

Arizona State Kindergarten Math Standards Alignment to Starfall

Counting and Cardinality (CC)

K.CC.A Know number names and the count sequence

Arizona Standards	Starfall K Math Alignment
K.CC.A.1 Count to 100 by ones and by tens.	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. 274 - Count by Fives and Tens 100th Day of School Supplement pp. 2-4 - 100th Day of School Activities Starfall.com: Math: Numbers Starfall.com: Math: Add & Subtract: Place Value Starfall.com: Math: Kindergarten Mathematics Generators: Counting - Count to 100
K.CC.A.2 Count forward from a given number other than one, within the known sequence (e.g., "Starting at the number 5, count up to 11.")	Teacher's Guide p. 64 - Daily Routine: Number Line (daily) Teacher's Guide p. 212 - Counting on from 10-20 Teacher's Guide p. 298 - Counting On Teacher's Guide p. 320 - Counting On from a Given Number Teacher's Guide p. 379 - Counting On Using the Number Line Teacher's Guide p. 546 - Counting on from 10 Teacher's Guide p. 560 - Counting On Starfall.com: Math: Numbers: Train
K.CC.A.3 Write numbers from 0 to 20. Represent a number of objects with a written numeral 0 to 20 (with 0 representing account of no objects).	Teacher's Guide pp. 199 - 248 - Unit 5: Troublesome Teens Teacher's Guide pp. 246-247 - Introduce 20 Teacher's Guide p. 248 - Learning Centers: Computer Teacher's Guide p. 248 - Learning Centers: A Walk in the Park Teacher's Guide p. 249 - Learning Centers: Dot-to-Dot (1-20) Teacher's Guide pp. 546-547- Numbers 10-20 Backpack Bear's Math Workbook 1 - Numbers 1 - 20

K.CC.B Count to tell the number of objects.

Arizona Standards	Starfall K Math Alignment
K.CC.B.4 Understand the relationship between numbers and	Teacher's Guide Read Me First p. 9 - Backpack Bear's Math

quantities; connect counting to cardinality. a. When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object (one to one correspondence).	Games - "Race to 20" Teacher's Guide p. 87 - Using Math Strategies 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
 b. Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted (cardinality). c. Understand that each successive number name refers to a quantity that is one larger (hierarchical inclusion). 	Teacher's Guide pp. 87-88 - The Number Seven Teacher's Guide pp. 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 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) 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
K.CC.B.5 Count to answer questions about "How many?" when 20 or fewer objects are arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1 to 20, count out that many objects.	Teacher's Guide p. 60 - Daily Routines: Number Line - "How Many Days Have We Been in School?" Teacher's Guide p. 277 - Learning Centers: 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

K.CC.C Compare numbers.

Arizona Standards	Starfall K Math Alignment
K.CC.C.6 Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group. (Include groups with up to ten objects.)	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
K.CC.C.7	Teacher's Guide p. 128 - Less Than

Teach "High/ Teach Teach	ner's Guide p. 187 - "Thumbs Up/Thumbs Down" ner's Guide p. 195 - Learning Centers: Banker, Customer - /Low" ner's Guide p. 265 - Number Sense ner's Guide p. 415 - Mystery Number Game nall.com: Math: Add & Subtract: Base Ten Practice
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Operations and Algebraic Thinking (OA)

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

Arizona Standards	Starfall K Math Alignment
K.OA.A.1 Represent addition and subtraction concretely.	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 Starfall.com: Math: Add & Subtract: Math Helpers
K.0A.A.2 Solve addition and subtraction word problems and add and subtract within 10. See Table 1.	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: Subtraction Intro Starfall.com: Math:Addition & Subtraction: Subtraction Intro Starfall.com: Math:Addition & Subtraction: Subtraction Within 10 Starfall.com: Math:Add & Subtract: Word Problems Starfall.com: Math: Addition & Subtraction: Word Problems Add To: Change Unknown
K.0A.A.3 Decompose numbers less than or equal to 10 into pairs in more than one way (e.g., using fingers, objects, symbols, tally marks, drawings, expressions).	Teacher's Guide pp. 350 - Number Bonds to 10 Teacher's Guide pp. 351-352 - Review Number Bonds Teacher Guide p. 353 - Write Equations for Ten Teacher's Guide p. 377 - Using Counters and Ten-Frames

	Teacher's Guide p. 384 - Learning Centers: Shake, Spill, and Add Teacher's Guide p. 400 - Create Addition Problems to 10 Teacher's Guide pp. 452-453 - Review Addition Teacher's Guide pp. 468-469 - Creating Addition and Subtraction Equations Teacher's Guide pp. 620-621 - Composing and Decomposing Numbers 6-10 Starfall.com: Math: Add & Subtract: Compose/Decompose Tens and Ones Starfall.com: Math: Add & Subtract: Math Helpers
K.0A.A.4 For any number from 1 to 9, find the number that makes 10 when added to the given number (e.g., using fingers, objects, symbols, tally marks, drawings, or equation).	Teacher's Guide p. 352 - Hanger Activity to 10 Teacher's Guide pp. 374-375 - Introduction to Addition Teacher's Guide pp. 381-383 - Act It Out! 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 Teacher's Guide p. 474 - Addition and Subtraction Journal Page 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
K.OA.A.5 Fluently add and subtract within 5.	Teacher's Guide p. 466 - Addition and Subtraction Equation Cards Teacher's Guide p. 469 - What's My Sign? Teacher's Guide p. 475 - Learning Centers: Flash Card Game Teacher's Guide p. 622 - Addition Game Day Teacher's Guide p. 623 - Subtraction Ball Toss Teacher's Guide p. 625 - Play "What's the Operation? Teacher's Guide p. 625 - What's the Operation? Teacher's Guide pp. 632-633 - Addition and Subtraction Starfall.com: Math: Add & Subtract: Addition Intro Starfall.com: Math: Add & Subtract: Addition Practice Starfall.com: Math: Add & Subtract: Subtraction Intro Starfall.com: Math: Add & Subtract: Subtraction Within 10 Starfall.com: Math: Add & Subtract: Subtraction Practice

Number and Operations in Base Ten (NBT)

K.NBT.A Work with numbers 11 to 19 to gain foundations for place value.

Arizona Standards	Starfall K Math Alignment
K.NBT.A.1 Compose and decompose numbers from 11 to 19 into ten ones and additional ones by using objects, drawings and/or equations. Understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones (e.g., 18 = 10 + 8).	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: Subtraction: Within 20 Starfall.com: Math: Add & Subtract: Compage (Decompage)
Starfall.com: Math: Add & Subtract: Compose/Decompose

K.NBT.B Use place value understanding and properties of operations to add and subtract.

Arizona Standards	Starfall K Math Alignment
K.NBT.B.2 Demonstrate understanding of addition and subtraction within 10 using place value.	Teacher's Guide p. 431 - "Backpack Bear Says" Teacher's Guide p. 432 - Subtraction Flash Cards Teacher's Guide p. 471 - Adding and Subtracting with Money Starfall.com: Math: Add & Subtract: Addition Within 10 Starfall.com: Math: Add & Subtract: Place Value Starfall.com: Math: Add & Subtract: Subtraction Within 10

Measurement and Data (MD)

K.MD.A Describe and compare measurable attributes.

Arizona Standards	Starfall K Math Alignment
K.MD.A.1 Describe measurable attributes of a single object (e.g., length and weight).	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 Starfall.com: Math: Geometry & Measurement: Measurement Starfall.com: Math: Geometry & Measurement: Weight
K.MD.A.2 Directly compare two objects with a measurable attribute in common to see which object has "more of" or "less of" the attribute, and describe the difference (e.g., directly compare the length of 10 cubes to a pencil and describe one as longer or shorter).	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

K.MD.B Classify objects and count the number of objects in each category.

Arizona Standards	Starfall K Math Alignment
K.MD.B.3 Classify objects into given categories; count the number in each category and sort the categories by count. (Note: limit category counts to be less than or equal to 10.)	Teacher's Guide pp. 36-37 - Explore Shapes Teacher's Guide pp. 41-42 - Introduce Octagon and Review 2D Shapes Teacher's Guide pp. 132-133 - Sort By Attribute Teacher's Guide p. 134 - Learning Centers: Sorting Objects

	Teacher's Guide pp. 288-289 - 3-D Shape Museum Day Teacher's Guide p. 290 - Sorting Shapes Teacher's Guide p. 624 - Pattern Using Coins Starfall.com: Math: Geometry & Measurement: Button Sort
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Geometry (G)

K.G.A Identify and describe shapes.

Arizona Standards	Starfall K Math Alignment
K.G.A.1 Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind, and next to.	Teacher's Guide pp.128-129 - Ordinal Numbers Teacher's Guide pp. 152-153 - Introduce Positional Words Teacher's Guide p. 160 - Positional Words Teacher's Guide p. 623 - Position Words
K.G.A.2 Correctly name shapes regardless of their orientation or overall size (e.g., circle, triangle, square, rectangle, rhombus, trapezoid, hexagon, cube, cone, cylinder, sphere).	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
K.G.A.3 Identify shapes as two-dimensional (lying in a plane, 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: 2-D/3D Shapes Starfall.com: Math: Geometry and Measurement: 3D Space

K.G.B Analyze, compare, create, and compose shapes.

Arizona Standards	Starfall K Math Alignment
K.G.B.4	Teacher's Guide pp. 265-266 - Shape Properties

Analyze and compare two-dimensional and three-dimensional shapes, in different sizes and orientations, using informal 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).	Teacher's Guide p. 269 - Introduce the Math Net Teacher's Guide p. 272- Introduce the Rectangular Prism 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. 301 - Graphing 3-D Shapes Teacher's Guide p. 303 - Distinguishing 2D and 3D Shapes Teacher's Guide p. 296-297 -Backpack Bear's Treasure Hunt
K.G.B.5 Model shapes in the world by building shapes from components (e.g., use sticks and clay balls) and 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
K.G.B.6 Use simple shapes to form composite shapes. For example, "Can you join these two triangles with full sides touching to make a rectangle?	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 $Arizona\ Department\ of\ Education\ High\ Academic\ Standards\ for\ Students.$

Arizona Mathematics Standards Kindergarten

Table 1. Common Addition and Subtraction Problem Types/Situations.¹

	Result Unknown	Change Unknown	Start Unknown
Add to	Teacher's Guide	Teacher's Guide	Starfall.com Website: Add & Subtract
	Magic Math Moment (p.65)	Use Coins to Solve Problems(p. 192)	Add & Subtract Strategies
	Magic Math Moment (p.112)		
		Formative Assessment: Story	
	Magic Math Moment (p.150)	Problem #2 (p. 193)	
	Magic Math Moment (p. 189)	Place Value and Equations	
		with Ten-Frames (p.213)	
	Math Bags and Coins (P. 192)		
		Creating Numbers Using	
	Magic Math Moment (p.215)	Ten-Frames (p. 214)	

Number Riddles/Introduce 19: Number Riddles (More/Less) Summative Assessment: (p.244)Represent Numbers (p. 235) Domino Math (p. 334) Magic Math Moment: One More (p. 286) Sorting Dominoes (p. 335) Formative Assessment: **Complete Number Sentences** Summative Assessment (p. 345) (p.338)Introduce Hanger Activities to "Missing Number Game" (p.350)(p. 351 - 352) Solving for X (p. 392) Learning Centers: Equation Flashcards (p. 360) Formative Assessment: What Number is Missing? (p 392) Learning Centers: Summative Assessment (p. 360) Create and Solve a Number Magic Math Moment: Sequence (p. 396) Introduce "Operation" (p. 374) Using Addition Strategies Going Shopping (p. 398) (p.375)Formative Assessment: "Let's Using Addition Strategies to GO Shopping" Worksheet (p. 398) Solve Equations (p. 376) Using the Number Line to Add Magic Math Moment: Missing (p. 379) Number (p.508) Formative Assessment: Use Count on Using Connect Cubes the FLoor Number Line to Add (p. 546) (p. 380) Count on Using Place Value Magic Math Moment: Addition Sticks and Bundles (p.546 Equation Cards (Counting On) -547) (p. 381) Acting Out Story Problems (pp. 381 - 382) Starfall.com Website: Add & Subtract Operators & Drawing Pictures (p. 383) Operands: 12? Learning Centers: Shake, Spill, • Add & Subtract and Add (p. 384) Strategies Word Problems: Add Learning Centers: "What's To/Change Unknown Your Answer?" (p. 384) Unknown Addend Base Ten Practice Missing Numbers: Building Addition Number Stories (p.

*Math Workbook 1*Worksheet 10 (p. 15)

391)

Magic Math Moment: Flash Card Game (p. 393)

Strategy Demonstration (p. 393)

Using Strategies to Solve Story Problems (p.394)

Create and Solve a Number Sequence (p. 396)

Formative Assessment: Story Maps (p. 396)

Addition and Subtraction Problems: Listen for Addition and Subtraction Clues (p. 473-474)

Formative Assessment: Calendar Questions (p. 561)

Magic Math Moment: (More Than/Less Than Riddles (p. 604)

Play "What's the Operation?" (p.625)

Starfall.com Website: Add & Subtract

- Addition with 10
- Addition within 20
- Addition Practice
- Addition Intro
- Word Problems: Add To/Result Unknown
- Two Digit Addition
- Add & Subtract Strategies
- Base Ten Practice

Math Workbook 2

- Domino Math (p. 5)
- Number Combinations for 8 and 9 (p. 7)
- Addition: Read It, Draw It, Solve It (p. 10)
- Addition Equations (p. 11)

- Worksheet 11 (p. 25)
- Worksheet 12 (p. 27)
- Worksheet 13 (p. 29)
- Worksheet 14 (p. 31)
- Worksheet 15 (p.33)
- Worksheet 16 (p. 35)
- Worksheet 17 (p. 37)
- Worksheet 18 (p. 39)
- Worksheet 19 (p. 41)
- Worksheet 20 (p. 43)

Math Workbook 2

- Number Combinations for 6 and 7 (p. 6)
- Solve for X (p. 12)

	 Little Bo Peep - Addition (p. 13) Mary Had a Little Lamb - Addition (p. 14) Addition Equations (p. 20) Addition: Color by Equation (p.21) Addition and Subtraction Within 5 (p. 24) Addition and Subtraction with Money (p. 27) Addition and Subtraction Journal Page (p. 28) What's the Operation (p. 45) Let's Add; Let's Subtract; Let's Add AND Subtract (p. 46) 		
Take from	Teacher's Guide Count Down from Five (p. 47) Magic Math Moment: Story Problem (p.112) Counting Backwards to Zero (p. 113) Magic Moment: Less Than (p. 128) Magic Moment: One Less (p. 130) Magic Math Moment: Number Line Riddles (p. 189) Magic Math Moment: Act It Out:Subtraction (p. 296) Partner to Solve Subtraction Problems (p. 417) Teacher's Guide p. 418 Counting Backward Teacher's Guide pp. 418-419 Subtraction Practice:	Teacher's Guide "Little Boy Blue" Story Problems (p. 428-429) Starfall.com Website: Add & Subtract Add & Subtract Strategies Word Problems : Take From/Change Unknown	Starfall.com Website: Add & Subtract Add & Subtract Strategies Word Problems: Take From/Start Unknown

Drawing Pictures Strategy	
Teacher's Guide p. 421 "Five Little Teddy Bears" Subtraction Story	
Teacher's Guide p. 422 High/Low Card Game	
Teacher's Guide pp.428-429 "Little Boy Blue" Story Problems	
Teacher's Guide p. 430 Number Line Subtraction	
Teacher's Guide p. 430 Acting Out Story Problems	
Formative Assessment (p. 431)	
Let's Go Shopping (p. 432 - 433)	
Using the Number Line to Subtract (p. 434)	
Formative Assessment: Train Subtraction (p. 435 -436)	
Review Subtraction Strategies (p. 457)	
Act Out Subtraction (p. 457)	
Draw to Solve a Problem (P. 458)	
Formative Assessment: Weather Subtraction (p. 458)	
"Disappearing Train Cube Subtraction" Game (p. 467)	
Adding and Subtracting with Money (Pp 471)	
Addition and Subtraction Story Problems: Listen for Addition and Subtraction Clues (p. 473-474)	
Magic Math Moment: More	

	Than/Less Than Riddles (p. 604) Subtraction Ball Toss (p. 623) Play "What's the Operation?" (p. 625) Addition and Subtraction (pp. 632-633) Starfall.com Website: Add & Subtract Word Problems: Take From/Result Unknown Subtraction Intro Subtraction Within 10 Subtraction Within 10 Subtraction Within 20 Math Workbook 2 Subtraction: Read It; Draw It; Solve It (p. 15) S Little Bears - Subtraction (p. 16) Little Boy Blue - Subtraction (p. 18) Weather Subtraction (p. 18) Weather Subtraction (p. 22) Subtraction: Color by Equation (p. 23) Addition and Subtraction Within 5 (p. 24) Addition and Subtraction with Money (p. 27) What's the Operation (p. 45)		
	Total Unknown	Addend Unknown	Both Addends Unknown ²
Put Together / Take Apart ³	Teacher's Guide	Teacher's Guide	Teacher's Guide
	Magic Math Moment (p.65) Magic Math Moment (p.112)	Use Coins to Solve Problems(p. 192)	Directionality of Equations: (p. 322)
	Magic Math Moment (p.150)	Demonstrate Story Problem #1 (p. 193)	Introduce Number Combinations of 6 (pp. 336-337)
	Magic Math Moment (p. 189) Magic Math Moment (p. 192)	Place Value and Equations with Ten-Frames (p.213)	Representations of 7 (p. 337)

Complete Number Sentences Combinations of 8 (p. 341) Magic Math Moment (p.215) (p. 338) Create Combinations of 9 (p. Number Riddles/Introduce 19: Missing Number Game (p. 350) 343) Number Riddles (More,Less) (p.244)Solving for X. (p.392) Create a 10-Chain (p. 350) Domino Math (p. 334) Use a Story Map (p. 395) Introduce Hanger Activity to 5 Sorting Dominoes (P. 335) Create and Solve a Number (p. 351-352) Sequence (p. 396) Summative Assessment (p. Hanger Activity to 10 (p. 352) 345) Formative Assessment: "Let's Go Shopping" Worksheet (p. Write Equations for Ten (p. Introduce Hanger Activities to 398) 353) 5 (p. 351 - 352) "Little Boy Blue" Subtraction Create Arrays (p. 359) Learning Centers: Equation (p.429)Flashcards (p. 360) Summative Assessment: Magic Math Moment: issing Hanger Activity (p. 360) **Learning Centers: Summative** Number (p. 508) Assessment (p. 360) Use Counters and Ten-Frame Count On Using Place Value Strategies (pp. 377-378) Magic Math Moment: Sticks and Bundles (p. Introduce "Operation" (p. 374) 546-547) Different Ways to Make 5 (p. 378) **Using Addition Strategies** Magic Math Moment: How Summative Assessment: Create (p.375)MAny More or Less? (p.632) Addition Problems to 10: (p. 400) Using Addition Strategies to Solve Equations (p. 376) Starfall.com Website: Review Strategies for Adding Add & Subtract Using the Number Line to Add (p.455)(p. 379) Word Problems: Put Together/Take Ways to Show Numbers (p. Formative Assessment: Use Apart-Addend 562) the Floor Number Line to Add Unknown (p. 380) Magic Math Moment: Addition Equation Cards (Counting On) Starfall.com Website: Add & Subtract (p. 381) Make 10 Objects Acting Out Story Problems (pp. My Coin Book 1 381-382) My Coin Book 2 Drawing Pictures (p. 383) Math Workbook 2 Learning Centers: Shake, Spill, Shake, Spill, and Add to 5 (p. 9) and Add (p. 384) "What's Your Answer?" (p. 384) **Building Addition Number**

Stories (p. 391) Magic Math Moment: Flash Card Game (p. 393) Strategy Demonstration (p. 393) Using Strategies to Solve Story Problems (p.394) Create and Solve a Number Sequence (p. 396) Formative Assessment: Story Maps (p. 396) Addition and Subtraction Problems: Listen for Addition and Subtraction Clues (pp. 473-474) Formative Assessment Calendar Questions (p. 561) Magic Math Moment: (More Than/Less Than Riddles (p.604)Play "What's the Operation?" (p.625)Starfall.com Website: Add & Subtract • Word Problems: Put Together/Take Apart-Total Unknown • Addition with 10 • Addition within 20 • Addition Practice • Addition Intro • Two Digit Addition Add & Subtract Strategies Base Ten Practice Math Workbook 2 • Domino Math (p. 5) Addition and Subtraction with Money (p. 27) Addition and Subtraction Journal

Page (p. 28)
• Let's Add; Let's

	Subtract; Let's Add AND Subtract (p. 46)		
	Difference Unknown	Bigger Unknown	Smaller Unknown
Compare	Teacher's Guide		
	Magic Math Moment: Using Math Strategies (p. 87)		
	Greater Than and Less Than (p. 156 - 157)		
	Magic Math Moment: "Thumbs-Up,Thumbs-Down" (p. 186)		
	Demonstrate More and Less (p.186)		
	Using Ten-Frames to Demonstrate More (p. 187)		
	Formative Assessment: Partner Share (p. 188) Equivalent Coins (p. 190)		
	Formative Assessment: Which is Worth More? (p. 191)		
	Summative Assessment: Banker, Customer (p. 195)		

¹ Adapted from Box 2-4 of Mathematics Learning in Early Childhood, National Research Council (2009, pp. 32, 33).

but always does mean is the same quantity as.

Standards for Mathematical Practices

The following Mathematical Practices were an underlying basis in the creation of mathematics lessons and activities included in the Starfall Kindergarten Math Curriculum. This chart includes several examples of lessons that specifically address each Mathematical Practice.

Mathematical Practices	Starfall K Math ALignment
K.MP.1 Make sense of problems and persevere in solving them.	Teacher's Guide pp. 334-335 - Addition to Five Teacher's Guide p. 350 - Number Bonds of Ten Teacher's Guide pp. 354-356 - Arrays Up to 20 Teacher's Guide pp. 374-375 - Introduction to Addition

² These take apart situations can be used to show all the decompositions of a given number. The associated equations, which have the total on the left of the equal sign, help children understand that the = sign does not always mean makes or results in

³ Either addend can be unknown, so there are three variations of these problem situations. Both Addends Unknown is a productive extension of this basic situation, especially for small numbers less than or equal to 10.

	Teacher's Guide pp. 377-378 - Using Counters and Ten Frames
	Teacher's Guide pp. 379-380 - Using a Number Line to Add
	Teacher's Guide pp. 381-382 - Acting it Out
	Teacher's Guide pp. 391-392 - Missing Numbers
	Teacher's Guide pp. 393-394 - Strategies to Solve Story
	Problems
	Teacher's Guide pp. 395-396 - Story Maps
	Teacher's Guide pp. 416-417 - Introduce Subtraction
	Teacher's Guide pp. 418-419 - Subtraction Practice
	Teacher's Guide pp. 420-421 - "Five Little Teddy Bears"
	Subtraction
	Teacher's Guide pp. 428-429 - "Little Boy Blue" Story Problems
	Teacher's Guide pp. 430-431 - Subtraction Story Problems
	Teacher's Guide pp. 434-436 - Using a Number Line to Subtract
	Teacher's Guide pp. 455-456 - My Answer Is
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	Teacher's Guide p. 459 - Subtraction Equations
	Teacher's Guide pp. 466-467 - Review Addition and
	Subtraction Facts
	Teacher's Guide pp. 430-431 - Subtraction Story Problems
	Teacher's Guide pp. 468-469 - Creating Addition and
	Subtraction Equations
www.a.a.a.a.a.a.a.a.a.a.a.a.a.a.a.a.a.a	m 1 1 0 11 0 m v. 1 11 11 11 11 11 11 11 11 11 11 11 11
K.MP.2 Reason abstractly and quantitatively.	Teacher's Guide p. 375 - Using Addition Strategies
	Teacher's Guide p. 376 - Using Addition Strategies to Solve
	Equations
	Teacher's Guide pp. 381-383 - Acting It Out
	Teacher's Guide p. 391 - Building Addition Number Stories
	Teacher's Guide p. 392 - Solving for X
	Teacher's Guide pp. 393-394 - Strategies to Solve Story
	Problems
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K.MP.3 Construct viable arguments and critique the reasoning of others.	Teacher's Guide p. 500 - Measure Objects Teacher's Guide p. 502 - Learning Centers: Measure the Objects Teacher's Guide p. 374 - Introduce "Operation" Teacher's Guide p. 375 - Using Addition Strategies Teacher's Guide p. 376 - Using Addition Strategies to Solve Equations Teacher's Guide pp. 377-378 - Use Counters and Ten-Frame Strategies Teacher's Guide pp. 379-380 - Using a Number Line to Add Teacher's Guide pp. 381 - Addition Equation Cards (Counting On) Teacher's Guide pp. 381-382 - Acting It Out Teacher's Guide pp. 383 - Drawing Pictures Teacher's Guide pp. 384 - Solve Number Stories Teacher's Guide pp. 391 - Five Little Bees" Teacher's Guide pp. 391 - Building Addition Number Stories Teacher's Guide pp. 392 - Solving For X Teacher's Guide pp. 393-394 - Strategies to Solve Story Problems Teacher's Guide pp. 393-394 - Strategies to Solve Story Problems Teacher's Guide pp. 397-398 - Addition With Coins Teacher's Guide pp. 397-398 - Addition With Coins Teacher's Guide pp. 400 - Learning Centers: Summative Assessment: Create Addition Problems to 10 Teacher's Guide p. 414-415 - Greater Than/Less Than Game Day Teacher's Guide p. 416 - Subtraction as an Operation Teacher's Guide pp. 417 - Partner to Solve Subtraction Problems Teacher's Guide pp. 417 - Partner to Solve Subtraction Problems Teacher's Guide pp. 419 - Read It, Draw It, Solve It Practice Teacher's Guide pp. 419 - Represent Subtraction Teacher's Guide pp. 420-421 - "Five Little Boy Blue" Story Problems Teacher's Guide pp. 420-421 - "Five Little Teddy Bears" Subtraction Teacher's Guide pp. 432-433 - Subtraction Story Problems Teacher's Guide pp. 434-436 - Using a Number Line to Subtract Teacher's Guide pp. 432-433 - Subtraction and Money Teacher's Guide pp. 455-456 - My Answer Is Teacher's Guide pp. 455-456 - My Answer Is Teacher's Guide pp. 457-458 - Subtraction Teacher's Guide pp. 457-458 - Subtraction Teacher's Guide pp. 457-458 - Subtraction Teacher's Guide pp. 468-469 - Creating Addition and
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K.MP.4 Model with mathematics.	Teacher's Guide p. 375 - Using Addition Strategies Teacher's Guide p. 376 - Using Addition Strategies to Solve
	Equations
	Teacher's Guide pp. 381-383 - Acting It Out
	Teacher's Guide p. 391 - Building Addition Number Stories
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	Problems
	Teacher's Guide p. 491 - Use Pictures to Solve Problems
	Teacher's Guide p. 492 - Draw Pictures to Solve Problems
	F
K.MP.5 Use appropriate tools strategically.	Teacher's Guide - Daily Routines (Daily)
	Teacher's Guide pp. 15-16 - Introduce Daily Routines and
	Preview One
	Teacher's Guide p. 68 - Math Bag Objects
	Teacher's Guide p. 84 - Introduce the Number Six
	Teacher's Guide p. 120 - Learning Centers: Number Activity
	Mats
	Teacher's Guide p. 134 - Learning Centers: Sorting Objects
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	Teacher's Guide p. 156 - Greater Than and Less Than
	Teacher's Guide pp. 172-173 - Introduce the Dime
	Teacher's Guide pp. 184-185 - Ten-Frames
	Teacher's Guide p. 235 - Learning Centers: Summative
	Assessment: Represent Numbers
	Teacher's Guide p. 246 - Introduce 20
	Teacher's Guide p. 265 - Shape Properties
	Teacher's Guide pp. 284-285 - Introduce the Sphere
	Teacher's Guide p. 304 - Learning Centers: Constructing 3-D Shapes
	Teacher's Guide pp. 325-326 - Review Money (Penny, Nickel, Dime)
	Teacher's Guide pp. 336-337 - Number Combinations of 6 and 7
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	Teacher's Guide pp. 393-394 - Strategies to Solve Story Problems Teacher's Guide p. 422 - Learning Centers: "Add and Subtract" Teacher's Guide pp. 430-431 - Subtraction Story Problems Teacher's Guide pp. 455-456 - My Answer Is Teacher's Guide pp. 470-471 - Plus and Minus Teacher's Guide pp. 496-497 - Height and Length Teacher's Guide pp. 508-509 - Measure Distance Teacher's Guide pp. 524-525 - Weighing Objects Teacher's Guide pp. 550-551 - Teens Practice Teacher's Guide p. 567 - Learning Centers: "Count to 50" Number Grid Game Teacher's Guide p. 606 - Learning Centers: Capacity
K.MP.6 Attend to precision.	Teacher's Guide pp. 15-16 - Introduce Daily Routines and Preview One Teacher's Guide pp. 35-36- Explore Shapes Teacher's Guide pp. 61-63 - Introduce Essential Questions and the Number One Teacher's Guide pp. 84-85 - The Number Six Teacher's Guide pp. 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. 126-127 - Measurement Teacher's Guide pp. 150-151 - Identify Shapes in the Environment Teacher's Guide pp. 166-168 - Introduce Money Teacher's Guide pp. 186-188 - Ten-Frame Activities: More and Less Teacher's Guide pp. 211 - Formative Assessment: Backpack Bear's Math Workbook, Page 24 Teacher's Guide pp. 226-227 - Introduce 13 Teacher's Guide pp. 249 - Learning Center 5: Summative Assessment: Dot-to-Dot (1-20) Teacher's Guide pp. 288-289 - 3-D Shape Museum Day Teacher's Guide pp. 288-289 - 3-D Shape Museum Day Teacher's Guide pp. 296-297 - Backpack Bear's Treasure Hunt Teacher's Guide pp. 319 - Formative Assessment: Complete Number Sentences Teacher's Guide pp. 338 - Formative Assessment: Create a 10-Chain Teacher's Guide pp. 350 - Formative Assessment: Create a 10-Chain Teacher's Guide pp. 377-378 - Using Counters and Ten-Frames Teacher's Guide pp. 391-392 - Missing Numbers: Building Addition Number Stories; Solving For X; What Number is Missing? Teacher's Guide pp. 414-415 - Greater Than/Less Than Game Day Teacher's Guide pp. 428-429 - "Little Boy Blue" Story Problems Teacher's Guide pp. 453-454 - Writing Equations Teacher's Guide pp. 474 - Formative Assessment: Addition and

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	Tools Tools Park Chida n 522 December to Heavier
	Teacher's Guide p. 523 - Record Lighter or Heavier Teacher's Guide p. 549 - Formative Assessment: Number
	Representations from 10 to 20
	Teacher's Guide p. 566 - Review Numbers and Sets 10 Through 20
	Teacher's Guide p. 589 - Formative Assessment: Draw a Clock
	Teacher's Guide p. 599 - Formative Assessment: Classify Hot or Cold
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	Operation? Teacher's Guide pp. 622, 622. Addition and Subtraction
	Teacher's Guide pp. 632-633 - Addition and Subtraction
K.MP.7 Look for and make use of structure.	Teacher's Guide pp. 212-213 - Introduce Teens Using a Ten-Frame
	Teacher's Guide p. 228 - Tens and Ones
	Teacher's Guide pp. 342-343 - Introduce 18
	Teacher's Guide p. 322 - Directionality of Equations
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	Equations
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	Patterns
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	Different Combinations of 8 Teacher's Guide p. 342 - Number Patterns of Nine
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	Teacher's Guide p. 430 - Subtraction Story Problems: Starfall.com
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	Subtraction
	Teacher's Guide p. 453 - Ways to Write an Addition Equation
	Teacher's Guide p. 461 - Summative Assessment: Adding and
	Subtracting Within 5
	Teacher's Guide pp. 468-469 - Creating Addition and
	Subtraction Equations
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	Subtracting using Money
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K.MP.8 Look for and express regularity in repeated reasoning.	Teacher's Guide p. 215 - Magic Math Moment: Tens and Ones Teacher's Guide p. 226 - Creating Number Combinations Teacher's Guide pp. 244-245 - Number Riddles/ Introduce 19 Teacher's Guide pp. 318-319 - Number Representations 1-5 Teacher's Guide pp. 323-324 - Number Representations 6-10 Teacher's Guide pp. 334-335 - Addition to 5 Teacher's Guide pp. 336-338 - Number Combinations of 6 and 7 Teacher's Guide pp. 339-341 - Number Combinations of 8 Teacher's Guide pp. 342-343 - Number Combinations of 9 Teacher's Guide pp. 350 - Number Bonds of 10 Teacher's Guide pp. 351-352 - Review Number Bonds Teacher's Guide pp. 357-358 - Subitizing and Array Review Teacher's Guide pp. 359 - Formative Assessment: Create Arrays Teacher's Guide pp. 360 - Summative Assessment: Different Ways to Make 5 Teacher's Guide pp. 384 - "Shake, Spill, and Add" Teacher's Guide pp. 392 - Solving For X Teacher's Guide pp. 400 - Summative Assessment: Create Addition Problems to 10 Teacher's Guide pp. 434-435 - Using a Number Line to Subtract Teacher's Guide pp. 466-467 - Review Addition and Subtraction Facts Teacher's Guide pp. 490-492 - Introduce Fractions Teacher's Guide pp. 524-525 - Weighing Objects Teacher's Guide pp. 550-551 - Teens Practice Teacher's Guide pp. 550-551 - Teens Practice Teacher's Guide pp. 566 - Review Numbers and Sets 10 Through
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