

Mobile County Public School
Elementary Mathematics Grade K
Explanation and 2009 ALCOS Changes Preface Guide
2009-2010

In April 2009, the Alabama State Department of Education adopted the new Course of Study for Mathematics. The new course of study (COS) is based upon the National Council of Teachers of Mathematics (NCTM) *Principles and Standards of School Mathematics (PSSM)*, *Curriculum Focal Points for Prekindergarten through Grade 8 Mathematics: A Quest for Coherence and Foundations for Success: The Final Report of the National Mathematics Advisory Panel*. The MCPSS Elementary Mathematics Curriculum Manual was updated to reflect the changes in the new COS, therefore necessitating changes in the quarterly Pacing Guide. Below is information to help teachers maximize their use of the pacing guides.

INTERPRETING THE PACING GUIDES DOCUMENT:

Column 1 – **Alabama Course of Study number:** If there is no number listed, the objective is required locally by MCPSS.

Column 2 – **Manual & Quiztrax number:** The Manual was updated to make sure the Quiztrax numbers are reflective of the Manual numbers.

Column 3 – **Standards & Objectives:** Numbered COS items are bolded since these are the guiding objectives and will be the overall tested standards on the ARMT. If a row is shaded, this denotes a modification of the core objective for the purpose of developmental progression towards overall mastery.

Columns 4 & 5 – **ARMT/SAT10:** Signify that certain objectives are likely to be tested on the ARMT and SAT10.

Columns 6 & 7 - **Taught & Tested:** Allow teachers to record information about when objectives have been taught and tested.

USING THE PACING GUIDE:

The purpose of the Pacing Guide is to supply a scope and sequence of objectives that will be assessed each quarter. The Elementary Mathematics Curriculum Manual provides additional math content and professional knowledge along with clarifying examples of each objective. Pacing information, however, is all contained in the Pacing Guide. The Pacing Guide should be used to plan and prepare units and lessons for instruction each quarter.

Important: After reviewing the pacing for each quarter, each school and grade level should review the longitudinal testing data for the school to determine areas of weakness. Schools may want to add these areas for improvement earlier in the year, as well as, the quarter in which the System assigns to the objective.

What is new for Kindergarten:

NUMBER AND OPERATIONS:

- 1.4 Identify the quantity of a given set of objects from 0-20
- 1.5 Identify the numeral that represents a given set of objects
- 1.6 Identify numerals 0-20 in sequential and nonsequential order
- 2.3 Compose and decompose numbers 1-10
- 2.4 Estimate the number of objects in sets that contain up to 20 objects
- 3.1 Demonstrate addition and subtraction processes needed to solve single-digit problems using authentic situations
- 5.2 Distinguish parts of a whole as equal or not equal

ALGEBRA:

- 6.1 Explain criteria used to sort objects
- 7.1 Create a repeating pattern using multiple representations

GEOMETRY:

- 8.2 Locate shapes in the environment
- 8.3 Combine shapes to fill in the area of a given shape

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 Division of Curriculum & Instruction
KINDERGARTEN MATHEMATICS PACING GUIDE AT A GLANCE
QUARTER 1

ACOS #	Framework/ QuizTrax #	Standards/Objectives	A check mark (✓) indicates the standard is assessed on:		Assessment	
			ARMT	SAT10	Taught	Tested
1	1.1	Count in sequence by ones from 1-10 .				
1	1.4	Identify the quantity of a given set of objects from 0-5 .				
1	1.5	Identify the numeral, 1-5 , that represents a given set of objects.				
1	1.6	Identify numerals 0-5 in sequential and non-sequential order.				
2	2.1	Use one to one correspondence to compare sets of objects up to 5 by using vocabulary terms including more than, less than, most or least				
	2.6	Order a set of up to 7 objects and identify ordinal positions 1 st through 5 th and last.				
6	6.1	Explain criteria used to sort objects.				
7	7.1	Create a repeating pattern using multiple representations.				
	7.2	Recognize, extend and describe patterns using multiple representations.				
	7.3	Complete missing elements in repeating, numerical and visual patterns.				
8	8.1	Identify two-dimensional (plane) shapes including rectangle, square, circle, triangle, hexagon, trapezoid, and rhombus.				
8	8.2	Locate shapes in the environment.				
9	9.1	Describe spatial relationships of objects using positional terms.				
12	12.1	Categorize data on Venn diagrams, pictographs and yes/no charts using real objects, symbolic representations, or pictorial representations.				
	12.3	Respond to questions for the purpose of data collection.				

Highlighted objectives indicate a modification of the core objective for the purpose of developmental progression towards overall mastery. For example, in the *Curriculum Framework* objective 1.1 states, "Count in sequence by ones from 1 to 30." In quarter 1, students are only expected to master counting in sequence from 1 to 10.

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QUARTER 2

ACOS #	Framework/ QuizTrax #	Standards/Objectives	A check mark (✓) indicates the standard is assessed on:		Assessment	
			ARMT	SAT10	Taught	Tested
1	1.1	Count in sequence by ones from 1-15 .				
1	1.2	Count backwards from 10 to 0.				
1	1.4	Identify the quantity of a given set of objects from 0-10 .				
1	1.5	Identify the numeral, 1-10 , that represents a given set of objects.				
1	1.6	Identify numerals 0-10 in sequential and non-sequential order.				
2	2.1	Use one to one correspondence to compare sets of objects up to 7 by using vocabulary terms including more than, less than, most or least.				
2	2.2	Recognize that the quantity remains the same when the spatial arrangement changes.				
2	2.3	Compose and decompose numbers 1-4 .				
2	2.4	Estimate the number of objects in sets that contain up to 10 objects.				
5	5.1	Recognize that a whole object can be divided into parts.				
5	5.2	Distinguish parts of a whole as equal or not equal.				
	5.3	Recognize that a whole object or set of items can be divided into equal parts or fair shares.				
	6.2	Sort objects by more than one attribute.				
8	8.3	Combine shapes to fill in the area of a given shape.				
	8.4	Identify shapes that have symmetry.				
10	10.1	Use vocabulary to compare length, volume or weight of objects.				
12	10.2	Compare and order objects of different lengths, weights, heights, or capacities.				
12	12.1	Categorize data on Venn diagrams, pictographs and yes/no charts using real objects, symbolic representations, or pictorial representations.				
12	12.3	Respond to questions for the purpose of data collection.				

Highlighted objectives indicate a modification of the core objective for the purpose of developmental progression towards overall mastery. For example, in the *Curriculum Framework* objective 1.1 states, "Count in sequence by ones from 1 to 30." In quarter 2, students are only expected to master counting in sequence from 1 to 15.

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QUARTER 3

ACOS #	Framework/ QuizTrax #	Standards/Objectives	A check mark (✓) indicates the standard is assessed on:		Assessment	
			ARMT	SAT10	Taught	Tested
1	1.1	Count in sequence by ones from 1-20 .				
	1.3	Given a number, less than 30, count in sequence by ones to 30.				
1	1.4	Identify the quantity of a given set of objects from 0-15 .				
1	1.5	Identify the numeral, 1-15 , that represents a given set of objects.				
1	1.6	Identify numerals 0-15 in sequential and non-sequential order.				
2	2.1	Use one to one correspondence to compare sets of objects up to 10 by using vocabulary terms including more than, less than, most or least.				
2	2.3	Compose and decompose numbers 1-7 .				
3	3.1	Demonstrate addition processes needed to solve single-digit problems, 0-5 , using authentic situations.				
3	3.2	Illustrate conceptual understanding of joining sets using a variety of materials				
3	3.3	Demonstrate subtraction processes needed to solve single-digit problems, 0-5, using authentic situations.				
3	3.4	Illustrate conceptual understanding of separating sets using a variety of materials.				
4	4.1	Identify coins by name, including penny, nickel, dime, and quarter.				
	4.2	Compare characteristic of coins, such as size, textures, and pictures.				
	4.3	Name the value of individual coins including penny, nickel, dime, and quarter.				
	5.4	Identify an object or a set of objects that have been divided into halves.				
8	8.1	Identify two-dimensional (plane) shapes including rectangle, square, circle, triangle, hexagon, trapezoid, rhombus, and three-dimensional (solid) figures including sphere, cone, and cylinder.				
11	11.1	Use vocabulary associated with the sequence of time, including words related to clocks and calendars.				
	11.2	Relate temperature on a thermometer to the appropriate activity.				
12	12.1	Categorize data on Venn diagrams, pictographs and yes/no charts using real objects, symbolic representations, or pictorial representations.				
12	12.2	Describe collected data.				
12	12.3	Respond to questions for the purpose of data collection.				

Highlighted objectives indicate a modification of the core objective for the purpose of developmental progression towards overall mastery. For example, in the *Curriculum Framework* objective 1.1 states, "Count in sequence by ones from 1 to 30." In quarter 3, students are only expected to master counting in sequence from 1 to 20.

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QUARTER 4

ACOS #	Framework/ QuizTrax #	Standards/Objectives	A check mark (✓) indicates the standard is assessed on:		Assessment	
			ARMT	SAT10	Taught	Tested
1	1.1	Count in sequence by ones from 1-30 .				
1	1.4	Identify the quantity of a given set of objects from 0-20 .				
1	1.5	Identify the numeral, 1-20 , that represents a given set of objects.				
1	1.6	Identify numerals 0-20 in sequential and non-sequential order				
2	2.3	Compose and decompose numbers 1-10 .				
2	2.4	Estimate the number of objects in sets that contain up to 20 objects.				
2	2.5	Relate sets of objects less than 20 to the benchmark-anchor number 10, using pictorial representations and vocabulary.				
2	2.6	Order a set of objects up to 12 and identify ordinal positions 1 st through 10 th and last.				
2	2.7	Count sets of 10 to find out how many in all.				
2	2.8	Use a hundreds chart to count by 5's and 10's.				
3	3.1	Demonstrate addition processes needed to solve single-digit problems, 0-9 , using authentic situations.				
3	3.2	Illustrate conceptual understanding of joining sets using a variety of materials				
3	3.3	Demonstrate subtraction processes needed to solve single-digit problems, 0-9 , using authentic situations.				
3	3.4	Illustrate conceptual understanding of separating sets using a variety of materials.				
	4.4	Determine the monetary value of like coins to 10¢.				
7	7.1	Create a repeating pattern using multiple representations.				
7	7.2	Recognize, extend, describe, and replicate patterns using multiple representations.				
12	12.1	Categorize data on a Venn diagrams, pictographs and yes/no charts using real objects, symbolic representations or pictorial representations.				
12	12.2	Describe collected data.				
12	12.3	Respond to questions for the purpose of data collection.				

Highlighted objectives indicate a modification of the core objective for the purpose of developmental progression towards overall mastery. For example, in the *Curriculum Framework* objective 1.1 states, "Count in sequence by ones from 1 to 30." In quarter 4, students are only expected to master counting in sequence from 1 to 30.