decimals Y6: Number: Algebra		Measurement: Converting Units	Measurement: Perimeter, Area and Volume		Y5: Consolidation Y6: Number: Ratio		Statistics	
Summer	Geometry: Properties of Shape		Geometry: Position and Direction	Y6: SATS		Investigations and Consolidation						

However, there is flexibility concerning the length of the blocks-these can be made longer or shorter (in consideration to time) depending on continuing Assessment for Learning and Teacher Assessment. The blocks may also be taught in a different order-it is the teacher’s professional responsibility to ensure that the expectation of the curriculum objectives being covered by the end of the academic year is met. Teachers need to use their professional judgement to judge what is most beneficial for their own class.

It is an essential requirement that the mathematics subject lead is informed of the coverage for each class on a weekly basis using the document provided. This must occur before the content is taught so the subject lead has an up-to-date and clear picture of mathematics across the school at any point in time. Changes to this sequence/chronology should be annotated on the document by teachers-these weekly overviews will be working documents and should change/alter to suit the needs of the children. A record of this coverage will be filed by the subject lead in the relevant subject leader file.

Mixed year groups (Y2/3, Y5/6) will still utilise the WRH yearly coverage document to ensure accurate curriculum coverage but the input and modelling for each lesson should address the higher-level concept (the higher year group). The task should then be differentiated so that it meets the requirement of each year group (e.g. Place value in Y6 is to ten million whereas in Year 5 it is to one million etc). In instances where the National Curriculum requirements for each year group do NOT align, a split teaching approach **must** be employed to ensure that each year group receives their curriculum entitlement. Teaching Assistants should be utilised

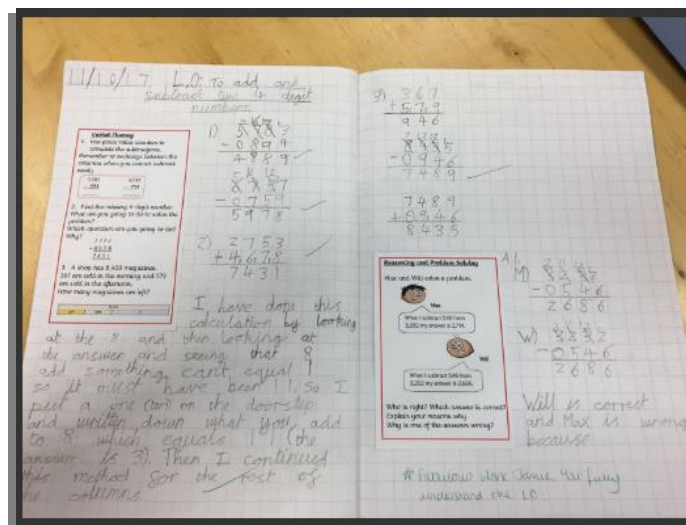


when appropriate to facilitate this process e.g. when the teacher is providing quality first teaching inputs to one year group, the teaching assistant may be utilised in providing immediate intervention for a concept for the other year group, then the 'teacher group' works independently with the support of a TA whilst the other year group receives their quality first teaching input. **Teachers will use their professional judgement to decide how best to utilise this support.**

Teachers should design lessons with an emphasis on the representation of content (Concrete Pictorial Abstract-CPA-approach) and work designed to meet the needs of the objective (objective first, not task). A wide range of resources should be used in order to create specific tasks-teachers should 'dip in' to WRH, Maths No Problem (electronic version), Kenny's Pouch etc to create tailor-made worksheets for their cohorts. All worksheets need to contain Fluency, Problem Solving and Reasoning tasks **EVERY DAY** from Monday-Thursday. Every Friday all children should complete real-life problems, investigations, puzzles etc.

Worksheets should be created using the template provided (examples given)-this would provide consistency of expectation across school and present a uniformed approach to presentation of content and appearance for moderation purposes. Children should record in squared books **not** on the sheet, unless it is a diagram/number-line etc to complete.

Example provided below.



Success Criteria labels will be used as an indicator of the progress that has occurred throughout the course of the lesson. **The labels need to be specific to the year group objective and the Success Criteria specific to each year group.** The success criteria **SHOULD NOT** be generic but **SHOULD BE** differentiated and matched to the children's ability.

The modelling resources used by teachers to facilitate learning should indicate progress clearly and use models and images vital to the children achieving mastery (by the end of the academic year). Marking and assessment within lessons (Verbal



Feedback), at the point of learning, should be an integral part of practice. Please use the 'Next Steps' to further challenge the Greater Depth children or to consolidate learning. It is an expectation that when the children's work merits it, the 'next step' will be given. **Crucially, teachers need to mark and acknowledge the 'next step' feedback by marking and initialling it.**

Example of aligning curriculum content:

Year 2/3 example:

Y2 Place value – Comparing and Ordering Numbers:

- Place Value: Objective 2 - Can recognise the place value of each digit in a two-digit number (tens, ones).

Year 3 Place value – Comparing, ordering and rounding numbers:

- Place Value: Objective 2 - Can recognise the place value of each digit in a three-digit number (hundreds, tens, ones).

Year 3/4 example:

Year 3 Place value – Comparing, ordering and rounding numbers:

- Place Value: Objective 3 - Can compare and order numbers up to 1000.

Year 4 Place value – Comparing, ordering and rounding numbers:

- Place Value: Objective 5 - Can order and compare numbers beyond 1000.

Year 5/6 example:

Year 5 Fractions, decimals and percentages:

- Fractions: Objective 22 - Can compare and order fractions whose denominators are all multiples of the same number.

Year 6 Fractions, decimals and percentages:

- Fractions: Objective 15 - Can compare and order fractions, including fractions less than 1.

Once the objectives have been carefully selected from the MTP, teachers can deliver the content. In the Year 2/3 example, all children would receive the main input to meet the Y3 objective (pre-signalling content for Y2). The Y3 children could then be sent off to begin their task whilst the Y2 children remain with the teacher for the extended input to deliver the Y2 objective (this 'extended' time may only be 5 or 6 minutes depending on the objective/how well the objectives have been aligned). Once the Y2 input has been completed, the teacher would be able to send these children off to begin their task whilst checking the Y3 children and providing appropriate feedback. The teacher must then ensure that ALL children receive appropriate feedback throughout the course of the lesson.

It should be noted that not every objective on the MTP may not require a whole lesson e.g. Year 1 Place Value – Rote counts from 0 – 30 or beyond and back from any given number up to 30. This objective may be addressed in a mental and oral starter, DMM etc.

Autumn Term, September 2020.



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In Autumn Term 2020, place value objectives from the children's current Year Group, will be the first block taught as this content underpins other areas of mathematics and previous Teacher Assessment and monitoring indicates that there were no significant gaps in this knowledge. It is hoped that this will provide children with a confident start to life in their new year group after an unusually long absence due to COVID-19-a confidence that they will, hopefully, be able to maintain throughout their return to 'normal' school life. After place value has been taught and assessed, the next block to be taught will be number-calculations for the reasons mentioned above. After these two blocks have been taught, it will be the teacher's professional judgement that will decide the order and length of blocks taught-as mentioned previously, **it is an expectation and requirement that this is communicated to the Maths Lead prior to the teaching commencing.**

To support with the delivery of mathematics, the DfE and the NCETM have produced some excellent resources to help teachers deliver a coherent curriculum. The guidance, which is non-statutory but **school will use it**, summarises the most important knowledge and understanding and important connections between mathematical topics. These essential elements of knowledge are referred to in the documents 'Ready-to-progress criteria' and are for each block of knowledge-Number and place value (**NPV**), Number facts (**NF**), Addition and Subtraction (**AS**), Multiplication and division (**MD**), Fractions (**F**) and Geometry (**G**).

When delivering the ready-to-progress criteria, please indicate this on the Success Criteria label with '**RTP**' in brackets after the objective. This is for monitoring purposes and to ensure consistency across school. The RTPs need to be taught in order within the block you are delivering. Please note, this guidance **does not** deliver all of the curriculum objectives which we are statutorily required to deliver. To that end, when teaching the RTP objectives, links must be made these RTPs and the other National Curriculum objectives to ensure full curriculum coverage (the teaching of mathematics within school **CANNOT** be solely based on this new guidance). By the end of the academic year, it is still an expectation that all of the curriculum objectives will be delivered for the benefit of all children.

A crucial point to note is that whilst the place value and calculation content is being delivered in the 60 minute maths lesson, the KS2 DMM must be utilised to address any gaps in knowledge that have become apparent from any area of mathematics from the previous year due to COVID 19 e.g. fractions, shape, statistics etc. It is essential that the DMM of 30 minutes is utilised for the maximum benefit of the children-the content taught will vary from cohort to cohort and should be bespoke to that cohort of children's needs and assessment information. **The focus for the DMM needs to be communicated to the Maths Lead using the same process as for the blocks being taught and should happen 'ahead of time'.**

Also, cross curricular links should be made to alleviate some of the time pressures for delivering mathematics e.g. the 'statistics' requirement of the mathematics NC could be taught exclusively in science but the teacher would need to ensure that the maths being delivered (through science) is age appropriate and will be used to satisfy the expectations for the maths curriculum.



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In all year groups, teachers need to use their **professional judgment** to deliver the mathematics curriculum for the maximum benefit for all children within their cohort. In a mixed age class, the children from each year group should have evidence of learning from their own year group rather than it being the same e.g. in Y2/3 – the Y2 children should have evidence of Y2 National Curriculum objectives whereas the Y3 children should have evidence of Y3 National Curriculum Objectives. This also applies to the Year 5/6 mixed age class.

This is a non-negotiable and will not be deviated from for any reason.

There will be **NO** requirement for teachers to produce short term planning, unless they choose to. For moderation purposes, the children's books and teacher's lesson preparation materials (activeinspire files, powerpoints, notebook files etc) will be collected and analysed.

There would be freedom within the teaching sequence to have specific problem solving and specific reasoning lessons where the children are taught the discrete problem solving and reasoning skills necessary to solve problems and reason within various areas of mathematics. Teachers should endeavour to make maths fun and use a range of experiences and practical maths activities to engage the children.

Elements of maths:

Fluency (learning the skills), Problem Solving (applying the learnt skill in different contexts) and Reasoning (thinking more widely about the skill and in different ways).

Children should have access to fluency, problem solving and reasoning **EVERY DAY**-the children may **NOT** always address all three elements but the children need to have access to all three to cater for their needs (GD may not need/choose not to complete all Fluency questions whereas LA may only complete the Fluency etc).

Greater Depth Children

Children who are assessed as being potentially Greater Depth by the end of the academic year should also have access to more complicated/sophisticated questions (NCETM Mastery booklets- 'Mastery with Greater Depth' questions, Higher Ability challenge booklets etc) when **teachers feel it is appropriate to challenge** and using **professional judgement**. There should be evidence in potential GD children's books of these challenges and also the use of scaffolding, layered support designed to challenge understanding to a greater degree. **This will be a specific element of internal monitoring by SLT during the academic year 2020-2021, specifically for the moderation of assessment judgements at the end of each term.**

In summary



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In Key Stage 2, the input for the lesson will be designed to meet the higher objective. The SC label and task will then be differentiated to meet the needs of each year group ensuring full curriculum coverage.

In Key Stage 1, the maths curriculum will be delivered using WRH but there is flexibility with the timings of the blocks-teachers use professional judgement to deliver mathematics for the maximum benefit of the children.

Worksheet will be designed and made by teachers using a wide range of resources and MUST CONTAIN fluency, problem solving and reasoning activities-see the example.

-The DfE and NCETM documents will be used to focus the curriculum objectives for each strand of mathematics-these will then be connected to the National Curriculum objectives to ensure full curriculum coverage.

-In every year group, the worksheet should be trimmed into each different element (F, PS, R) and be glued into books. The children should glue their work in neatly and complete all working out alongside-**NOT** on the sheet.

-Once a week, there will be a real-life problem solving/investigation/puzzle day where ALL children are taught specific problem solving skills and have access to problem solving activity. There needs to be some form of evidence for this in books.

-Every day, in Key Stage 2, for 30 minutes, a Daily Maths Meeting takes place where basic skills, times tables, gaps in knowledge and procedures are revisited and revised. The content for DMM needs to come from your AFL.

Mr. M. Churchill
Deputy Head and Mathematics Subject Lead
June 2020.