

POLICY TITLE	Maths Policy
RESPONSIBLE COMMITTEE	Curriculum Committee
RATIONALE	At the academy we endeavour to ensure our early learners develop into lifelong learners. We strive to provide a safe, secure and stimulating environment where curiosity is welcomed, enquiry is encouraged and learning is fostered.
PURPOSES	At Mersey Primary Academy, we believe that people learn best in different ways. At the academy we provide a rich and varied learning environment to ensure all pupils make at least good progress. Maths is an essential skill for leading a happy, healthy and full life.
GUIDELINES	<p><u>Assessment</u></p> <ul style="list-style-type: none"> • Teachers will, every half term, use the Sheffield STAT assessment grids to assess pupils Maths and identify clear ways forward. • Children who are failing to meet expected progress, are placed on a Cause For Concern list, which is reviewed each half term. • Assessments are moderated at different intervals: <ul style="list-style-type: none"> ○ Half termly by another member of staff who is ‘buddied’ with them. ○ Termly by the cluster academics or whole staff. ○ Groups of children as well as children causing concern are moderated at different points within the moderation cycle. <p><u>Teaching and Learning</u></p> <ul style="list-style-type: none"> • Teachers set challenging teaching and learning objectives which are relevant to all pupils in their classes. These are based on knowledge of pupils’ past and current achievement and the expected standards for pupils of the relevant age range. (Appendix 1 Planning Example) • Teachers teach clearly structured lessons or sequences of work which interest and motivate pupils and which: <ul style="list-style-type: none"> ○ Start with a clear learning objective, taken from the Chris Quigley ‘Essentials’ curriculum, understood by all pupils ○ Have a defined set of criteria for success, taken from ‘STAT’ document ○ Have learners working at their instructional level. ○ Have learners working in the first 3 minutes of learning ○ Ensures learners are not sat listening to teacher inputs for more than 11 minutes ○ Employ interactive teaching methods and collaborative group work, especially the use of the TALK project. ○ Promotes active and independent learning that enables pupils to think for themselves and to plan manage and assess their own learning. ○ Ensure that children are given long enough to complete work, and have opportunities for working for sustained periods of time, appropriate to their age. ○ ICT is used effectively to deepen understanding ○ Presentation of learners work is of a highest standard. ○ Uses ‘Assessment as Learning’ strategies within the lesson to ensure learning is taking place. ○ Uses higher level questioning based on Bloom’s Taxonomy to deepen understanding. ○ Encourages children to mark almost all of their closed number work ○ Focuses on reasoning and the skills of using and applying ○ Follows the progression model as in the Calculation Policy <p><u>Lesson Structure</u></p> <p>Teachers will follow the Same Day Intervention Maths format with the following alterations:</p> <ol style="list-style-type: none"> 1. The lesson will be facilitated over two sessions each day

2. The first session

- 30 minutes long (Singapore: There is no time limit for this session; typically it would be between 25 and 40 minutes.)
- Mixed ability seating
- Teach-practice model where the work is demonstrated by the teacher before being completed by the pupils in books (Singapore: The session will take place in the morning and will stop at the point the teacher would have moved onto the workbook.)
- WAGOLL to introduce, leading into HOQ and the TALK PROJECT
- Independent on whiteboards
- Pupils completing 5 questions within 10 minutes of the session (Singapore: After any whole class input, teachers are encouraged to step back and observe/assess. The teacher will be able to focus on children for relevant learning discussions based on their observations.)
- Mark independently according to marking policy
- Self-assess at the end

3. Between Sessions

- At the end of the session, the teacher should have made appropriate formative assessments, which will enable the teacher to provide extra support for pupils who require it before the second session. (Appendix 2 Marking Example)
- Teacher marks any work which hasn't already been self-marked
- Creates the groups for the same day intervention:
 - SDIB (Same Day Intervention Bronze)
 - ATS - Achieved Target Silver (Age related Fluency/Skills practice)
 - ATG – Achieved Target Gold (Age related Greater Depth)
- The activities will be already be planned by the teacher on a planning pro forma

4. The second session

- The session will take place after marking.
 - The time between sessions will help demonstrate that the pupils have retained the learning from the first session.
 - This session will 30 minutes (Singapore: it will be shorter than first session).
 - Teacher/TA works with SDIB group to help them meet the LO through pictorial or concrete methods
 - ATS and ATG work independently on age related and deeper thinking tasks (problem solving, investigations and reasoning activities)
 - If children have achieved the ATS or ATG, code is highlighted green
 - (Singapore: The pupils will first complete the work in their books, either as a SDI, or independent activity.)
 - The teacher will not mark the work books unless they identify errors or misconceptions.
 - The teacher will mark 1 in 3 Journal/CTG pieces of work.
- Teachers will follow the marking and feedback policy and will provide more teacher led CTGs for higher achieving pupils to facilitate aspirational progress (2 in 3 pieces)
 - Teachers will deliver a mental maths session at least four times a week: CLIC
 - Teachers will provide weekly cross curricular opportunities for using and applying through problem solving.
 - Teachers will provide weekly Maths homework, for KS2 this is to be MyMaths.
 - Children who are identified as in need of additional support will receive 50 daily 1:1 sessions
 - Children in Year 6 will have weekly 1:1 sessions
 - Children in Year 6 will have an extended day
 - Children in Years 1, Years 2 and Years 3 will work from Singapore Maths for lessons to make explicit ARE
 - Children using Singapore Maths will have access to reasoning and mastery learning challenge in Maths books

Academy Environment

- Teachers have consistently high expectations of pupils and build successful relationships, centred on

	teaching and learning. They establish a purposeful learning environment where diversity is valued and where pupils feel secure and confident. <ul style="list-style-type: none"> • Teachers will use the 5Rs consistently to promote and embed learning attitudes and habits to secure independent learners. • Teachers ensure the classroom learning environment includes a working wall for Mathematics. • Families will receive a termly newsletter which sets out learning expectations • Teachers set high expectations for pupils' behaviour and establish a clear framework for classroom discipline in line with the academy behaviour policy. 		
FURTHER DETAILS CONTAINED IN DOCUMENTS	Calculation Policy Assessment Policy	Teaching and Learning Policy Behaviour Policy	Marking and Feedback Policy

DATE APPROVED: SEPTEMBER 2016	NEXT REVIEW DATE (every two years)

Reference Number:	MF-15
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Appendix 1

Short Term Planning

Maths 19.7.16

Year 4

<u>Objective</u>	<u>Context</u>	<u>Success Criteria</u>	<u>Notes</u>										
<u>LO: To multiply</u>	Complete different multiplication problems	<p>YEAR 4 STAT Multiply two-digit and three-digit numbers by a one and two-digit number using formal written layout.</p> <p><u>Fluency</u></p> <table border="1"> <tr><td>1.</td><td>12 × 14 =</td></tr> <tr><td>2.</td><td>13 × 14 =</td></tr> <tr><td>3.</td><td>? = 12 × 17</td></tr> <tr><td>4.</td><td>Find me the product of 13 and 15.</td></tr> <tr><td>5.</td><td>11 × 14 > 13 × 12. True or False?</td></tr> </table> <p><u>STEPS TO MOVING LEARNING FORWARD (CT6):</u></p> <p><u>SDIB</u> Numicon, visual grids, number cards</p> <p><u>ATS</u> What could the numbers in the multiplication be? Every digit is different. ??? × 3 = ????</p> <p><u>ATG</u> Penny says a two digit number multiplied by a one digit number will always give a two digit answer. Is she correct? Justify your answer.</p> <p>Find the mistake that has been made in the calculation below. Explain and correct it.</p> <pre> 47 X 8 --- 3256 </pre>	1.	12 × 14 =	2.	13 × 14 =	3.	? = 12 × 17	4.	Find me the product of 13 and 15.	5.	11 × 14 > 13 × 12. True or False?	<p><u>Vocabulary:</u> product, the sum of, multiply</p> <p><u>Questioning:</u> Justify... Explain your answer... Create... Investigate...</p> <p><u>1:1</u></p>
1.	12 × 14 =												
2.	13 × 14 =												
3.	? = 12 × 17												
4.	Find me the product of 13 and 15.												
5.	11 × 14 > 13 × 12. True or False?												

Assessment

Independent

With Help

Couldn't do it

Appendix 2 Marking and Feedback Example

19/7/16

LO: To multiply

1.	$12 \times 14 =$
2.	$13 \times 15 =$
3.	$? = 12 \times 17$
4.	Find me the product of 14 and 14.
5.	$11 \times 14 > 13 \times 12$. True or False?

1. $12 \times 14 = 168$



2. $13 \times 15 = 182$



$$\begin{array}{r} \text{T O} \\ 13 \\ \times 15 \\ \hline 65 \\ 130 \\ \hline 195 \end{array}$$

VF. Ensure you are completing the correct operation throughout the entire calculation.

16. Complete number two again using the correct operation.

$$\begin{array}{r} \text{T O} \\ 13 \\ \times 15 \\ \hline 165 \\ 130 \\ \hline 195 \end{array}$$



3. $12 \times 17 = 204$



4. $14 \times 14 = 196$



5. That statement is false because the answer to $11 \times 14 = 154$. The answer to $13 \times 12 = 156$. This proves that the second calculation is larger and therefore it should be written down like the following: $11 \times 14 < 13 \times 12$.



S.A. = Today I have been reflective because I used the WAGOLL from the beginning of the lesson to help me.

What could the numbers in the multiplication be? Every digit is different.

$???\times 3 = ????$

$246 \times 3 = 738$

$391 \times 3 = 1173$

$419 \times 3 = 1257$

$731 \times 3 = 2193$

$891 \times 3 = 2673$

This is what the possible digits could be: $891 \times 3 = 2673$



Well done Lucy! You've proved you've been resilient today because you used trial and error with your problem.