

Arkansas State Kindergarten Math Standards Alignment to Starfall

Counting and Cardinality

Know number names and the count sequence.

Arkansas Standards	Starfall K Math Alignment
AR.Math.Content.K.CC.A.1 Count to 100 by ones, fives, and ten.	Teacher's Guide Read Me First p. 6 - Hundredth Day Chart Teacher's Guide Read Me First p. 9 - Backpack Bear's Math Games: Count to 100 Teacher's Guide p. 108 - Daily Routines: Number Line (daily) Teacher's Guide p. 115 - Number Bundles Teacher's Guide p. 169 - Count by Fives Teacher's Guide p. 175 - Count by Ones, Fives, and Tens Teacher's Guide p. 230 - Count by Fives Teacher's Guide p. 274 - Count by Fives and Tens Teacher's Guide p. 325 - Counting by Fives and Tens 100th Day of School Supplement p. 2 - 100th Day of School Daily Routines 100th Day of School Supplement p. 4 - Connect the Dots Starfall.com: Math: Numbers "100" Starfall.com: Math: Add & Subtract: Place Value Starfall.com: Math: Kindergarten Mathematics Generators: Counting - Count to 100
AR.Math.Content.K.CC.A.2 Count forward, by ones, from any given number up to 100.	Teacher's Guide Read Me First p. 9 - Backpack Bear's Math Games: Count to 100 Teacher's Guide - Daily Routines: Number Line (daily) Teacher's Guide - Hundreds Chart Routine (daily) Teacher's Guide p. 298 - Counting On Teacher's Guide p. 320 - Counting On from a Given Number 100th Day of School Supplement p. 2 - 100th Day of School Daily Routines
AR.Math.Content.K.CC.A.3 Read, write, and	Teacher's Guide pp. 199 - 248 - Unit 5: Troublesome Teens

represent numerals from 0 to 20.	Teacher's Guide pp. 246-247 - Introduce 20
	Teacher's Guide p. 248 - Learning Centers: Computer
Note: K.CC.A.3 addresses the writing of numbers	Teacher's Guide p. 248 - Learning Centers: A Walk in the Park
and using the written numerals 0-20 to describe	Teacher's Guide p. 249 - Learning Centers: Dot-to-Dot (1-20)
the amount of a set of objects. Due to varied	Teacher's Guide pp. 546-547 - Numbers 10-20
progression of fine motor and visual	Backpack Bear's Math Workbook 1 - Numbers 1 - 20
development, a reversal of numerals is	
anticipated for the majority of students. While	
reversals should be pointed out to students, the	
emphasis is on the use of numerals to represent	
quantities rather than the correct handwriting of	
the actual number itself.	

Counting and Cardinality

Count to tell the number of objects.

Arkansas Standards	Starfall K Math Alignment
AR.Math.Content.K.CC.B.4 Understand the relationship between numbers and quantities; connect counting to cardinality.	Teacher's Guide Read Me First p. 9 - Backpack Bear's Math Games - "Race to 20" Teacher's Guide p. 87 - Using Math Strategies
When counting objects: •Say the numbers in order, pairing each object with only one number and each number with only one object (one to one correspondence).	Teacher's Guide p.92 - Learning Centers: Ways to Represent Numbers Teacher's Guide pp. 109-110 - One-to-One Correspondence and the Number Nine Teacher's Guide pp.112-113 - The Number Zero Teacher's Guide p. 116 - Formative Assessment Teacher's Guide p. 282 - Seeing Number Patterns Starfall.com: Math: Numbers Starfall.com: Math Songs Starfall.com: Math: Numbers: Count Cookies
•Understand that the last number said tells the number of objects counted.	Teacher's Guide pp. 87-88 - The Number Seven Teacher's Guide p.120 - Learning Centers: Number Activity Mats Teacher's Guide pp. 318-319 - Number Representations 1-5 Teacher's Guide pp. 323 - Match Dominoes to Number Cards Teacher's Guide pp. 323-324 - Number Representations 6-10 Starfall.com: Math: Numbers
•Understand that each successive number refers to a quantity that is one larger.	Teacher's Guide p. 40 - Daily Routines: Number Line (daily) Teacher's Guide p. 44 - Daily Routines: Hundreds Chart (daily) Teacher's Guide p.60 - Daily Routines: Place Value (daily)

Note: Students should understand that the number of objects is the same regardless of their arrangement or the order in which they were counted.	Teacher's Guide p. 81 - Count to Five Teacher's Guide pp. 84-85 - The Number Six Starfall.com: Math: Numbers Starfall.com: Math Songs
AR.Math.Content.K.CC.B.5 Count to answer "how many?: •Count up to 20 objects in any arrangement •Count up to 10 objects in a scattered configuration •Given a number from 1-20, count out that many objects Note: As students progress they may first move the objects, counting as they move them. Students may also line up objects to count them. If students have a scattered arrangement, they may touch each item as they count it, or if students have a scattered arrangement, they may finally be able to count them by visually scanning	Teacher's Guide p. 60 - Daily Routines: Number Line - "How Many Days Have We Been in School?" Teacher's Guide p. 248 - "A Walk in the Park" Game Teacher's Guide p. 277 - Learning Centers: Race to 20 Teacher's Guide p. 344 - "Race to 20" Teacher's Guide pp. 354-356 - Arrays to 20 Teacher's Guide pp. 357-359 - Subitizing and Array Review Teacher's Guide p. 360 - Learning Center: Arrays 100th Day of School Supplement p. 2 - 100th Day Transitional Activities

Counting and Cardinality

Compare numbers.

Arkansas Standards	Starfall K Math Alignment
AR.Math.Content.K.CC.C.6 Identify whether the number of objects in one group from 0-10 is greater than (more, most), less than (less, fewer, least), or equal to (same as) the number of objects in another group of 0-10. For example: Use matching and counting strategies to compare value.	Teacher's Guide p. 155 - Evaluate Most, Least, and Same Teacher's Guide pp. 156-158 - Greater Than and Less Than Teacher's Guide pp. 187-188 - Using Ten Frames to Demonstrate More Teacher's Guide p. 189 - Number Line Riddles Teacher's Guide p. 288 - One Less Teacher's Guide p. 342 - One More/One Less Teacher's Guide p. 415 - Pocket Chart Game Teacher's Guide p. 490 - Creating Equal Groups Teacher's Guide p. 633 - How Many More or Less? Starfall.com: Math: Greater Than/Less Than
AR.Math.Content.K.CC.C.7 Compare two numbers between 0 and 20 presented as written numerals. Note: The use of the symbols for greater than/less than should not be introduced in this	Teacher's Guide p. 90 - What Number Comes Between? Teacher's Guide p. 128 - Less Than Teacher's Guide p. 132 - One More Teacher's Guide p. 155 - Evaluate Most, Least, and Same Teacher's Guide p. 187 - "Thumbs Up/Thumbs Down" Teacher's Guide p. 195 - Learning Centers: Banker, Customer -

grade level. Appropriate terminology to use would be more than, less than, or the same as.	"High/Low" Teacher's Guide p. 242 - Estimation Teacher's Guide p. 265 - Number Sense Teacher's Guide p. 288 - One Less Teacher's Guide p. 415 - Mystery Number Game Starfall.com: Math: Add & Subtract: Base Ten Practice
AR.Math.Content.K.CC.C.8 Quickly identify a number of items in a set from 0-10 without counting (e.g., dominoes, dot cubes, tally marks, ten-frames).	Teacher's Guide p. 318 - Toss the Dice Teacher's Guide p. 336 - Tally Marks Teacher's Guide pp. 354-355 - Arrays up to 20 Teacher's Guide p. 358 - Write That Number Teacher's Guide p. 359 - Create Arrays

Operations and Algebraic Thinking

Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.

Arkansas Standards	Starfall K Math Alignment
AR.Math.Content.K.OA.A.1 Represent addition and subtraction using objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions (e.g., 2+3), or equations (e.g., 2+3 =). Note: Expressions and equations are not required but are recommended by the end of kindergarten.	Teacher's Guide p.112 - Story Problems Teacher's Guide p. 296 - Act It Out: Subtraction Teacher's Guide pp. 374-375 - Introduction to Addition Teacher's Guide pp. 376 - Using Addition Strategies to Solve Equations Teacher's Guide pp. 379-380 - Using a Number Line to Add Teacher's Guide pp. 381-383 - Acting It Out Teacher's Guide pp. 417 - Partner to Solve Subtraction Problems Teacher's Guide pp. 428-429 - Little Boy Blue Story Problems Teacher's Guide pp. 430-431 - Subtraction Story Problem Teacher's Guide pp. 457-458 -Subtraction
AR.Math.Content.K.OA.A.2 Solve real-world problems that involve addition and subtraction within 10 (e.g., by using objects or drawings to represent the problem).	Teacher's Guide pp. 377-378 - Using Counters and Ten-Frames Teacher's Guide pp. 382-383 - Create an Addition Story; Drawing Pictures Teacher's Guide p. 383 - Solve Number Stories Teacher's Guide p. 396 - Story Maps Teacher's Guide pp. 418-419 - Subtraction Practice Teacher's Guide pp. 420-421 - Five Little Teddy Bear Subtraction Teacher's Guide p. 422 - Learning Centers: Add and Subtract Starfall.com: Math: Addition & Subtraction: Addition Intro Starfall.com: Math: Addition & Subtraction: Addition Practice Starfall.com: Math: Addition & Subtraction: Addition Within 10

Starfall.com: Math:Addition & Subtraction: Subtraction Intro **Starfall.com:** Math:Addition & Subtraction: Subtraction Within Starfall.com: Math:Add & Subtract: Word Problems Starfall.com: Math: Addition & Subtraction: Word Problems Add To: Change Unknown **Teacher's Guide pp. 350** - Number Bonds to 10 AR.Math.Content.K.OA.A.3 Use objects or drawings to decompose (break apart) numbers **Teacher's Guide pp. 351-352** - Review Number Bonds less than or equal to 10 into pairs in more than **Teacher's Guide p. 353** - Write Equations for Ten one way, and record each decomposition (part) **Teacher's Guide p. 377** - Using Counters and Ten-Frames by a drawing or an equation (e.g., 5 = 2 + 3 and **Teacher's Guide p. 384 -** Learning Centers: Shake, Spill, and 5 = 4 + 1). Add **Teacher's Guide p. 400** - Create Addition Problems to 10 **Teacher's Guide pp. 452-453** - Review Addition *Note: Students should see equations and be* Teacher's Guide pp. 468-469 - Creating Addition and encouraged to recognize that the two parts make the whole. However, writing equations is not Subtraction Equations **Teacher's Guide pp. 620-621** -Composing and Decomposing required. Numbers 6-10 *Starfall.com:* Math: Add & Subtract: Compose/Decompose Tens and Ones Starfall.com: Math: Add & Subtract: Math Helper AR.Math.Content.K.OA.A.4 Find the number **Teacher's Guide p. 352 -** Hanger Activity to 10 that makes 10 when added to the given number **Teacher's Guide pp. 374-375** - Introduction to Addition (e.g., by using objects or drawings) and record **Teacher's Guide pp. 381-383** - Act It Out! the answer with a drawing or equation. **Teacher's Guide pp. 453-454** - Ways to Write an Addition Equation/Writing Equations/Solving Addition Equations Teacher's Guide p. 468 - Plus and Minus Game *Note: Use of different manipulatives such as* ten-frames, cubes, or two-color counters, assists **Teacher's Guide p. 474** - Addition and Subtraction Journal Page students in visualizing these number pairs. **Teacher's Guide p. 508** - Missing Number Starfall.com: Math: Add & Subtract: Math Helpers Starfall.com: Math: Add & Subtract: Make 10 Numbers Starfall.com: Math: Make 10 Objects AR.Math.Content.K.OA.A.5 Fluently add and **Teacher's Guide p. 375** - Using Addition Strategies **Teacher's Guide pp. 379-380** - Using a Number Line to Add subtract within 10 by using various strategies Teacher's Guide pp. 381-383 - Acting It Out! and manipulatives. **Teacher's Guide pp. 393-394** - Strategies to Solve Story *Note: Fluency in this standard means accuracy* Problems (correct answer), efficiency (a reasonable **Teacher's Guide p. 421** - "Add and Subtract" amount of steps), and flexibility (using various **Teacher's Guide p. 429** - "Little Boy Blue" Subtraction strategies). Fluency is developed by working with **Teacher's Guide p. 433** - Practice with Coins Teacher's Guide pp. 434-436 - Using a Number Line to Subtract many different kinds of objects over an extended period of time. This objective does not require the **Teacher's Guide p. 437** - "Add and Subtract" students to instantly know the answer. **Teacher's Guide p. 438** - Summative Assessment: Subtraction **Teacher's Guide pp. 452-454** - Review Addition **Teacher's Guide pp. 455-456** - Review Strategies for Adding Teacher's Guide pp. 457-458 - Subtraction

Problems

Teacher's Guide p. 471 - Adding and Subtraction with Money **Teacher's Guide p. 472** - Adding and Subtracting using Money **Teacher's Guide pp. 473-474** - Addition and Subtraction Story

Number and Operations in Base Ten

Work with numbers 11-19 to gain foundations for place value.

Arkansas Standards	Starfall K Math Alignment
AR.Math.Content.K.NBT.A.1 Develop initial understanding of place value and the base-ten number system by showing equivalent forms of whole numbers from 11 to 19 as groups of tens and ones using objects and drawings.	Teacher's Guide pp. 546-547 - Numbers 10-20 Teacher's Guide pp. 548-549 - Recognize Numbers and Sets of 10 to 20 Teacher's Guide pp. 550-551 - Teens Practice Teacher's Guide pp. 552-553 - Place Value Teacher's Guide p. 555 - Learning Centers: Summative Assessment Starfall.com: Math: Add & Subtract: Place Value Starfall.com: Math: Add & Subtract: Addition Within 20 Starfall.com: Math: Add & Subtract: Compose/Decompose

Measurement and Data

Describe and compare measureable attributes.

Arkansas Standards	Starfall K Math Alignment
AR.Math.Content.K.MD.A.1 Describe several measurable attributes of a single object, including but not limited to length, weight, height, and temperature.	Teacher's Guide pp.126-127 - Measurement Teacher's Guide pp.132-133 - Sort by Attribute Teacher's Guide pp. 508-509 - Measure Distance Teacher's Guide pp. 510-511 - Classroom Size Comparison Teacher's Guide pp. 512-514 - Comparing Surface Area

Note: Vocabulary may include short, long, heavy, light, tall, hot, cold, warm, or cool.	Starfall.com : Math: Geometry & Measurement: Measurement Starfall.com : Math: Geometry & Measurement: Weight
AR.Math.Content.K.MD.A.2 Describe the difference when comparing two objects (side-by-side) with a measurable attribute In common, to see which object has more of or less of the common attribute. Note: Vocabulary may include shorter, longer, taller, lighter, heavier, warmer, cooler, or holds more.	Teacher's Guide pp. 28-29 - Introduce Measuring with Rectangles, Match Lengths, Compare Rectangles Teacher's Guide pp. 126 - 127 - Introduce Measurement Teacher's Guide p. 268 - Taller or Shorter? Teacher's Guide p. 284 - One Less Teacher's Guide p. 285 - One More Starfall.com: Math: Geometry & Measurement: Measurement

Measurement and Data

Classify objects and count the number of objects in each category.

Arkansas Standards	Starfall K Math Alignment
AR.Math.Content.K.MD.B.3 Classify, sort, and count objects using both measurable and non-measureable attributes such as size, number, color, or shape.	Teacher's Guide p. 132 - Sort by Attribute Teacher's Guide p. 133 - Different Ways to Sort Teacher's Guide p. 134 - Sorting Objects Teacher's Guide pp. 189-190 - Sorting Coins Teacher's Guide pp. 288-289 - Sorting Items Into Groups
Note: Limit category count to be less than or equal to 10. Students should be able to give the reason for the way the objects were sorted.	Teacher's Guide p. 290 - Sorting Shapes 100th Day of School Supplement p. 4 - Sorting 100 Objects

Measurement and Data

Work with time and money.

Arkansas Standards	Starfall K Math Alignment
•Understand concepts of time including morning, afternoon, evening, today, yesterday, tomorrow, day, week, month, and year.	Teacher's Guide - Calendar Routine (daily) Teacher's Guide - Weather Routine (daily) Teacher's Guide - Number Line Routine (daily) Teacher's Guide - Place Value Routine (daily)

•Understand that clocks, both analog and digital, and calendars are tools that measure time.	Teacher's Guide - Hundreds Chart Routine (daily) Teacher's Guide p. 583 - Which Measuring Tool Would I Use? Teacher's Guide p. 586 - Numbers on a Clock Teacher's Guide p. 589 - Hands of a Clock/Different Types of Clocks Teacher's Guide p. 590 - Hands on the Clock
AR.Math.Content.K.MD.C.5 Read time to the hour on digital and analog clocks. Note: This is an introductory skill and is addressed more formally in the upcoming grade levels.	Teacher's Guide p. 583 - Which Measuring Tool Would I Use? Teacher's Guide p. 586 - Numbers on a Clock Teacher's Guide p. 589 - Hands of a Clock/Different Types of Clocks Teacher's Guide p. 590 - Hands on the Clock Teacher's Guide p. 593 - Summative Assessment Starfall.com: - Geometry & Measurement: Time Starfall.com: Math Songs: "The Time Song"
AR.Math.Content.K.MD.C.6 Identify pennies, nickels, and dimes, and know the value of each. Note: This is an introduction skill and is addressed more formally in the upcoming grade levels.	Teacher's Guide p. 166 - Introduce the Penny Teacher's Guide p. 167 - Introduce the Penny Rhyme Teacher's Guide p. 169 - Introduce the Nickel Teacher's Guide p. 170 - Examine the Nickel Teacher's Guide p. 171 - Compare Nickel and Penny Teacher's Guide p. 172 - Introduce a Dime Teacher's Guide p. 173 - Examine the Dime Teacher's Guide p. 174 - Partner Share Teacher's Guide p. 175 - Introduce "Coin Town" Teacher's Guide p. 176 - Color Pennies, Nickels, and Dimes Teacher's Guide p. 177 - "Coin Town" Game Teacher's Guide p. 177 - Coin Concentration Teacher's Guide p. 189 - Money Review Teacher's Guide p. 191 - Which is Worth More? Teacher's Guide p. 471 - Adding and Subtracting with Money Teacher's Guide p. 624 - Patterns Using Coins Starfall.com: Math - "Coin Concentration" Starfall.com: Math - "Coin Sort"

Geometry

Identify and describe shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres).

Arkansas Standards	Starfall K Math Alignment
AR.Math.Content.K.G.A.1 Describe the positions of objects in the environment and	Teacher's Guide pp.128-129 - Ordinal Numbers

geometric shapes in space using names of shapes, and describe the relative positions of these objects. Note: Positions could be inside, outside, between, above, below, near, far, under, over, up, down, behind, in front of, next to, to the left of, to the right of, or beside.	Teacher's Guide pp. 152-153 - Introduce Positional Words Teacher's Guide p. 160 - Positional Words Teacher's Guide p. 623 - Position Words
AR.Math.Content.K.G.A.2 Correctly name shapes regardless of their orientations or overall size. Note: Orientation refers to the way the shape is turned (upside down, sideways).	Teacher's Guide pp. 18-19 - Review One, Preview Two (Properties of a circle) Teacher's Guide pp. 21-22 - Preview Three (Properties of a Triangle) Teacher's Guide pp. 24-25 - Preview Four (Properties of a rectangle and square) Teacher's Guide p. 134 - Computer Center Teacher's Guide p. 150 - Identify shapes in the Environment Teacher's Guide pp. 265-266 - Shape Properties Starfall.com: Math - Geometry and Measurement: Triangles & Make Shapes Starfall.com: Math - Geometry and Measurement: Puzzles Starfall.com: Math - Geometry and Measurement: 2D/3D Shapes
AR.Math.Content.K.G.A.3 Identify shapes as two-dimensional (flat) or three-dimensional (solid).	Teacher's Guide pp. 265-267 - Shape Properties Teacher's Guide pp. 268-269 - Introduce Cube Teacher's Guide pp. 271-273 - Introduce the Rectangular Prism Teacher's Guide pp. 274-275 - Introduce the Cone Teacher's Guide pp. 282-283 - Introduce the Cylinder Teacher's Guide pp. 284 - Introduce the Sphere Teacher's Guide pp. 286-287 - Introduce the Square Pyramid Teacher's Guide pp. 302 - Sorting 2D and 3D Shapes Starfall.com: Math: Geometry and Measurement: 2D/3D Sort Starfall.com: Math: Geometry and Measurement: 3D Space

Geometry

Analyze, compare, create, and compose shapes.

Arkansas Standards	Starfall K Math Alignment
AR.Math.Content.K.G.B.4 Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal	Teacher's Guide pp. 265-266 - Shape Properties Teacher's Guide p. 269 - Introduce the Math Net Teacher's Guide p. 272- Introduce the Rectangular Prism

language to describe their similarities, differences, parts (e.g., number of sides and vertices/corners), and other attributes (e.g., having sides of equal length). Note: 2-D shapes: squares, circles, triangles, rectangles, and hexagons 3-D shapes: cube, cone, cylinder, and sphere	Math Net Teacher's Guide p. 275 - Introduce the Cone Math Net Teacher's Guide p. 282 - Introduce the Cylinder Math Net Teacher's Guide p. 283 - Properties of a Cylinder Teacher's Guide p. 285 - Compare Circles and Spheres Teacher's Guide p. 287 - Introduce the Square Pyramid Math Net Teacher's Guide p. 289 - Sort Items Into Groups Teacher's Guide p. 296-297 -Backpack Bear's Treasure Hunt Teacher's Guide p. 301 - Graphing 3-D Shapes Teacher's Guide p. 303 - Distinguishing 2D and 3D Shapes
AR.Math.Content.K.G.B.5 Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and by drawing shapes.	Teacher's Guide p. 151 - Draw Shapes Teacher's Guide p. 267 - Draw Shapes with Shaving Cream Teacher's Guide p. 276 - Learning Centers: Play Dough Shape Town Teacher's Guide p. 297 - Draw Shapes Teacher's Guide p. 304 - Learning Centers: Play Dough 3-D Shapes Teacher's Guide p. 304 - Learning Centers: Constructing 3-D Shapes
AR.Math.Content.K.G.B.6 Compose two-dimensional shapes to form larger two-dimensional shapes. For example: Join two squares to make a rectangle or join six equilateral triangles to form a hexagon.	Teacher's Guide p. 134 - Computer Center Teacher's Guide pp. 265-266 - Shape Properties Teacher's Guide p. 273 - Cubes and Rectangular Prisms Starfall.com: Math: Geometry and Measurement: Triangles & Make Shapes Starfall.com: Math: Geometry and Measurement: Puzzles

^{*}The standards in this document were copied directly from the *Arkansas Academic Standards: Arkansas Mathematics Standards.*