### **GRADE 5**

The learnerThe learnerGrade 5- FIRST QUARTERNumbers and Number1.demonstrates understanding of whole numbers up to 10 000 000.1.is and wwSense1.demonstrates understanding of divisibility, order of operations, factors and multiples, and the four fundamental operations involving fractions1.is is and the op fractions	PERFORMANCE STANDARDS	CONTENT	LEARNING COMPETENCY	CODE	LEARNING MATERIALS	МАТН
Numbers and Number       1.       demonstrates understanding of whole numbers up to 10 000 000.       1.       is an whole numbers up to 10 000 000.         2.       demonstrates understanding of divisibility, order of operations, factors and multiples, and the four fundamental operations involving fractions       2.       is operations involving fractions	he learner		The learner	0021		EQUIPMENT
Number       understanding of       an         Sense       whole numbers up       w         vto 10 000 000.       to         2.       demonstrates       co         understanding of       divisibility, order of       2.         operations, factors       di         and multiples, and       op         the four fundamental       an         operations involving       th         fractions       fu		Grade 5- FIRST C				
	and represent whole numbers up to 10 000 000 in various forms and contexts.	Numbers and Number Sense	1. visualizes numbers up to 10 000 000 with emphasis on numbers 100 001 – 10 000 000.	M5NS-Ia- 1.5	<ol> <li>DLP Gr. 3 Module 1, Gr. 4 Module 1</li> <li>BEAM LG Gr. 4 Module 1- Whole Numbers</li> <li>Lesson Guide in Elem. Math Gr. 4 p. 1</li> <li>MISOSA Gr. 4 Module – Numbers through Billions</li> <li>Lesson Guide in Elem. Mathematics Grade 4. 2005. pp. 1-4</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2005. pp. 1-3</li> <li>Lesson Guide in Elem. Mathematics Grade 4. 2010. pp. 1-4</li> <li>Lesson Guide in Elem. Mathematics Grade 4. 2010. pp. 1-4</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2010. pp. 1-4</li> <li>Lesson Guide in Elem. Mathematics Grade 4. 2010. pp. 1-4</li> <li>Mathematics for Everyday Life Grade 4. 2000. p. 2*</li> <li>Lesson Guide in Elem. Mathematics Grade 4. 2000. p. 2*</li> </ol>	
			<ol> <li>reads and writes numbers up to</li> <li>10 000 000 in symbols and in</li> </ol>	M5NS-Ia- 9.5	<ol> <li>DLP Gr. 3 Module 3, Gr. 4 Module 3</li> <li>BEAM LG Gr. 4 Module 1- Whole Numbers, Gr.</li> </ol>	

CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS	MATH
	The learner	The learner The learner			EQUIPMENT	
					<ol> <li>Lesson Guide in Elem. Math Gr. 4 p. 7, Gr. 5 p. 1</li> <li>Lesson Guide in Elem. Mathematics Grade 4. 2005. pp. 7-9</li> <li>Lesson Guide in Elem. Mathematics Grade 4. 2010. pp. 7-9</li> <li>Mathematics for Everyday Life Grade 4. 2000. pp. 3-5*</li> <li>Mathematics for Everyone Grade 5. 2000. p. 8*</li> <li>Lesson Guide in Elem. Mathematics Grade 4. 2012. pp. 7-9</li> </ol>	
			3. rounds numbers to the nearest hundred thousand and million.	M5NS-Ia- 15.3	<ol> <li>DLP Gr. 3 Module 6, Gr. 5 Module 4</li> <li>BEAM LG Gr. 4 Module – Rounding Off Numbers</li> <li>Lesson Guide in Elem. Math Gr. 4 p. 13</li> <li>MISOSA Gr. 4 Module – Rounding Numbers</li> <li>Lesson Guide in Elem. Mathematics Grade 4. 2005. pp. 13-15; 15-18</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2005. pp. 9-12</li> <li>Lesson Guide in Elem. Mathematics Grade 4. 2005. pp. 9-12</li> <li>Lesson Guide in Elem. Mathematics Grade 4. 2010. pp. 13-18</li> </ol>	

CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS	МАТН
	The learner	The learner	The learner			EQUIPMENT
					<ol> <li>Lesson Guide in Elem. Mathematics Grade 5. 2010. pp. 9-13</li> <li>Mathematics for Everyday Life Grade 4. 2000. 10-13*</li> <li>Grade School Mathematics Grade 4. 2003. p. 16*</li> <li>Lesson Guide in Elementary Mathematics Grade 4. 2012. pp. 13-18</li> <li>DI P. Cr. 4 Modulo 4. Gr</li> </ol>	
			<ol> <li>uses divisibility rules for 2, 5, and 10 to find the common factors of numbers.</li> </ol>	M5NS-Ib- 58.1	<ol> <li>DLP Gr. 4 Module 4, Gr. 5 Module 1, 12</li> <li>Lesson Guide in Elem. Math Gr. 5 p.48</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2005. pp. 44-47</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2010. pp. 48-51</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2012. pp. 48-51</li> </ol>	
			5. uses divisibility rules for 3, 6, and 9 to find common factors.	M5NS-Ib- 58.2	<ol> <li>DLP Gr. 5 Module 1, 12</li> <li>Lesson Guide in Elem. Math Gr. 5 p.51, 57</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2005. pp. 47-50</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2010. pp. 51-54</li> <li>Lesson Guide in Elem.</li> </ol>	

CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY		LEARNING MATERIALS	МАТН
	The learner	The learner	The learner			EQUIPMENT
					Mathematics Grade 5. 2012. pp. 51-54	
			<ol> <li>uses divisibility rules for 4, 8, 12, and 11 to find common factors.</li> </ol>	M5NS-Ib- 58.3	DLP Gr. 5 Module 1, 12	
			7. solves routine and non-routine problems involving factors, multiples, and divisibility rules for 2,3,4,5,6,8,9,10,11, and 12.	M5NS-Ic- 59	<ol> <li>Lesson Guide in Elem. Math Gr. 5 p.57</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2012. pp. 54-59</li> </ol>	
			<ol> <li>creates problems(with reasonable answers) involving factors, multiples and divisibility rules.</li> </ol>	M5NS-Ic- 60		
			9. states, explains, and interprets Parenthesis, Multiplication, Division, Addition, Subtraction (PMDAS) or Grouping, Multiplication, Division, Addition, Subtraction (GMDAS) rule.	M5NS-Ic- 61.2		
			10. simplifies a series of operations on whole numbers involving more than two operations using the PMDAS or GMDAS rule.	M5NS-Id- 62.2		
			11. finds the common factors and the GCF of 2–4 numbers using continuous division.	M5NS-Id- 68.2	<ol> <li>DLP Gr. 5 Module 9</li> <li>BEAM LG Gr. 6 – Number Theory</li> <li>Lesson Guide in Elem. Math Gr. 5 p.33, Gr. 6 p. 148</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2005. pp. 27-31</li> <li>Lesson Guide in Elem.</li> </ol>	

CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS	МАТН
	The learner	The learner	The learner			EQUIPMENT
					<ul> <li>Mathematics Grade 6. 2005. pp. 134-137</li> <li>6. Lesson Guide in Elem. Mathematics Grade 5. 2010. pp. 33-37</li> <li>7. Lesson Guide in Elem. Mathematics Grade 6. 2010. pp. 148-151</li> <li>8. Lesson Guide in Elem. Mathematics Grade 5. 2012. pp. 33-37</li> <li>1. DLP Gr. 5 Module 11</li> <li>2. BEAM LG Gr. 6 –</li> </ul>	
			12. finds the common multiples and LCM of 2–4 numbers using continuous division.	M5NS-Id- 69.2	<ol> <li>BEAM LG Gr. 6 – Number Theory</li> <li>Lesson Guide in Elem. Math Gr. 5 p.44, Gr. 6 p. 151</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2005. pp. 41-44</li> <li>Lesson Guide in Elem. Mathematics Grade 6. 2005. pp. 143-147</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2010. pp. 44-48</li> <li>Lesson Guide in Elem. Mathematics Grade 6. 2010. pp. 151-155</li> <li>Lesson Guide in Elem. Mathematics Grade 6. 2010. pp. 151-155</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2012. pp. 44-48</li> </ol>	
			13. solves real-life problems involving GCF and LCM of 2-3 given numbers.	M5NS-Ie- 70.2		

CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS	МАТН
	The learner	The learner	The learner			EQUIPMENT
			14. creates problems(with reasonable answers)involving GCF and LCM of 2-3 given numbers.	M5NS-Ie- 71.2		
			15. adds fractions and mixed fractions without and with regrouping.	M5NS-Ie- 84	<ol> <li>DLP Gr. 5 Module 16, 22</li> <li>Lesson Guide in Elem. Math Gr. 5 p. 99 – 107</li> <li>MISOSA Gr. 5 Modules on Addition of Fractions and Mixed Forms</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2005. pp. 71-76; 81- 100</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2010. pp. 104-107</li> <li>Mathematics for Everyone Grade 5. 2000. pp. 94-95*</li> <li>Lesson Guide in Elem. Mathematics Grade 4. 2012. pp. 217-227</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2012. pp. 79-111</li> <li>Proded Math. III-A: Adding and Subtracting Similar Fractions</li> <li>Proded Math. IIIB &amp; III-C: Add and Subtract Fractions and Wholes</li> <li>Proded Math. 34-A, 34- B &amp; 34-C: Adding Dissimilar Fractions</li> </ol>	

CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS	МАТН
	The learner	The learner	The learner			EQUIPMENT
					<ol> <li>NFE Accreditation and Equivalency Learning Material. Addition and Subtraction of Fractions. 2001. pp. 6- 23</li> <li>NFE Accreditation and Equivalency Learning Material. Pagdaragdag at Pagbabawas ng mga Praksiyon. 2001. pp. 5- 15</li> </ol>	
			16. subtracts fractions and mixed fractions without and with regrouping.	M5NS-If- 85	<ol> <li>BEAM LG Gr. 5 Module 4 – Subtraction of Dissimilar Fractions</li> <li>Lesson Guide in Elem. Math Gr. 5 p. 140-166</li> <li>MISOSA Gr. 5 Modules on Subtraction of Fractions and Mixed Forms</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2005. pp. 115-151</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2010. pp. 159-165</li> <li>Mathematics for Everyday Use Grade 6. 1999. pp. 103-105*</li> <li>Lesson Guide in Elem. Mathematics Grade 4. 2012. pp. 230-238</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2012. pp. 124-171</li> </ol>	

CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS	MATH
	The learner	The learner	The learner			EQUIPMENT
					<ol> <li>Proded Math. III-A: Adding and Subtracting Similar Fractions</li> <li>Proded Math. IIIB &amp; III-C: Add and Subtract Fractions and Wholes</li> <li>Proded Math. 34-A, 34- B &amp; 34-C: Adding Dissimilar Fractions</li> <li>NFE Accreditation and Equivalency Learning Material. Addition and Subtraction of Fractions. 2001. pp. 26- 31</li> <li>NFE Accreditation and Equivalency Learning Material. Pagdaragdag at Pagbabawas ng mga Praksiyon. 2001. pp. 25-26</li> </ol>	
			17. solves routine and non-routine problems involving addition and/or subtraction of fractions using appropriate problem solving strategies and tools.	M5NS-If- 87.2	<ol> <li>BEAM LG Gr. 5 Module 7 – Application of Subtraction of Fraction</li> <li>Lesson Guide in Elem. Math Gr. 5 p. 119, 172,176</li> <li>MISOSA Gr. 5 Modules on Addition and Subtraction of Word problems involving Fractions</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2005. pp. 106-111; 151-159</li> </ol>	

### PERFORMANCE **CONTENT STANDARDS** LEARNING COMPETENCY MATH **STANDARDS** CONTENT CODE LEARNING MATERIALS EQUIPMENT The learner... The learner... The learner... 18. creates problems (with reasonable answers) involving M5NS-Ifaddition and/or subtraction of 88.2 fractions using appropriate problem solving strategies. 1. DLP Gr. 4 Module 69 2. BEAM LG Gr. 4 Module 10 – Multiplication of Fractions 3. Lesson Guide in Elem. Math Gr. 4 p. 250, Gr. 5 p.180 4. MISOSA Gr. 5 Module -Visualization of Multiplication of Fractions 5. Lesson Guide in Elem. Mathematics Grade 5. 2005. pp. 159-164 19. visualizes multiplication of M5NS-Iq-6. Lesson Guide in Elem. fractions using models. 89 Mathematics Grade 5. 2010. pp. 181-187 7. Mathematics for Everyday Life Grade 4. 2000. p. 132\* 8. Mathematics for Everyone Grade 5. 2000. pp. 112-113\* 9. Lesson Guide in Elem. Mathematics Grade 4. 2012. pp. 250-254 10. Lesson Guide in Elem. Mathematics Grade 5. 2012. pp. 181-187 20. multiplies a fraction and a 1. DLP Gr. 4 Module 70, M5NS-Igwhole number and another 90.1 Gr. 5 Module 25

## K to 12 BASIC EDUCATION CURRICULUM

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CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS	MATH
	The learner	The learner	The learner			EQUIPMENT
			fraction.		<ol> <li>BEAM LG Gr. 4 Module 10 – Multiplication of Fractions</li> <li>Lesson Guide in Elem. Math Gr. 4 p. 254, 261, Gr. 5 p.187, 196, 200</li> <li>MISOSA Gr. 5 Modules –Multiplication of Fractions</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2005. pp. 171-174; 174-177</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2010. pp. 196-200; 203-209</li> <li>Lesson Guide in Elem. Mathematics Grade 4. 2012. pp. 261-263</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2012. pp. 187-191, 196-213</li> <li>BALS Video – Lesson 1: Multiplication and Division of Proper and Improper Fractions</li> <li>Mathematics for</li> </ol>	
			fractions with denominators up to 10.	M5NS-Ig- 91	Everyone Grade 5. 2000. p. 115*	
			22. solves routine or non-routine problems involving multiplication without or with	M5NS-Ih- 92.1	<ol> <li>DLP Gr. 4 Module 71</li> <li>BEAM LG Gr. 4 Module 10 – Multiplication of</li> </ol>	
			addition or subtraction of fractions and whole numbers	7211	Fractions 3. Lesson Guide in Elem.	

CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS	MATH
	The learner	The learner	The learner	0051		EQUIPMENT
			using appropriate problem solving strategies and tools.		<ul> <li>Math Gr. 4 p.264, 269</li> <li>4. MISOSA Gr. 5 Modules <ul> <li>Word problems on</li> <li>Multiplication of</li> <li>Fractions</li> </ul> </li> <li>5. Lesson Guide in Elem.</li> <li>Mathematics Grade 5. <ul> <li>2005. pp. 186-190</li> </ul> </li> <li>6. Lesson Guide in Elem.</li> <li>Mathematics Grade 5. <ul> <li>2010. pp. 213-217</li> </ul> </li> <li>7. Lesson Guide in Elem.</li> <li>Mathematics Grade 4. <ul> <li>2012. pp. 264-272</li> </ul> </li> <li>8. Lesson Guide in Elem.</li> <li>Mathematics Grade 5. <ul> <li>2012. pp. 213-217</li> </ul> </li> </ul>	
			23. creates problems (with reasonable answers) involving multiplication of fractions.	M5NS-Ih- 93.1		
			24. shows that multiplying a fraction by its reciprocal is equal to 1.	M5NS-Ih- 94	<ol> <li>Mathematics for Everyday Use Grade 6. 1999. p. 129*</li> <li>Lesson Guide in Elem. Mathematics Grade 6. 2012. pp. 253-258</li> </ol>	
			25. visualizes division of fractions.	M5NS-Ii- 95	<ol> <li>Lesson Guide in Elem. Mathematics Grade 6. 2005. pp. 249-253</li> <li>Lesson Guide in Elem. Mathematics Grade 6. 2012. pp. 266-270</li> </ol>	
			26. divides - simple fractions - whole numbers by a fraction and vice versa	M5NS-Ii- 96.1	<ol> <li>DLP Gr. 6 Module 38</li> <li>MISOSA Modules Gr.6         <ul> <li>Division of Fractions</li> <li>Lesson Guide in Elem.</li> </ul> </li> </ol>	

CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS	МАТН
	The learner	The learner	The learner			EQUIPMENT
					<ul> <li>Mathematics Grade 6. 2005. pp. 254-257; 257-260</li> <li>4. Lesson Guide in Elem. Mathematics Grade 6. 2010. pp. 270-277</li> <li>5. Mathematics for Everyday Use Grade 6. 1999. pp. 137-139*</li> <li>6. Lesson Guide in Elem. Mathematics Grade 6. 2012. pp. 270-282</li> <li>7. BALS Video – Lesson 1: Multiplication and Division of Proper and Improper Fractions</li> <li>1. Lesson Guide in Elem. Mathematics Grade 6.</li> </ul>	
			27. solves routine or non-routine problems involving division without or with any of the other operations of fractions and whole numbers using appropriate problem solving strategies and tools .	M5NS-Ij- 97.1	<ol> <li>2005. pp. 266-269; 269-273</li> <li>Lesson Guide in Elem. Mathematics Grade 6. 2010. pp. 282-289</li> <li>Mathematics for Everyday Use Grade 6. 1999. pp. 139-144*</li> <li>Lesson Guide in Elem. Mathematics Grade 6. 2012. pp. 282-289</li> </ol>	
			28. creates problems (with reasonable answers) involving division or with any of the other operations of fractions and whole numbers.	M5NS-Ij- 98.1		

CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS	МАТН
30	The learner	The learner	The learner	0051		EQUIPMENT
Grade 5- SECO	ND QUARTER				•	
Numbers and Number Sense	<ol> <li>demonstrates understanding of decimals.</li> <li>demonstrates understanding of the four fundamental operations involving decimals and ratio and proportion.</li> </ol>	<ol> <li>is able to recognize and represent decimals in various forms and contexts.</li> <li>is able to apply the four fundamental operations involving decimals and ratio and proportion in mathematical problems and real-life situations.</li> </ol>	29. gives the place value and the value of a digit of a given decimal number through ten thousandths.	M5NS-IIa- 101.2	<ol> <li>DLP Gr. 6 Module 5</li> <li>Lesson Guide in Elem. Math Gr. 5 p.237, Gr. 6 p. 38</li> <li>MISOSA Module Gr.6 – Place Value of Decimals</li> <li>Lesson Guide in Elem. Mathematics Grade 4. 2005. pp. 151-154</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2005. pp. 211-213</li> <li>Lesson Guide in Elem. Mathematics Grade 6. 2005. pp. 35-39</li> <li>Lesson Guide in Elem. Mathematics Grade 4. 2010. pp. 153-156</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2010. pp. 237-241</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2010. pp. 38-43</li> <li>Grade School Mathematics Grade 4. 2003. p. 166*</li> <li>Lesson Guide in Elem. Mathematics Grade 4. 2012. pp. 153-156</li> <li>Lesson Guide in Elem. Mathematics Grade 4. 2012. pp. 153-156</li> <li>Lesson Guide in Elem. Mathematics Grade 4. 2012. pp. 153-156</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2012. pp. 237-241</li> </ol>	Place Value Chart with Decimal Pockets

CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS	МАТН
	The learner	The learner	The learner			EQUIPMENT
					2012. pp. 38-43 14. NFE Accreditation and Equivalency Learning Material. Addition and Subtraction of Fractions. 2001. pp. 26- 31 15. NFE Accreditation and Equivalency Learning Material. Pagdaragdag at Pagbabawas ng mga Desimal. 2001. pp. 4- 10	
			30. reads and writes decimal numbers through ten thousandths.	M5NS-IIa- 102.2	<ol> <li>DLP Gr. 4 Module 47, Grade 5 Module 30, Gr. 6 Module 6</li> <li>BEAM LG Gr. 5 Decimals, Gr. 6 Module 2</li> <li>Lesson Guide in Elem. Math Gr. 5 p.241, Gr. 6 p.43</li> <li>MISOSA Module Gr.6 – Read and Write Decimals</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2005. pp. 213-217</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2010. pp. 241-247</li> <li>Grade School Mathematics Grade 4. 2003. pp. 152-153, 166, 168</li> <li>Mathematics for</li> </ol>	

CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS LEARNING COMPETENCY	CODE	LEARNING MATERIALS	MATH	
	The learner	The learner	The learner			EQUIPMENT
					Everyday Use Grade 6. 1999. pp. 154-155* 9. Lesson Guide in Elem. Mathematics Grade 4. 2012. pp. 146-148 10. Lesson Guide in Elem. Mathematics Grade 5. 2012. pp. 241-247 11. Lesson Guide in Elem. Mathematics Grade 6. 2012. pp. 43-46	
			31. rounds decimal numbers to the nearest hundredth and thousandth.	M5NS-IIa- 103.2	<ol> <li>DLP Gr. 4 Module 49, Grade 5 Module 31, Gr. 6 Module 8</li> <li>BEAM LG Gr. 5 Decimals, Gr. 6 Module 2</li> <li>Lesson Guide in Elem. Math Gr. 5 p.247, Gr. 6 p.49</li> <li>MISOSA Gr. 5 and 6 Modules –Rounding Decimals</li> <li>Lesson Guide in Elem. Mathematics Grade 4. 2005. pp. 157-160</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2005. pp. 217-219</li> <li>Lesson Guide in Elem. Mathematics Grade 6. 2005. pp. 46-48</li> <li>Lesson Guide in Elem. Mathematics Grade 4. 2005. pp. 46-48</li> <li>Lesson Guide in Elem. Mathematics Grade 4. 2005. pp. 159-162</li> </ol>	

CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS	МАТН
	The learner	The learner	The learner			EQUIPMENT
					Mathematics Grade 5. 2010. pp. 247-251 10. Lesson Guide in Elem. Mathematics Grade 6. 2010. pp. 49-51 11. Mathematics for Everyone Grade 5. 2000. p. 135* 12. Mathematics for Everyday Use Grade 6. 1999. pp. 156-158* 13. Lesson Guide in Elem. Mathematics Grade 4. 2012. pp. 159-162 14. Lesson Guide in Elem. Mathematics Grade 5. 2012. pp. 247-251	
			32. compares and arranges decimal numbers.	M5NS-IIb- 104.2	<ol> <li>DLP Gr. 6 Module 7</li> <li>BEAM LG Gr. 6 Module 2</li> <li>Lesson Guide in Elem. Math Gr. 6 p. 46</li> <li>MISOSA Module Gr.6 – Compare and Order Decimals</li> <li>Lesson Guide in Elem. Mathematics Grade 6. 2005. pp. 42-45</li> <li>Lesson Guide in Elem. Mathematics Grade 6. 2010. pp. 46-49</li> <li>Grade School Mathematics Grade 4. 2000. pp. 153-154*</li> <li>Lesson Guide in Elem. Mathematics Grade 4.</li> </ol>	

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CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS	МАТН
	The learner	The learner	The learner			EQUIPMENT
			33. visualizes addition and subtraction of decimals.	M5NS-IIb- 105	2012. pp. 46-49 Mathematics for Everyday Life Grade 4. 2000. pp. 150, 152* 1. DLP Gr. 4 Module 50, 51, 52, 53, Grade 5	
			34. adds and subtracts decimal numbers through thousandths without and with regrouping.	M5NS-IIb- 106.1	<ol> <li>Module 32, 34</li> <li>BEAM LG Gr. 4 Module 7 – Addition and Subtraction of Decimals, Gr. 5 Module 7</li> <li>Lesson Guide in Elem. Math Gr. 5 p.117, 251, 254, 257, 264</li> <li>MISOSA Gr. 4 and Gr. 5 Modules – Addition and Subtraction of Decimals</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2010. pp. 251-267</li> <li>Mathematics for Everyone Grade 5. 2000. pp. 136-139*</li> <li>Mathematics for Everyday Use Grade 6. 1999. pp. 159-162*</li> <li>Lesson Guide in Elem. Mathematics Grade 4. 2012. pp. 162-169</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2012. pp. 251-267</li> <li>Proded Math. III-C: Add and Subtract Decimals</li> </ol>	

CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS	MATH
	The learner	The learner	The learner			EQUIPMENT
					<ol> <li>Proded Math. III-B: Add and Subtract Mixed Decimals</li> <li>NFE Accreditation and Equivalency Learning Material. Pagdaragdag at Pagbabawas ng mga Desimal. 2001. pp. 19- 21, 27-32</li> </ol>	
			35. estimates the sum or difference of decimal numbers with reasonable results.	M5NS-IIc- 107	<ol> <li>DLP Gr. 6 Module 9</li> <li>Lesson Guide in Elem. Mathematics Grade 6. 2012. pp. 51-54</li> </ol>	
			36. solves routine or non-routine problems involving addition and subtraction of decimal numbers including money using appropriate problem solving strategies and tools.	M5NS-IIc- 108.1	<ol> <li>DLP Gr. 4 Module 54, 55, 56, Grade 5 Module 35</li> <li>BEAM LG Gr. 4 Module 7 – Addition and Subtraction of Decimals, Gr. 5 Module 7</li> <li>Lesson Guide in Elem. Math Gr. 5 p.271</li> <li>MISOSA Gr. 4 Modules – Word Problems on Addition and Subtraction of Decimals</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2010. pp. 268-273</li> <li>Lesson Guide in Elem. Mathematics Grade 6. 2010. pp. 68-70</li> <li>Mathematics for Everyday Life Grade 4. 2000. pp. 156-157,</li> </ol>	

### PERFORMANCE **CONTENT STANDARDS** LEARNING COMPETENCY MATH **STANDARDS** CONTENT CODE LEARNING MATERIALS EQUIPMENT The learner... The learner... The learner... 159\* 8. Grade School Mathematics Grade 4. 2003. pp. 162-163\* 9. Mathematics for Everyone Grade 5. 2000. p. 145\* 10. Mathematics for Everyday Use Grade 6. 1999. pp. 169-171\* 11. Lesson Guide in Elem. Mathematics Grade 4. 2012. pp. 175-188 12. Lesson Guide in Elem. Mathematics Grade 5. 2012. pp. 268-273 13. NFE Accreditation and Equivalency Learning Material. Pagdaragdag at Pagbabawas ng mga Desimal. 2001. pp. 22-26 37. creates problems (with reasonable answers) involving M5NS-IIcaddition and/or subtraction of 109.1 decimal numbers including money. 1. Lesson Guide in Elem. Math Gr. 5 p.274 2. Lesson Guide in Elem. 38. visualizes multiplication of Mathematics Grade 5. M5NS-IIddecimal numbers using 2005. pp. 235-238 110 3. Lesson Guide in Elem. pictorial models. Mathematics Grade 5. 2010. pp. 274-278 4. Lesson Guide in Elem.

CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS	MATH
	The learner	The learner	The learner			EQUIPMENT
			39. multiplies decimals up to 2 decimal places by 1- to 2-digit whole numbers.	M5NS-IId- 111.1	Mathematics Grade 5. 2012. pp. 274-275 1. MISOSA Gr. 5 Module – Multiplication of Decimals and Whole Numbers 2. Lesson Guide in Elem. Mathematics Grade 6. 2010. pp. 80-83 3. Proded Math. 36A: Multiplying Decimals 4. Mathematics for Everyday Use Grade 6. 1999. pp. 174-175*	
			40. multiplies decimals with factors up to 2 decimal places.	M5NS-IId- 111.2	<ol> <li>Lesson Guide in Elem. Math Gr. 5 p.279, 282</li> <li>MISOSA Gr. 5 Module – Multiplication of Decimals through Hundredths</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2012. pp. 279-297</li> <li>Lesson Guide in Elem. Mathematics Grade 6. 2012. pp. 73-89</li> <li>Proded Math. 36-A: Multiplying Decimals</li> <li>Proded Math. 36-B: Multiplying More Decimals</li> <li>Proded Math. 36-C: Multiplying Mixed Decimals</li> <li>NFE Accreditation and Equivalency Learning</li> </ol>	

CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS	MATH
	The learner	The learner	The learner			EQUIPMENT
					Material. Multiplication and Division of Decimals. 2001. pp. 4- 16	
			41. estimates the products of decimal numbers with reasonable results.	M5NS-IIe- 112	<ol> <li>DLP Gr. 6 Module 13</li> <li>MISOSA Module Gr.6 – Estimating Quotients of Decimals</li> <li>Lesson Guide in Elem. Mathematics Grade 6. 2005. pp. 66-68</li> <li>Lesson Guide in Elem. Mathematics Grade 6. 2012. pp. 70-73</li> </ol>	
			42. solves routine and non-routine problems involving multiplication without or with addition or subtraction of decimals and whole numbers including money using appropriate problem solving strategies and tools.	M5NS-IIe- 113.1	<ol> <li>MISOSA Gr. 5 Module – Word Problems on Multiplication of Decimals</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2005. pp. 255-257</li> <li>Lesson Guide in Elem. Mathematics Grade 6. 2005. pp. 88-91; 91-94</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2010. pp. 301-305</li> <li>Lesson Guide in Elem. Mathematics Gr. 6. 2010. pp. 93-100</li> <li>Lesson Guide in Elementary Mathematics Gr. 6. 2012. pp. 93-100</li> <li>Mathematics for Everyone Gr. 5. 2000.</li> </ol>	

CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS	МАТН
	The learner	The learner	The learner			EQUIPMENT
					<ul> <li>pp. 159-161*</li> <li>8. Lesson Guide in Elem. Mathematics Grade 5. 2012. pp. 213-217</li> <li>9. Lesson Guide in Elem. Mathematics Grade 6. 2012. pp. 93-100</li> <li>10. NFE Accreditation and Equivalency Learning Material. Multiplication and Division of Decimals. 2001. pp. 17- 21</li> </ul>	
			43. visualizes division of decimal numbers using pictorial models.	M5NS-IIf- 115	<ol> <li>Lesson Guide in Elem. Math Gr. 5 p.305</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2005. pp. 258-261</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2010. pp. 305-310</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2012. pp. 305-310</li> </ol>	Base 10 Blocks
			44. divides decimals with up to 2 decimal places.	M5NS-IIf- 116.1	<ol> <li>DLP Grade 5 Module 42</li> <li>BEAM LG Gr. 5 Module 13</li> <li>Lesson Guide in Elem. Math Gr. 5 p.314</li> <li>MISOSA Gr. 5 Module – Division of Decimals</li> <li>Lesson Guide in Elementary Mathematics Grade 5. 2012. pp. 310-318</li> <li>Mathematics for</li> </ol>	

CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS	MATH
	The learner	The learner	The learner			EQUIPMENT
					<ul> <li>Everyone Grade 5. 2000. pp. 162-163*</li> <li>7. Lesson Guide in Elem. Mathematics Grade 5. 2012. pp. 310-318</li> <li>8. NFE Accreditation and Equivalency Learning Material. Multiplication and Division of Decimals. 2001. pp. 22- 32</li> </ul>	
			45. divides whole numbers with quotients in decimal form.	M5NS-IIf- 116.2	<ol> <li>Lesson Guide in Elem. Math Gr. 6 p.109</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2005. pp. 261-264</li> <li>Lesson Guide in Elem. Mathematics Grade 6. 2005. pp. 103-105</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2010. pp. 314-318</li> <li>Mathematics for Everyone Grade 5. 2000. pp. 164-165*</li> <li>Lesson Guide in Elem. Mathematics Grade 6. 2000. pp. 109-111</li> </ol>	
			46. estimates the quotients of decimal numbers with reasonable results.	M5NS-IIg- 117	<ol> <li>DLP Gr. 6 Module 18</li> <li>Lesson Guide in Elem. Mathematics Grade 6. 2005. pp. 94-97</li> <li>Lesson Guide in Elem. Mathematics Grade 6. 2012. pp. 100-102*</li> </ol>	

CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS	MATH
	The learner	The learner	The learner			EQUIPMENT
			47. solves routine and non-routine problems involving division without or with any of the other operations of decimals and whole numbers including money using appropriate problem solving strategies and tools.	M5NS-IIg- 120.1	<ol> <li>DLP Grade 5 Module 43</li> <li>BEAM LG Gr. 5 Module 13</li> <li>MISOSA Gr. 5 Module – Word Problems on Division of Decimals</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2005. pp. 268-270</li> <li>Lesson Guide in Elem. Mathematics Grade 6. 2005. pp. 123-129</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2010. pp. 318-321</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2010. pp. 130-136</li> <li>Mathematics for Everyone Grade 5. 2000. pp. 166-167*</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2012. pp. 318-321</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2012. pp. 130-136</li> <li>Mathematics Grade 6. 2012. pp. 318-321</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2012. pp. 130-136</li> <li>NFE Accreditation and Equivalency Learning Material. Multiplication and Division of Decimals. 2001. pp. 32- 41</li> </ol>	
			48. creates problems (with reasonable answers) involving multiplication and/or division	M5NS-IIg- 121.1		

CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS	МАТН
	The learner	The learner	The learner			EQUIPMENT
			or with any of the other operations of decimals and whole numbers including money.			
			49. visualizes the ratio of 2 given numbers.	M5NS-IIh- 122	<ol> <li>MISOSA Gr. 5 Module – Visualization of Ratio</li> <li>Mathematics for Everyday Life Grade 4. 2000. p. 134*</li> <li>Grade School Mathematics Grade 4. 2003. p. 140*</li> </ol>	
			50. expresses ratio using either the colon (:) or fraction.	M5NS-IIh- 123	<ol> <li>DLP Gr. 6 Module 42</li> <li>BEAM LG Gr. 5 Module 9, Gr. 6 Module 11</li> <li>Lesson Guide in Elem. Math Gr. 5 p.218</li> <li>MISOSA Gr. 5 Module – Expressing Ratio</li> <li>Lesson Guide in Elem. Mathematics Grade 6. 2005. pp. 273-276</li> <li>Lesson Guide in Elem. Mathematics Grade 6. 2010. pp. 289-293</li> <li>Mathematics for Everyday Life Grade 4. 2000. p. 136*</li> <li>Grade School Mathematics Grade 4. 2003. p. 141*</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2012. pp. 218-222</li> <li>Lesson Guide in Elem. Mathematics Grade 5.</li> <li>2012. pp. 218-222</li> <li>Lesson Guide in Elem. Mathematics Grade 6.</li> </ol>	

CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS	MATH
	The learner	The learner	The learner			EQUIPMENT
			51. identifies and writes equivalent ratios.	M5NS-IIi- 124	<ol> <li>2012. pp. 289-293</li> <li>DLP Grade 5 Module 29</li> <li>BEAM LG Gr. 5 Module 9</li> <li>Lesson Guide in Elem. Math Gr. 5 p.227</li> <li>MISOSA Gr. 5 Module – Proportion</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2005. pp. 196-200</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2012. pp. 227-231</li> <li>BALS Video – Ratio and Proportion</li> </ol>	
			52. expresses ratios in their simplest forms.	M5NS-IIi- 125	<ol> <li>Lesson Guide in Elem. Math Gr. 5 p.222</li> <li>MISOSA Gr. 5 Module – Ratio in its Simplest Form</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2005. pp. 194-196</li> <li>Lesson Guide in Elem. Mathematics Grade 6. 2005. pp. 276-280</li> <li>Lesson Guide in Elem. Mathematics Grade 6. 2010. pp. 293-297</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2012. pp. 222-226</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2012. pp. 222-226</li> <li>Lesson Guide in Elem. Mathematics Grade 6. 2012. pp. 293-297</li> </ol>	

#### PERFORMANCE **CONTENT STANDARDS** LEARNING COMPETENCY MATH **STANDARDS** CONTENT CODE LEARNING MATERIALS EQUIPMENT The learner... The learner... The learner... 8. BALS Video – Ratio and Proportion 1. DLP Gr. 6 Module 43 2. Lesson Guide in Elem. Mathematics Grade 6. 2005. pp. 280-283 3. Lesson Guide in Elem. Mathematics Grade 6. M5NS-IIi-53. finds the missing term in a 2010. pp. 297-301 pair of equivalent ratios. 126 4. Mathematics for Everyday Life Grade 4. 2000. p. 137\* 5. Mathematics for Everyday Use Grade 6. 1999. pp. 146-147\* Lesson Guide in Elem. M5NS-IIj-54. defines and describes a Mathematics Grade 6. proportion. 127 2012. pp. 289-293 55. recognizes when two M5NS-IIjquantities are in direct 128 proportion. **Grade 5- THIRD QUARTER** demonstrates is able to apply percent DLP Gr. 5 Module 44 1. understanding of percent. in mathematical 2. BEAM LG Gr. 5 Module problems and real-life 14 situations 3. Lesson Guide in Elem. Math Gr. 5 p.321, 325, 56. visualizes percent and its 330, 334 M5NS-4. MISOSA Gr. 5 relationship to fractions, ratios, and decimal numbers IIIa-136 Modules-Percent, using models. Fraction, Ratio and Decimal 5. Lesson Guide in Elem. Mathematics Grade 5. 2005. pp. 280-283 6. Mathematics for

CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS	МАТН
	The learner	The learner	The learner			EQUIPMENT
			57. defines percentage, rate or percent, and base.	M5NS- IIIa-137	<ul> <li>Everyone Grade 5. 2000. p. 172*</li> <li>7. Lesson Guide in Elem. Mathematics Grade 5. 2012. pp. 321-339</li> <li>8. BALS Video – Solving Percentage Problems</li> <li>1. DLP Gr. 6 Module 45</li> <li>2. BEAM LG Gr. 6 Module 17</li> <li>3. Lesson Guide in Elem. Math Gr. 6 p.311</li> <li>4. Lesson Guide in Elem. Mathematics Grade 5. 2005. pp. 283-288</li> <li>5. Lesson Guide in Elem. Mathematics Grade 6. 2005. pp. 292-297</li> <li>6. Lesson Guide in Elem. Mathematics Grade 5. 2010. pp. 339-345</li> <li>7. Lesson Guide in Elem. Mathematics Grade 6. 2010. pp. 311-316</li> <li>8. Mathematics for Everyone Grade 5. 2000. p. 178*</li> <li>9. Mathematics for Everyday Use Grade 6. 1999. p. 198*</li> </ul>	
					10. Lesson Guide in Elem. Mathematics Grade 6. 2012. pp. 311-316	
			58. identifies the base, percentage, and rate in a problem.	M5NS- IIIa-138	<ol> <li>DLP Gr. 6 Module 45</li> <li>Lesson Guide in Elem. Math Gr. 5 p.339</li> </ol>	

#### PERFORMANCE **CONTENT STANDARDS** LEARNING COMPETENCY MATH **STANDARDS** CONTENT CODE LEARNING MATERIALS EQUIPMENT The learner... The learner... The learner... 3. Lesson Guide in Elem. Mathematics Grade 5. 2012. pp. 339-345 1. DLP Gr. 6 Module 46 2. BEAM LG Gr. 6 Module 17 3. Lesson Guide in Elem. Math Gr. 5 p.345 4. Lesson Guide in Elem. Mathematics Grade 5. 2005. pp. 288-291 5. Mathematics for 59. finds the percentage in a M5NS-Everyone Grade 5. given problem. IIIb-139 2000. p. 179\* 6. Mathematics for Everyday Use Grade 6. 1999. p. 199\* 7. Lesson Guide in Elem. Mathematics Grade 5. 2012. pp. 345-350 8. Proded Math. 37-A: Finding Percentage 1. BEAM LG Gr. 6 Module 60. solves routine and non-routine 17 problems involving percentage M5NS-2. Mathematics for using appropriate strategies **IIIb-140** Everyone Grade 5. and tools. 2000. pp. 180-182 61. creates problems involving percentage, with reasonable M5NSanswers. IIIb-141 1. DLP Gr. 4 Module 72 Geoboard, 11 x 11 62. visualizes, names, and is able to construct and M5GE-Geometry demonstrates 2. Lesson Guide in Elem. describes polygons with 5 or describe polygons, understanding of IIIc-19 Math Gr. 5 p.350, 354 more sides. circles, and solid 3. Lesson Guide in Elem. polygons, circles, and

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Page **162** *of 257* **\*These materials are in textbooks that have been delivered to schools.** 

CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS	MATH
	The learner	The learner	The learner			EQUIPMENT
	solid figures.	figures.			Mathematics Grade 5. 2005. pp. 292-294; 295-297 4. Lesson Guide in Elem. Mathematics Grade 5. 2010. pp. 350-357 5. Lesson Guide in Elem. Mathematics Grade 5. 2012. pp. 354-357 6. NFE Accreditation and Equivalency Learning Material. Geometric Shapes. 2001. pp. 14- 15	
			63. describes and compares properties of polygons (regular and irregular polygons).	M5GE- IIIc-20		Template, Shapes
			64. draws polygons with 5 or more sides.	M5GE- IIIc-21	<ol> <li>DLP Gr. 5 Module 46</li> <li>BEAM LG Gr. 5 Geometry</li> </ol>	
			65. visualizes congruent polygons.	M5GE- IIId-22	<ol> <li>Lesson Guide in Elem. Mathematics Gr. 5. 2005. pp. 297-300</li> <li>Lesson Guide in Elem. Mathematics Gr. 5. 2010. pp. 358-362</li> <li>Lesson Guide in Elem. Mathematics Gr. 5. 2012. pp. 358-362</li> </ol>	Geostrips
			66. visualizes and describes a circle.	M5GE- IIId-23.1	<ol> <li>Grade School Mathematics Grade 4. 2003. p. 192*</li> </ol>	Compass, blackboard
			67. identifies the terms related to a circle.	M5GE- IIId-23.2	1. Mathematics for Everyday Life Grade 4. 2000. pp. 180-181*	Compass, blackboard

CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS	МАТН
	The learner	The learner	The learner			EQUIPMENT
					<ol> <li>Grade School Mathematics Grade 4. 2003. p. 192*</li> <li>Lesson Guide in Elem. Mathematics Grade 4. 2012. pp. 280-284</li> </ol>	
			68. draws circles with different radii using a compass.	M5GE- IIIe-24		<ol> <li>Compass, blackboard</li> <li>Compass (For student)</li> </ol>
			69. visualizes and describes solid figures.	M5GE- IIIe-25	<ol> <li>Mathematics for Everyone Grade 5. 2000. pp. 188, 190*</li> <li>BALS Video – Shapes and Figures Around Us</li> </ol>	
			70. makes models of different solid figures: cube, prism, pyramid, cylinder, cone, and sphere using plane figures.	M5GE- IIIe-26		
Patterns and Algebra	demonstrates understanding of the concept of sequence and solving simple equations.	<ol> <li>is able to apply the knowledge of sequence in various situations.</li> <li>is able to use different problem</li> </ol>	<ul> <li>71. formulates the rule in finding the next term in a sequence.</li> <li>e.g.</li> <li>1, 3, 7,15, (15 x 2+1)</li> <li>Possible answers:</li> <li>(x 2 + 1)</li> <li>(+2, +4, +8, +16)</li> </ul>	M5AL- IIIf-6		

CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS	MATH EQUIPMENT
	The learner	The learner The learner	The learner			
		solving strategies.	<ul> <li>72. uses different strategies (looking for a pattern, working backwards, etc.) to solve for the unknown in simple equations involving one or more operations on whole numbers and fractions.</li> <li>e.g. 3 x _ + 1 = 10 (the unknown is solved by working backwards)</li> </ul>	M5AL- IIIf-14		
Measurement	demonstrates understanding of time and circumference.	is able to apply knowledge of time and circumference in mathematical problems and real-life situations.	73. measures time using a 12- hour and a 24-hour clock.	M5ME- IIIg-14	<ol> <li>NFE Accreditation and Equivalency Learning Material. Time. 2001. pp. 5-13</li> <li>NFE Accreditation and Equivalency Learning Material. Oras. 2001. pp. 5-14</li> </ol>	
			74. calculates time in the different world time zones in relation to the Philippines.	M5ME- IIIg-15		
			75. solves problems involving time.	M5ME- IIIg-16	<ol> <li>Mathematics for Everyday Life Grade 4. 2000. pp. 199, 202- 203*</li> <li>NFE Accreditation and Equivalency Learning Material. Time. 2001. pp. 20-33</li> </ol>	
			76. visualizes circumference of a circle.	M5ME- IIIh-67	<ol> <li>BEAM LG Gr. 5 Module 2 - Circumference</li> <li>Mathematics for Everyone Grade 5. 2000. p. 194*</li> </ol>	Compass, blackboard

#### PERFORMANCE **CONTENT STANDARDS** LEARNING COMPETENCY MATH **STANDARDS** CONTENT CODE LEARNING MATERIALS EQUIPMENT The learner... The learner... The learner... 1. Meterstick, Mathematics for Everyone Grade 5. plastic 2000. pp. 194-196\* 77. measures circumference of a M5ME-2. Ruler, 12" or circle using appropriate tools. IIIh-68 30cm 3. Tape Measure, 1.5 meter BEAM LG Gr. 5 Module 1. 2 – Circumference 2. Lesson Guide in Elem. Math Gr. 5 p.362 3. Lesson Guide in Elem. Mathematics Grade 5. 2005. pp. 301-304 78. derives a formula in finding M5ME-4. Lesson Guide in Elem. the circumference of a circle. IIIi-69 Mathematics Grade 5. 2010. pp. 362-366 5. Mathematics for Everyone Grade 5. 2000. p. 195\* 6. Lesson Guide in Elem. Mathematics Grade 5. 2012. pp. 362-366 1. DLP Gr. 5 Module 52 2. BEAM LG Gr. 5 Module 2 – Circumference 3. Lesson Guide in Elem. Math Gr. 5 p.366 79. finds the circumference of a M5ME-4. MISOSA Gr. 5 Module -IIIi-70 Circumference of a circle. Circle 5. Lesson Guide in Elem. Mathematics Grade 5. 2005. pp. 304-307 6. Lesson Guide in Elem.

CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS	MATH
	The learner	The learner	The learner			EQUIPMENT
					Mathematics Grade 5. 2010. pp. 366-369 7. Mathematics for Everyone Grade 5. 2000. pp. 196-197* 8. Lesson Guide in Elem. Mathematics Grade 5. 2012. pp. 366-369 9. NFE Accreditation and Equivalency Learning Material. Measurement, Perimeter and Circumference. 2001. pp. 20-24	
			80. solves routine and non-routine problems involving circumference of a circle.	M5ME- IIIj-71	<ol> <li>P. 20 21</li> <li>BEAM LG Gr. 5 Module 2 - Circumference</li> <li>Lesson Guide in Elem. Math Gr. 5 p.369</li> <li>MISOSA Gr. 5 Module - Word Problems on Circumference</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2005. pp. 307-309</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2010. pp. 369-372</li> <li>Mathematics for Everyone Grade 5. 2000. pp. 198-199*</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2000. pp. 198-199*</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2012. pp. 369-372</li> </ol>	

CONTENT	CONTENT STANDARDS The learner	PERFORMANCE STANDARDS	LEARNING COMPETENCY	Y CODE	LEARNING MATERIALS	МАТН
		The learner	The learner			EQUIPMENT
Grade 5- FOUR	TH QUARTER	I				I
Measurement	demonstrates understanding of area, volume and temperature.	is able to apply knowledge of area, volume and temperature in	81. visualizes area of a circle.	M5ME- IVa-72	<ol> <li>BEAM LG Gr. 5 Module 14 – Area</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2010. pp. 382-386</li> </ol>	<ol> <li>Compass, blackboard</li> <li>Circle Area Demonstrator</li> </ol>
		mathematical problems and real-life situations.	82. derives a formula in finding the area of a circle .	M5ME- IVa-73	<ol> <li>DLP Gr. 5 Module 49</li> <li>BEAM LG Gr. 5 Module 14 - Area</li> <li>Lesson Guide in Elem. Math Gr. 5 p.382</li> <li>MISOSA Gr. 5 Module - Area of a Circle</li> </ol>	
			83. finds the area of a given circle.	M5ME- IVa-74	<ol> <li>DLP Gr. 5 Module 53</li> <li>BEAM LG Gr. 5 Module 14 – Area</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2005. pp. 317-320</li> <li>Lesson Guide in Elem. Math Gr. 5. 2012. pp. 382-386</li> </ol>	
			84. solves routine and non-routine problems involving the area of a circle.	M5ME- IVb-75		
			85. creates problems involving a circle, with reasonable answers.	M5ME- IVb-76		
			86. visualizes the volume of a cube and rectangular prism.	M5ME- IVc-77	<ol> <li>Lesson Guide in Elem. Math Gr. 5 p. 389, Gr. 6 p. 384</li> <li>Mathematics for Everyone Grade 5. 2000. p. 206*</li> <li>BALS Video – Lesson 1: Units of Volume</li> </ol>	<ol> <li>Models Of Deriving Formula For Volume: 1000 pcs – 1 cm linking plastic cubes</li> </ol>

CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS	МАТН
	The learner	The learner	The learner			EQUIPMENT
					1 Losson Cuida in Flore	2. Volume demonstrator set: Includes the following: Cylinder and Cone Volume Comparing Tool, Quadrangular Volume Demonstrator
			87. names the appropriate unit of measure used for measuring the volume of a cube and a rectangle prism.	M5ME- IVc-78	<ol> <li>Lesson Guide in Elem. Math Gr. 6 p.391</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2005. pp. 323-325</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2010. pp. 389-391</li> <li>Mathematics for Everyone Grade 5. 2000. p. 206*</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2012. pp. 389-391</li> <li>BALS Video – Lesson 2: Measuring Volume</li> </ol>	
			88. derives the formula in finding the volume of a cube and a rectangular prism using cubic cm and cubic m.	M5ME- IVc-79	<ol> <li>DLP Gr. 6 Module 57</li> <li>Lesson Guide in Elem. Math Gr. 5 p.392, Gr. 6 p. 388</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2010. pp. 395-399</li> <li>Lesson Guide in Elem. Mathematics Grade 6.</li> </ol>	Basic 3-Dimensional Models

CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS	МАТН
	The learner	The learner	The learner			EQUIPMENT
			89. converts cu. cm to cu. m and vice versa; cu.cm to L and vice versa.	M5ME- IVd-80	<ol> <li>2010. pp. 391-394</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2012. pp. 395-399</li> <li>BALS Video – Lesson 2: Measuring Volume</li> <li>DLP Gr. 5 Module 54</li> <li>BEAM LG Gr. 5 Module 18 – Volume</li> <li>Lesson Guide in Elem. Math Gr. 5 p.395</li> <li>MISOSA Gr. 5 Module – Volume of a Rectangular Prism</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2005. pp. 325-327</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2010. pp. 392-395</li> <li>Lesson Guide in Elem. Mathematics Grade 6. 2010. pp. 388-390</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2012. pp. 392-395</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2012. pp. 392-395</li> </ol>	
				9. Lesson Guide in Elem. Mathematics Grade 6. 2012. pp. 388-390		
			90. finds the volume of a given cube and rectangular prism using cu. cm and cu. m.	M5ME- IVd-81	<ol> <li>Lesson Guide in Elem. Mathematics Grade 5. 2005. pp. 328-331</li> <li>Lesson Guide in Elem. Mathematics Grade 6. 2005. pp. 370-373</li> <li>Mathematics for</li> </ol>	

CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS	МАТН
	The learner	The learner	The learner			EQUIPMENT
					Everyone Grade 5. 2000. pp. 210-211* 4. Lesson Guide in Elementary Mathematics Grade 6. 2012. pp. 391-394 5. BALS Video – Lesson 2: Measuring Volume 1. DLP Gr. 5 Module 55 2. BEAM LG Gr. 5 Module	
			91. estimates and uses appropriate units of measure for volume.	M5ME- IVd-82	<ol> <li>18 - Volume</li> <li>Lesson Guide in Elem. Math Gr. 5 p. 399</li> <li>BALS Video - Lesson 1: Units of Volume</li> </ol>	
			92. solves routine and non-routine problems involving volume of a cube and rectangular prism in real-life situations using appropriate strategies and tools.	M5ME- IVe-83	<ol> <li>Lesson Guide in Elem. Mathematics Grade 5. 2005. pp. 332-334</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2010. pp. 399-402</li> <li>Mathematics for Everyone Gr. 5. 2000. pp. 212-213*</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2012. pp. 399-402</li> <li>BALS Video – Lesson 2: Measuring Volume</li> </ol>	
			93. creates problems (with reasonable answers) involving volume of a cube and rectangular prism in real-life situations.	M5ME- IVe-84	<ol> <li>DLP Gr. 5 Module 56</li> <li>BEAM LG Gr. 5 Module 19 – Temperature</li> <li>Lesson Guide in Elem. Math Gr. 5 p.305</li> </ol>	
			94. reads and measures temperature using	M5ME- IVf-85	1. Lesson Guide in Elem. Mathematics Grade 5.	1. Clinical Thermometer,

CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS	MATH
	The learner	The learner	The learner			EQUIPMENT
			thermometer (alcohol and/or digital) in degree Celsius.		<ol> <li>2005. pp. 336-339</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2010. pp. 405-408</li> <li>Mathematics for Everyday Life Grade 4. 2000. pp. 204-205*</li> <li>Grade School Mathematics Grade 4. 2003. pp. 218-219*</li> <li>Mathematics for Everyone Gr. 5. 2000. pp. 214-215*</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2012. pp. 402-408</li> </ol>	digital 2. Thermometer, Alcohol, -20°C to 110°C
			95. estimates the temperature(e.g. inside the classroom).	M5ME- IVf-86	<ol> <li>DLP Gr. 5 Module 57</li> <li>BEAM LG Gr. 5 Module 19 – Temperature</li> <li>Lesson Guide in Elem. Math Gr. 5 p.409</li> <li>MISOSA Gr. 5 Module – Temperature</li> </ol>	
			96. solves routine and non-routine problems involving temperature in real-life situations.	M5ME- IVf-87	<ol> <li>Lesson Guide in Elem. Mathematics Grade 5. 2005. pp. 339-342</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2010. pp. 409-412</li> <li>Mathematics for Everyday Life Grade 4. 2000. pp. 206-207*</li> <li>Grade School Mathematics Grade 4. 2003. pp. 219, 221*</li> <li>Lesson Guide in Elem.</li> </ol>	

CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS	МАТН
	The learner	The learner	The learner			EQUIPMENT
					Mathematics Grade 5. 2012. pp. 409-412	
			97. creates problems involving temperature, with reasonable answers.	M5ME- IVg-88		
Statistics and Probability	understanding of line graphs and experimental probability.interpret representations of data (tables and line graphs) and apply experimental probability in mathematical problems and real-life situations.	98. collects data on one to two variables using any source.	M5SP- IVg-1.5	<ol> <li>BEAM LG Gr. 5 Module 20 – Line Graph</li> <li>Lesson Guide in Elem. Math Gr. 5 p.417</li> <li>MISOSA Gr. 5 Module – Line Graph</li> </ol>		
		99. organizes data in tabular form and presents them in a line graph.	M5SP- IVg-2.5	<ol> <li>DLP Gr. 5 Module 58, 59</li> <li>BEAM LG Gr. 5 Module 20 – Line Graph</li> <li>Lesson Guide in Elem. Math Gr. 5 p.412</li> <li>Lesson Guide in Elem. Mathematics Gr. 5. 2012. pp. 417-421</li> </ol>		
			100. interprets data presented in different kinds of line graphs (single to double-line graph).	M5SP- IVh-3.5	<ol> <li>Lesson Guide in Elem. Mathematics Grade 5. 2005. pp. 342-346</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2010. pp. 412-417</li> <li>Lesson Guide in Elem. Mathematics Grade 5. 2012. pp. 412-417</li> </ol>	
			101. solves routine and non- routine problems using data presented in a line graph.	M5SP- IVh-4.5		
			102. draws inferences based on data presented in a line graph.	M5SP- IVh-5.5		

CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS	MATH EQUIPMENT
	The learner	The learner	The learner			
			103. describes experimental probability.	M5SP-IVi- 14		
			104. performs an experimental probability and records result by listing.	M5SP-IVi- 15		Calculator, Scientific
			105. analyzes data obtained from chance using experiments involving letter cards (A to Z) and number cards (0 to 20).	M5SP-IVi- 16		
			106. solves routine and non- routine problems involving experimental probability.	M5SP-IVj- 17		
			107. creates routine and non- routine problems involving experimental probability.	M5SP-IVj- 18		

# GLOSSARY

Accuracy	the quality of being correct and precise.
Applying	the skill of using concepts, procedures, algorithms and other mathematical constructs in practical situations and phenomena.
Communicating	the use of notations, symbols, figures, equations and functions to convey mathematical ideas.
Computing	the skill of calculating using correct algorithms, procedures and tools to arrive at a final exact result.
Conjecturing	the skill of formulating mathematical theories that still need to be proven.
Connecting	the skill of integrating mathematics to other school subjects and other areas in life.
Constructivism	the theory that knowledge is constructed when the learner is able to draw ideas from his/her own experiences and connects them to new ideas that are encountered.
Context	a locale, situation, or set of conditions of students that may influence their study and use of mathematics to develop critical thinking and problem solving skills.
Cooperative Learning	learning that is achieved by working with fellow learners as they all engage in a shared task.
Creativity	the skill of using available procedures in Mathematics and non-conventional methods to solve a problem and produce answers.
Critical Thinking	the intellectually disciplined process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, and/or evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communication, as a guide to belief and action (Scriven& Paul, 1987).
Decision-making	the skill of arriving at a choice or decision based on sound, logical procedures and mathematical analyses.
Discovery Learning	learning that is achieved by allowing students to discover new ideas using their experiences (Bruner, 1961).
Estimating	the skill of roughly calculating or judging a numerical value or quantity.
Experiential Learning	learning that occurs by making sense of direct everyday experiences (Kolb, 1984)
Inquiry-based Learning	learning that focuses on students asking questions and finding answers to their questions using their personal experiences.
Knowing and Understanding	meaningful acquisition of concepts that include memorizing and recalling of facts and procedures
Mathematical Problem Solving	finding a solution to a problem that is unknown (Polya, 1945 & 1962).
Modeling	the use of functions and graphs to represent relationships between and among quantities in a phenomenon.
Objectivity	the quality of judging, evaluating and making decisions based on mathematical facts and results without being influenced by subjective conditions.

## GLOSSARY

Perseverance	firmness in finishing a task despite difficulties and obstacles.
Productivity	the quality of pursuing an activity to arrive at a meaningful and useful result or product.
Proving	the skill of demonstrating the truth or falsity of a theory using reasoning and arguments.
Reasoning	the process of explaining using sound analyses, following the rules of logic.
<b>Reflective Learning</b>	learning that is facilitated by deep thinking.
Representing	the use of figures and shapes, variables, equations and functions to concretize and illustrate quantities and their relationships.
Situated Learning	learning in the same context in which concepts and theories are applied.
Solving	to find the answer to an algebraic or mathematical problem using any procedures and tools available.
Visualizing	using one's creativity and imagination to produce images, pictures and other means to represent and understand mathematical concepts (MATHTED & SEI, 2010).

# **Code Book Legend**

# Sample: M7AL-IIg-2

LEGENI	D	SAMPLE		DOMAIN/ COMPONENT	CODE
	Learning Area and Strand/ Subject or Specialization	Mathematics	М7	Number Sense	NS
First Entry	Grade Level	Grade 7	M7	Geometry	GE
Uppercase Letter/s	Domain/Content/ Component/ Topic	Patterns and Algebra	AL		
			-	Patterns and Algebra	
<b>Roman Numeral</b> *Zero if no specific quarter	Quarter	Second Quarter	п		
Lowercase Letter/s*Put a hyphen (-) in between letters to indicate more than a specific weekWeekWeek		Week seven	<b>g</b> Measurement		ME
			-		
Arabic Number	Competency	Solves problems involving algebraic expressions	2	Statistics and Probability	SP

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