

Pennsylvania State Kindergarten Math Standards Alignment to Starfall

2.1 Numbers and Operation

(A) Counting and Cardinality

Pennsylvania Standards	Starfall K Math Alignment
CC.2.1.K.A.1 Know number names and write and recite the count sequence.	 100th Day of School Supplement pp. 2-4 - 100th Day of School Activities 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. 64 - Daily Routine: Number Line (daily) Teacher's Guide p. 108 - Daily Routines: Number Line (daily) Teacher's Guide p. 115 - Number Bundles 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. 546 - Counting on from 10 Teacher's Guide p. 560 - Counting On Starfall.com: Math: Numbers: Train Starfall.com: Math: Kindergarten Mathematics Generators: Counting - Count to 100
CC.2.1.K.A.2 Apply one-to-one correspondence to count the number of objects.	Teacher's Guide Read Me First p. 9 - Backpack Bear's Math 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

	<i>Starfall.com:</i> Math: Numbers <i>Starfall.com:</i> Math Songs <i>Starfall.com:</i> Math: Numbers: Count Cookies
CC.2.1.K.A.3 Apply the concept of magnitude to compare numbers and quantities.	Teacher's Guide p. 63 - Formative Assessment: Draw Representations of the Number One Teacher's Guide p. 68 - Math Bag Objects Teacher's Guide p. 81 - Review Partner Sharing and Finding Fives Teacher's Guide p. 79 - Seven Hunt Teacher's Guide p. 79 - Seven Hunt Teacher's Guide p. 186 - Find Sevens Teacher's Guide p. 156 - Introduce Greater Than or Less Than Teacher's Guide p. 168 - Toss the Coin Teacher's Guide p. 186 - Demonstrate More or Less Teacher's Guide p. 187 - Using Ten Frames to Demonstrate More Teacher's Guide p. 190 - Equivalent Coins Teacher's Guide p. 342 - Magic Math Moment: One More/One Less Teacher's Guide p. 414 - Greater Than/Less Than Teacher's Guide p. 511 - Formative Assessment: Size Questions

(B) Numbers & Operations in Base Ten

Pennsylvania Standards	Starfall K Math Alignment
CC.2.1.K.B.1 Use place value to compose and decompose numbers within 19.	Teacher's Guide: Daily Routines - Place Value (Unit 1 - Unit 14) Teacher's Guide p. 546 - Count on Using Connect Cubes Teacher's Guide p. 546 - Count on Using Place Value Sticks and Bundles Teacher's Guide p. 548 - Add and Subtract: Compose and Decompose Tens and Ones Teacher's Guide p. 548 - Writing Teen Numbers Teacher's Guide p. 549 - Formative Assessment: Number Representations from 10 to 20 Teacher's Guide p. 550 - Adding Tens and Ones to Create Teen Numbers Teacher's Guide p. 550 - Create Equations to Equal Teen Numbers Teacher's Guide p. 551 - Formative Assessment: Create Representations of Teen Numbers Teacher's Guide p. 552 - Counting by Tens Teacher's Guide p. 552 - Counting by Tens Teacher's Guide p. 553 - Formative of Tens Assessment: Combinations of Tens and Ones Teacher's Guide p. 553 - Formative of Tens Assessment: Combinations of Tens and Ones

2.2 Algebraic Concept

(A) Operations and Algebraic Thinking

Pennsylvania Standards	Starfall K Math Alignment
CC.2.2.K.A.1 Extend the concepts of putting together and taking apart to add and subtract within 10.	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. 377-378 - Using Counters and Ten-Frames 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. 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 p. 417 - Partner to Solve Subtraction Problems Teacher's Guide pp. 418-419 - Subtraction Practice Teacher's Guide pp. 420-421 - Five Little Teddy Bear 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. 457-458 -Subtraction Starfall.com: Math: Add & Subtract: Math Helpers 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: Addition Within 10 Starfall.com: Math: Addition & Subtraction: Subtraction Intro Starfall.com: Math: Addition & Subtraction: Subtraction Mithin 10 Starfall.com: Math: Addition & Subtraction: Subtraction Mithin 10 Starfall.com: Math: Addition & Subtraction: Subtraction Within 10

2.3 Geometry

(A) Geometry	
Pennsylvania Standards	Starfall K Math Alignment
CC.2.3.K.A.1 Identify and describe two- and three- dimensional shapes.	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. 265-267 - Shape Properties Teacher's Guide pp. 268-269 - Introduce the 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 p. 284 - Introduce the Sphere Teacher's Guide p. 286-287 - Introduce the Square Pyramid Teacher's Guide p. 302 - Sorting 2D and 3D Shapes <i>Starfall.com:</i> Math: Geometry and Measurement: 2D/3D Sort <i>Starfall.com:</i> Math: Geometry and Measurement: 3D Space <i>Starfall.com:</i> Math - Geometry and Measurement: Triangles & Make Shapes <i>Starfall.com:</i> Math - Geometry and Measurement: Puzzles
CC.2.3.K.A.2 Analyze, compare, create, and compose two- and three-dimensional 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
	Teacher's Guide p. 134 - Computer Center Teacher's Guide pp. 265-266 - Shape Properties Teacher's Guide p. 273 - Cubes and Rectangular Prisms <i>Starfall.com:</i> Math: Geometry and Measurement: Triangles & Make Shapes <i>Starfall.com:</i> Math: Geometry and Measurement: Puzzles

2.4 Measurement, Data, and Probability

(A) Measurement and Data

Pennsylvania Standards	Starfall K Math Alignment
CC.2.4.K.A.1 Describe and compare attributes of length, area, weight, and capacity of everyday objects.	Teacher's Guide pp. 28-29 - Introduce Measuring with Rectangles, Match Lengths, Compare Rectangles Teacher's Guide pp. 126-127 - Measurement Teacher's Guide pp. 132-133 - Sort by Attribute Teacher's Guide p. 268 - Taller or Shorter? Teacher's Guide p. 284 - One Less Teacher's Guide p. 285 - One More 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 Starfall.com: Math: Geometry & Measurement: Measurement
CC.2.4.K.A.4 Classify objects and count the number of objects in each category.	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 pp. 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

CC.2.4.K.A.2 and CC.2.4.K.A.3 Intentionally Blank

*The standards in this document were copied directly from the *Academic Standards for Mathematics* - *Pennsylvania Department of Education.*

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 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. 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. 455-456 - My Answer Is 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
K.MP.2 Reason abstractly and quantitatively.	Teacher's Guide p. 375 - Using Addition StrategiesTeacher's Guide p. 376 - Using Addition Strategies to SolveEquationsTeacher's Guide p. 381-383 - Acting It OutTeacher's Guide p. 391 - Building Addition Number StoriesTeacher's Guide p. 392 - Solving for XTeacher's Guide p. 393-394 - Strategies to Solve StoryProblemsTeacher's Guide p. 417 - Partner to Solve Subtraction ProblemsTeacher's Guide p. 417 - Partner to Solve Subtraction ProblemsTeacher's Guide p. 420-421 - "Five Little Teddy Bears"SubtractionTeacher's Guide p. 423 - Learning Centers: SummativeAssessment: "Five Teddy Bears"Subtraction Story ProblemsTeacher's Guide p. 423 - Learning Centers: SummativeAssessment: "Five Teddy Bears"Teacher's Guide p. 423 - Learning Centers: SummativeAssessment: "Five Teddy Bears"Teacher's Guide p. 423 - Learning Centers: SummativeAssessment: "Five Teddy Bears"Teacher's Guide p. 423 - Subtraction Story ProblemsTeacher's Guide p. 452-454 - Review AdditionTeacher's Guide p. 455-456 - My Answer IsTeacher's Guide p. 457 - Subtraction EquationsTeacher's Guide p. 457 - Subtraction EquationsTeacher's Guide p. 467 - "Disappearing Train Cube Subtraction"GameTeacher's Guide p. 473 - 474 - Addition and Subtrac
K.MP.3 Construct viable arguments and critique the reasoning of others.	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 p. 381 - Addition Equation Cards (Counting On)Teacher's Guide p. 381-382 - Acting It Out Teacher's Guide p. 383 - Drawing Pictures Teacher's Guide p. 384 - Solve Number Stories Teacher's Guide p. 391 - "Five Little Bees"Teacher's Guide p. 391 - Building Addition Number Stories Teacher's Guide p. 392 - Solving For X Teacher's Guide p. 392 - Solving For X Teacher's Guide p. 392 - What Number is Missing? Teacher's Guide p. 393-394 - Strategies to Solve Story ProblemsTeacher's Guide p. 397-398 - Addition With Coins Teacher's Guide p. 497-398 - Addition With Coins Teacher's Guide p. 497-398 - Addition With Coins Teacher's Guide p. 414-415 - Greater Than/Less Than Game DayTeacher's Guide p. 416 - Subtraction as an Operation Teacher's Guide p. 417 - Compare Addition and Subtraction StrategiesTeacher's Guide p. 417 - Partner to Solve Subtraction Problems Teacher's Guide p. 419 - Read It, Draw It, Solve It Practice Teacher's Guide p. 419 - Read It, Draw It, Solve It Practice Teacher's Guide p. 420-421 - "Five Little Teddy Bears" Subtraction Teacher's Guide p. 430-431 - Subtraction story Problems Teacher's Guide p. 432-433 - Subtraction and Money Teacher's Guide p. 452-454 - Review Addition Teacher's Guide p. 452-454 - Review Addition Teacher's Guide p. 452-454 - Review Addition Teacher's Guide p. 457-458 - Subtraction Teacher's Guide p. 459 - Subtraction and Money Teacher's Guide p. 459 - Subtraction and Money Teacher's Guide p. 450 - 458 - Creating Addition and Subtraction Equations Teacher's Guide p. 468 - (Plus and Minus'' Game Teache
	Teacher's Guide pp. 473-474 - Addition and Subtracting Using Money Problems
K.MP.4 Model with mathematics.	Teacher's Guide p. 375 - Using Addition StrategiesTeacher's Guide p. 376 - Using Addition Strategies to SolveEquationsTeacher's Guide pp. 381-383 - Acting It OutTeacher's Guide p. 391 - Building Addition Number StoriesTeacher's Guide p. 392 - Solving for XTeacher's Guide pp. 393-394 - Strategies to Solve StoryProblemsTeacher's Guide pp. 395-396 - Story MapsTeacher's Guide p. 417 - Partner to Solve Subtraction Problems

	Teacher's Guide pp. 418-419 - Subtraction PracticeTeacher's Guide pp. 420-421 - "Five Little Teddy Bears"SubtractionTeacher's Guide p. 423 - Learning Centers: SummativeAssessment: "Five Teddy Bears"Teacher's Guide pp. 428-429 - "Little Boy Blue" Story ProblemsTeacher's Guide pp. 430-431 - Subtraction Story ProblemsTeacher's Guide pp. 452-454 - Review AdditionTeacher's Guide pp. 455-456 - My Answer IsTeacher's Guide pp. 457-458 - SubtractionTeacher's Guide p. 459 - Subtraction EquationsTeacher's Guide p. 466 - "Build a Tower Addition" GameTeacher's Guide pp. 468-469 - Creating Addition andSubtraction EquationsTeacher's Guide pp. 473-474 - Addition and Subtraction StoryProblemsTeacher's Guide pp. 491 - Use Pictures to Solve Problems
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 Teacher's Guide p. 156 - Greater Than and Less Than Teacher's Guide p. 172-173 - Introduce the Dime Teacher's Guide p. 184-185 - Ten-Frames Teacher's Guide p. 235 - Learning Centers: Summative Assessment: Represent Numbers Teacher's Guide p. 265 - Shape Properties 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. 378-377 - Number Combinations of 6 and 7 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. 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 p. 606 - Learning Centers: CapacityTeacher's Guide pp. 15-16 - Introduce Daily Routines and Preview OneTeacher's Guide pp. 35-36- Explore ShapesTeacher's Guide pp. 61-63 - Introduce Essential Questions and the Number OneTeacher's Guide pp. 84-85 - The Number SixTeacher's Guide p. 92 - Learning Centers: Ways to Represent NumbersTeacher's Guide pp. 109-110 - One-to-One Correspondence and the Number NineTeacher's Guide pp. 126-127 - Measurement Teacher's Guide pp. 150-151 - Identify Shapes in the EnvironmentTeacher's Guide pp. 166-168 - Introduce Money Teacher's Guide pp. 211 - Formative Assessment: Backpack Bear's Math Workbook, Page 24Teacher's Guide pp. 226-227 - Introduce 13 Teacher's Guide pp. 226-227 - Introduce 13 Teacher's Guide p. 267 - Formative Assessment: Draw Shapes with Shaving Gream Teacher's Guide p. 289 - 3-D Shape Museum Day Teacher's Guide p. 280 - 297 - Backpack Bear's Treasure Hunt Teacher's Guide p. 319 - Formative Assessment: Complete Number SentencesTeacher's Guide p. 319 - Formative Assessment: Complete
	Tools 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
	Teacher's Guide p. 625 - Formative Assessment: What's the
	Operation?
	Teacher's Guide pp. 632-633 - Addition and Subtraction
	Teacher's dulue pp. 032-035 - Aduition 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
	Teacher's Guide p. 322 - Formative Assessment Creating
	Equations
	Teacher's Guide p. 329 - Summative Assessment: Number
	Patterns
	Teacher's Guide p. 337 - Introduce Number Combinations of 7
	Teacher's Guide p. 341 - Formative Assessment: Create
	Different Combinations of 8
	Teacher's Guide p. 342 - Number Patterns of Nine
	Teacher's Guide p. 343 - Create Combinations of 9
	Teacher's Guide p. 350 - Number Bonds of 10
	Teacher's Guide pp. 351-352 - Review Number Bonds
	Teacher's Guide p. 354-356 - Arrays up to 20
	Teacher's Guide p. 357-359 - Subitizing and Array Review
	Teacher's Guide p. 360 - Summative Assessment: Hanger
	Activity
	Teacher's Guide p. 360 - Arrays
	Teacher's Guide p. 372 - Formative Assessment: Different Ways
	to Make 5
	Teacher's Guide pp. 391-392 - Missing Numbers
	Teacher's Guide p. 421 - "Five Little Teddy Bears" Subtraction
	Story
	Teacher's Guide p. 430 - Subtraction Story Problems: Starfall.com
	Teacher's Guide pp. 435-436 - Formative Assessment: Train
	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
	Teacher's Guide p. 472 - Formative Assessment: Adding and
	Subtracting using Money
	Teacher's Guide p. 547 - Formative Assessment: Add Numbers
	to Teens
	Teacher's Guide p. 548 - Add and Subtract:
	Compose/Decompose Tens and Ones
	Teacher's Guide pp. 620-621 - Composing and Decomposing

	Numbers 6-10 Teacher's Guide p. 632 - Magic Math Moment: How Many More or Less?
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 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. 339-341 - Number Combinations of 6 and 7 Teacher's Guide pp. 339-341 - Number Combinations of 6 Teacher's Guide pp. 350 - Number Bonds of 10 Teacher's Guide pp. 351-352 - Review Number Bonds Teacher's Guide p. 350 - Number Bonds of 10 Teacher's Guide p. 357-358 - Subitizing and Array Review Teacher's Guide p. 360 - Summative Assessment: Create Arrays Teacher's Guide p. 378 - Formative Assessment: Different Ways to Make 5 Teacher's Guide p. 392 - Solving For X Teacher's Guide p. 400 - Summative Assessment: Create Addition Problems to 10 Teacher's Guide p. 490-492 - Introduce Fractions Teacher's Guide pp. 450-551 - Teens Practice Teacher's Guide pp. 550-551 - Teens Practice Teacher's Guide pp. 550-551 - Teens Practice Teacher's Guide pp. 550-551 - Teens Practice Teacher's Guide pp. 590-591 - Hands on the Clock Teacher's Guide pp. 590-591 - Hands on the Clock Teacher's Guide pp. 620-621 - Composing and Decomposing
	Numbers 6-10 Teacher's Guide p. 622 - Addition Game Day Teacher's Guide p. 624 - Patterns Using Coins Teacher's Guide p. 624 - 225 Wile tit all Operation 2
	Teacher's Guide pp. 624-625 - What's the Operation? Teacher's Guide pp. 632-633 - Addition and Subtraction Teacher's Guide p. 636 - Interpreting a Graph