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ARKANSAS MATH FRAMEWORK STANDARDS CORRELATED TO *MOVING WITH MATH®-BY-TOPIC LEVEL A (GRADE 2)*

		Student Book	Skill Builders
	NUMBER AND OPERATIONS		
	Standard 1: Number Sense		
	The student shall understand numbers, ways of representing numbers, relationships among numbers and number systems		
	Whole Numbers		
NO.1.2.1	Use efficient *strategies* to count a given set of objects in groups of 2s and 5s to 100 and in groups of 3s to 30	**AI:** 31 **All:** 71, 72	30-1
NO.1.2.2	Represent a *whole number* in *multiple* ways using *composition* and *decomposition*	**AI:** 20-24	A-7
NO.1.2.3	Connect various physical models and representations to the quantities they represent using number names, numerals and number words to 100 with and without appropriate technology	**AI:** 4, 6-8, 29, 30	A-9
NO.1.2.4	Represent numbers to 100 in various forms	**AI:** 5, 7, 8, 32	A-4
NO.1.2.5	Use multiple models to represent understanding of *place value* including hundreds	**AI:** 44	
NO.1.2.6	Determine relative position using *ordinal numbers* (first through eighteenth	**AI:** 9, 10, 12, 13, 25, 26, 28, 33, 34	A-13
NO.1.2.7	Compare 2 numbers, less than 100 using numerals and =, <, > with and without appropriate *technology*	**AI:** 14-19, 27	3-1
	Rational Numbers		
NO.1.2.8	Communicate the relative position of any number less than 100 (27 is greater than 25 and less than 30)	**AI:** 37	6-1
NO.1.2.9	Represent fractions (halves thirds, fourths, sixths and eighths) using words, numerals, and physical models	**All:** 32-37	6-1 to 6-3, 9-2
NO.1.2.10	Utilize models to recognize that a fractional part can mean different amounts depending on the original quantity		

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	Standard 2: Properties of Number Operations		
	Students shall understand meanings of operations and how they relate to one another		
	Number Theory		
NO.2.2.1	Count on (forward) and back (backward) on a number line and a 100's chart starting at any *whole number* up to 100	**AI:** 35, 36	6-2, 6-3
NO.2.2.2	*Model* and use the *commutative property for addition*	**AII:** 4	A-18
NO.2.2.3	Develop an understanding of the *associative property* of addition using objects	**AII:** 5	
NO.2.2.4	Apply *number theory*	**EMILY HELP!**	
•	determine if a two-*digit* number is *odd* or *even*		
•	use the terms sum, *addends,* and *difference* in an appropriate context (2 + 3 = 5, 2 and 3 are *addends*; 5 is a sum)		
	Whole Number Operations		
NO.2.2.5	Demonstrate various meaning of addition and subtraction	**AII:** 24-27	18-1
NO.2.2.6	Demonstrate various addition and subtraction relationships (property) to solve problems in *contextual situations* involving *whole numbers*	**AII:** 66	A-27
NO.2.2.7	Model, represent and explain division as sharing equally and repeated subtraction in *contextual situations*	**AII:** 74	A-31
	Standard 3: Numerical Operations and Estimation		
	Students shall compute fluently and make reasonable estimates		
	Computational Fluency-Addition and Subtraction		
NO.3.2.1	Develop *strategies* for basic addition facts	**EMILY HELP!**	**EMILY HELP!**
•	counting all		
•	counting on		
•	one more, two more		
•	doubles		
•	doubles plus one or minus one		
•	make ten		
•	using ten frames		
•	*Identity Property* (add zero)		

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NO.3.2.2	Demonstrate multiple *strategies* for adding or subtracting two-*digit whole numbers*	**EMILY HELP!!!**	**EMILY HELP!**
•	*Compatible Numbers*		
•	*compensatory numbers*		
•	informal use of *commutative* and *associative properties of addition*		
NO.3.2.3	Demonstrate *computational fluency* (accuracy, efficiency and flexibility) in addition facts with addends through 9 and corresponding subtractions	**All:** 11, 13	16-1, 16-3
	Application of Computation		
NO.3.2.4	Solve problems using a variety of methods and tools	**All:** 44	22-1 to 22-3
	Estimation		
NO.3.2.5	Use *estimation strategies* to solve addition and subtraction problems and judge the reasonableness of the answer.	**All:** 69	26-5
	ALGEBRA		
	Standard 4: Patterns, Relations and Functions		
	Students shall recognize, describe and develop patterns, relations and functions		
	Sort and Classify		
A.4.2.1	Sort, classify, and label objects by three or more *attributes* in more than one way	**AIII:** 21	A-11
	Recognize, Describe and Develop Patterns		
A.4.2.2	Describe repeating and growing *patterns* in the environment	**AI:** 77	49-3
A.4.2.3	Use *patterns* to count forward and backward when given a number less than or equal to 100	**AI:** 50, 51	9-1, 9-5
A.4.2.4	Identify, describe and extend *skip counting patterns* from any given number	**All:** 71	A-14
A.4.2.5	Identify a number that is more or less than any *whole number* less than 100 using *multiples* of ten	**All:** 41	21-1
A.4.2.6	Recognize, describe, extend, and create repeating and growing *patterns* using a wide variety of materials to solve problems	**All:** 75	31-1
	Standard 5: Algebraic Representations		
	Students shall represent and analyze mathematical situations and structures using algebraic symbols		
	Expressions, Equations and Inequalities		

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A.5.2.1	Select and/or write number sentences to find the unknown in problem-solving contexts involving two-*digit* addition and subtraction using appropriate labels		
A.5.2.2	Express mathematical relationships using *equalities* and *inequalities* (>, <, =, ≠)		
A.5.2.3	Recognize that symbols in an addition or subtraction equation, represent a missing value that will make the statement true		
	Standard 6: Algebraic Models		
	Students shall develop and apply mathematical models to represent and understand quantitative relationships		
	Algebraic Models and Relationships		
A.6.2.1	Use a chart or table to organize information and to understand relationships	**AIII:** 72	
	Standard 7: Analysis of Change		
	Students shall analyze change in various contexts		
	Analyze Change		
A.7.2.1	Interpret and compare *quantitative change*		
	GEOMETRY		
	Standard 8: Geometric Properties		
	Students shall analyze characteristics and properties of 2 and 3 dimensional geometric shapes and develop mathematical arguments about geometric relationships		
	Characteristics and Properties-Three Dimensional		
G.8.2.1	Identify, name, sort and describe *three-dimensional* solids (*cube, sphere, rectangular prism, cone*, and *cylinder*) according to the shapes of *faces*		
	Characteristics and Properties- Two Dimensional		
G.8.2.3	Identify, classify and describe *two-dimensional* geometric figures (rectangle [including square], triangle and circle) using concrete objects drawings, and computer graphics	**AIII:** 12-21	37-1, 38-1, 39-1, 40-1
	Standard 9: Transformation of Shapes		
	Students shall apply transformations and the use of symmetry to analyze mathematical situations		

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	Symmetry and Transformations		
G.9.2.1	Use *lines* of *symmetry* to demonstrate and describe *congruent* figures within a *two-dimensional* figure	**AIII:** 26	A-37, A-40
G.9.2.2	Demonstrate the motion of a single *transformation*		
	Standard 10: Coordinate Geometry		
	Students shall specify locations and describe spatial relationships using coordinate geometry and other representational systems		
	Coordinate Geometry		
G.10.2.1	Extend the use of directional words to include rows and columns		
	Standard 11: Visualization and Geometric Models		
	Students shall use visualization, spatial reasoning and geometric modeling		
	Spatial Visualization and Models		
G.11.2.1	Replicate a simple geometric design from a briefly displayed example or from a description	**AIII:** 14	
G.11.2.2	Create new figures by combining and subdividing models of existing figures		
	MEASUREMENT		
	Standard 12: Physical Attributes		
	Students shall use attributes of measurement to describe and compare mathematical and real-world objects		
	Time: Calendar		
M.12.2.1	Recognize that there are 12 months in a year and that each month has a specific number of days	**AIII:** 52	49-3
	Time: Clock		
M.12.2.2	Recognize that there are 24 hours in a day	**AIII:** 49	A-19
	Money		
M.12.2.3	State the value of all coins and a dollar	**AIII:** 42	48-2
M.12.2.4	Compare the value of all coins	**AIII:** 39	A-46, A-47
	Temperature		
M.12.2.5	Compare temperatures using the Fahrenheit scale on a thermometer		
	Tools and Attributes		
M.12.2.6	Make a simple comparisons within units of like dimension (units of length, *mass*/weight and *capacity)*	**AIII:** 54	

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	Standard 13: Systems of Measurement		
	Students shall identify and use units, systems and processes of measurement		
	Calendar		
M.13.2.1	Use a calendar to determine *elapsed time* involving a time period within a given month	**AIII:** 52	49-3
	Clock		
M.13.2.2	Tell time to the nearest five-minute interval	**AIII:** 50	49-1, 49-2
	Elapsed Time		
M.13.2.3	Determine *elapsed time* in *contextual situations* in hour increments regardless of starting time.	**AIII:** 48	A-49
	Money		
M.13.2.4	Determine the value of a combination of coins up to the dollar	**AIII:** 41	48-1
M.13.2.5	Demonstrate a given value of money up to $1.00 using a variety of coin combinations	**AIII:** 39-41	47-1, 47-2, 48-1
M.13.2.6	Demonstrate a given value of money up to $1.00 using the fewest coins possible	**EMILY HELP!**	**EMIL YHELP!**
M.13.2.7	Represent and write the value of money using the cent sign and in decimal form when using the dollar sign	**AIII:** 38-44	46-1, 46-2, 47-1, 47-2, 48-1
M.13.2.8	Calculate the amount of money, spent with and without *regrouping* in a *contextual situation*	**AIII:** 45	
	Temperature		
M.13.2.9	Read temperatures on a Fahrenheit scale in intervals of ten		
	Applications		
M.13.2.10	Select appropriate customary measurement tools (rulers, balance scale, cup and thermometry) for situations involving length, *capacity* and *mass*	**AIII:** 56	50-2
M.13.2.11	*Estimate* and measure length, *capacity/volume* and *mass* with *non-standard units* to recognize the need for standard *units*	**AIII:** 57	
	Perimeter		
M.13.2.12	Determine the *perimeter* using physical materials (paper clips, craft sticks or grids) and by using measurement tools (rulers)	**AIII:** 58	
	Area		
M.13.2.13	Find the *area* of a region by counting squares on a grid		
	Volume		

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M.13.2.14	Compare and order containers of various shapes and sizes according to their *volume*. (*Volume* is determined by the number of cubic units to fill the container)		
	DATA ANALYSIS AND PROBABILITY		
	Standard 14: Data Representation		
	Students shall formulate questions that can be addressed with data and collect, organize and display relevant data to answer them		
	Collect, Organize and Display Data		
DAP.14.2.1	Identify the purpose for data collection and collect, organize, record and display the data using physical materials (*pictographs, Venn diagrams* and vertical and horizontal *bar graphs*)	**AIII:** 76, 77	50-4 to 50-7
	Standard 15: Data Analysis		
	Students shall select and use appropriate statistical methods to analyze data		
	Data Analysis		
DAP.15.2.1	Analyze and make predictions from data represented in charts ad graphs	**AIII:** 71	
DAP.15.2.2	Make true statements comparing data displayed on a graph or chart	**AIII:** 72	
	Standard 16: Inferences and Predictions		
	Students shall develop and evaluate inferences and predictions that are based on data		
DAP.16.2.1	Make simple predictions for a given set of data	**AIII:** 73	
	Standard 17: Probability		
	Students shall understand and apply basic concepts of probability		
DAP.17.2.1	Describe the *probability* of an event as being more, less, and equally likely to occur	**AIII:** 61	