

TEACHER INFORMATION

myJEMMdata Student Workbook

The provision of a Junior Elementary Math Mastery (JEMM) student workbook bestows distinct advantages from both educational and practicality viewpoints. Delivering a particularly strong educational component, the workbook slots in perfectly with the Australian Curriculum Sub-strand, Data Representation and Interpretation. Each day students record, summarise and represent their own personal data thereby enhancing their engagement with the learning process in the most positive way. Student employment of various forms of data representation enables them to map their performance, while also serving as a subtle, yet powerful, learning adjunct. The entire workbook flows with the JEMM program so as to maximise time-efficiency.

From a teacher viewpoint the workbook is an invaluable diagnostic tool and assessment record.

If you are new to the JEMM program, before proceeding you will need to read Junior Elementary Math Mastery (2010 Rhonda Farkota OzMath Press) pages iii–x.

Workbook components

Daily Data: Daily, students record and summarise their own data. For incorrect responses, classified as Bugs, students shade the BugKey in the corresponding row on the BugBoard. This allows teachers to continually monitor progress and determine whether remediation is needed.

For example, see myJEMMdata pages 2–9.

Visual representation: This provides foundational knowledge and daily practice in reading and interpreting data to prepare students for the Round task.

For example, see myJEMMdata pages 2–9.

Round task: JEMM is structured into 16 rounds each consisting of 5 lessons. At the end of each round students read, interpret and complete tables and graphs building on the Visual representation foundational knowledge.

For example, see myJEMMdata pages 10–11.

Self-evaluation: After every 4 rounds (20 lessons) students self-evaluate and reflect on their growth in knowledge, understanding and achievement. They record their feelings, providing teachers with insight into their thoughts and opportunity to comment. (Thanks to Kevin Duffy, Principal WA, for his valuable input into the Self-evaluation.)

For example, see myJEMMdata pages 12–13.

JEMMathon: For implementation details see pages 80–83. JEMMathons are restructured lessons that enable students to demonstrate their BugFree status. JEMMathons affirm fluency, further enhance self-efficacy, and assess how well students have consolidated their knowledge and understanding.

For example, see myJEMMdata pages 14–15.

JEMMathon to BugFree: Students convert their scores to percentages to determine their BugFree status. This encourages students to concentrate on personal growth rather than comparison with other students. Conversions should be performed either after each JEMMathon, or after each Marathon.

See myJEMMdata pages 58–61.

Challenge: This is designed to stimulate the thinking process requiring students to reflect on what they have learned. It is implemented at the end of the JEMM program.

See myJEMMdata pages 62–65.

Awards: These motivate and reward students by emphasising growth, effort and completion of tasks.

Club BugFree Award: These are for students who score all correct responses over a number of consecutive lessons. The recommended benchmark for this award is 20 consecutive lessons. Eight awards are provided allowing teachers to lower the benchmark at their discretion.

See myJEMMdata pages 67–69.

Optional awards: These should be assessed in 20 lesson blocks.

See myJEMMdata pages 71–77.

Pretest

Before beginning the program, Lesson 40 and/or Lesson 80 may be used as a pretest. Once Lesson 40 has been completed the results can be compared to the pretest. (Thanks to Far North Queensland Region, Education Queensland, for this suggestion.)

A suggested introductory script for using the Student Workbook

1. *Write on board Lesson 1 and today's date.*
2. *SAY: Open your Student Workbook to page 3 and find Lesson 1. You are going to write your answers to Lesson 1 in this column. Write the DATE above Lesson 1.*
3. *SAY: Now look at page 2 and find the Lesson 1 Workspace. Use this space for working you cannot do in your head.*
4. *Follow the Junior Elementary Math Mastery Lesson 1 script pages 2–3 up to the corrections.*
5. *SAY: Over the coming lessons I may decide to make an award for accurate marking.*
6. *Correct all questions, see Junior Elementary Math Mastery (page viii).*
7. *After corrections and before debugging SAY: Look at page 3 and find the word BugBoard. A Bug is an incorrect response where you are unable to understand why you are wrong. Look at the BugBoard. For those incorrect responses classified as Bugs shade the BugKey on the corresponding row under the column headed one.*
8. *DEBUG see Junior Elementary Math Mastery (page viii).*
9. *After debugging SAY: Look at page 2 and find the arrow at the bottom of the page. The arrow is pointing to the Visual representation images. I'll read what it says. You follow: For each Lesson the whole of my data is represented in a bar made of 5 squares. From the baseline, I summarise my data by shading the number of squares equal to my score. You can see the bar under Lesson 1. From the baseline, shade the number of squares equal to your score.*
10. *Observe and check students have followed correctly.*

Note: At the end of Lesson 5, introduce the first Round task. *SAY: Look at page 3 and find the arrow at the bottom of the page. The arrow is pointing forward. I'll read what it says. You follow: After recording and summarising my data for these 5 lessons, I go to page 10 and complete my Task for this Round.* Everyone turn to page 10 and complete the Round 1 Task.

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Implementation incorporating JEMMathon - Farkota Math Mastery Series:

- Junior Elementary Math Mastery (JEMM) ISBN 978-0-98-079050-4

JEMMathon

After students have self-evaluated their first group of 20 lessons (myJEMMdata page 12), teachers are advised to run a JEMMathon.

A JEMMathon is made up of 5 Marathons. A Marathon is a set of 4 lessons from the previous 20, which the teacher presents (in any order) without any teacher modelling.

The first Marathon (myJEMMdata page 14, coded M01 in the plan below) revisits Lessons 1, 2, 3 and 4 (coded L01–L04) where only the question is presented. The second Marathon (M02) revisits Lessons 5, 6, 7 and 8 (L05–L08) etc. After the first JEMMathon is completed, teachers return to the JEMM program presenting Lessons 21–40 as per the JEMM script.

After students have self-evaluated their second group of 20 lessons (myJEMMdata page 26), teachers run a second JEMMathon (myJEMMdata page 28) then return to the program, and so on. Each of the darker shaded sections below denote a JEMMathon round. A JEMMathon round consists of 20 lessons restructured into 5, effectively adding 20 lessons to the JEMM program.

JEMM L01–L20		JEMM L21–L40		JEMM L41–L60		JEMM L61–L80		
Self-evaluation	M01	L01–L04	Self-evaluation	M06	L21–L24	Self-evaluation	M11	L41–L44
	M02	L05–L08		M07	L25–L28		M12	L45–L48
	M03	L09–L12		M08	L29–L32		M13	L49–L52
	M04	L13–L16		M09	L33–L36		M14	L53–L56
	M05	L17–L20		M10	L37–L40		M15	L57–L60
JEMMathon 1		JEMMathon 2		JEMMathon 3		JEMMathon 4		

Teachers may consider commencing JEMMathons later in the program or adapting them in some other way that better befits the ability of their students. See pages 86–87 for JEMMathon optional template.

JEMMathon Visual Delivery Resources – Free download

<https://shop.acer.edu.au/math-mastery-series>

JEMMathon to BugFree

JEMMathons provide students with the opportunity to demonstrate they are BugFree; they affirm fluency and further enhance self-efficacy. Following the first JEMMathon students should complete JEMMathon 1 Task, myJEMMdata page 58, and then, go to page 60 and convert their own JEMMathon 1 scores to BugFree levels. Conversions should be performed after each JEMMathon.

Sessions Required to Complete the Math Mastery Series

	Number of sessions to complete MMS			
	EMM	JEMM+	JEMM	TOTAL
Teacher delivered scripted lessons	160	120	80	360
Student Self-evaluations	8	6	4	18
Marathons	40	30	20	90
EMM/JEMM+/JEMMathon tasks	8	6	4	18
Round tasks	24	18	12	54
Challenges	4	4	4	12
TOTAL number of sessions required	244	184	124	552