

## Objectives

### Kindergarten

#### Default Objectives

#### Intro to ST Math

Description:  
Introduce Jiji and the structure of ST Math, including the toolbar. Practice game play mechanisms, including clicking, dragging, and scrolling over items to select answers. Introduce the idea of clearing a path for Jiji to complete a problem.

Game	Description
Build Parts	
Jiji Poses	
Fill Ground	
Estimate On Number Line	

#### Exploring Shapes

Description:  
Identify circles, rectangles and triangles from a collection of shapes presented with size and rotational variations.

Direct Standards:  
K.6.C: Identify two-dimensional components of three-dimensional objects., K.6.D: Identify attributes of two-dimensional shapes using informal and formal geometric language interchangeably.

Supporting Standards:  
K.6.E: Classify and sort a variety of regular and irregular two- and three-dimensional figures regardless of orientation or size.

Game	Description
Roll Off	Identify the shapes that will roll away. Shapes that are not round get stuck and block Jiji's path.
Block Stack	Identify which objects can be stacked. Shapes that are not rectangular will roll away or cause the stack to topple.
Wedge	Identify the objects that can be used to move the barrier. Shapes that are not triangles will block Jiji's path since they cannot wedge themselves under the barrier.
Match Shape	Match shapes to their outlines to clear Jiji's path. This game introduces basic geometric shapes and the ideas of direction and position.
Prisms and Cylinders	Identify the shape of the base or side of a prism or cylinder.

#### Numbers and Objects to 5

Description:  
Count and recognize quantities from 0 to 5 using numerals and visual models. Visual models include objects presented in linear, array, circular and random arrangements. Students use the ten frames as a useful tool to organize the objects in an easily recognizable pattern.

Direct Standards:  
K.2.D: Recognize instantly the quantity of a small group of objects in organized and random arrangements.

Supporting Standards:  
K.2.A: Count forward and backward to at least 20 with and without objects., K.2.B: Read, write, and represent whole numbers from 0 to at least 20 with and without objects or pictures., K.2.C: Count a set of objects up to at least 20 and demonstrate that the last number said tells the number of objects in the set regardless of their arrangement or order., K.2.E: Generate a set using concrete and pictorial models that represents a number that is more than, less than, and equal to a given number up to 20.

Game	Description
Dot Count	Count the number of objects that appear in a set by clicking on each object once. Students learn to count to five.
Match Count	Match a given set of shaded circles with a set of empty circles. This game teaches counting and one-to-one correspondence.
How Many Legs?	Provide the correct number of shoes for each set of creatures.
Number Sticks	Learn the number symbols (0-5) and the quantities they represent.
Number Objects	Represent a numerical symbol (1-5) as a set of objects and provide the number that describes the size of a given a set of objects.
Dot Count LI	Count the number of objects that appear in a set by clicking on each object once.
Ten Frame Count	Relate numerical symbols (1-5) to their representations with ten frames.

#### Subitizing

Description:  
Practice instantly recognizing up to five fingers in different finger patterns, and objects presented in different arrangements such as dice configuration and random configuration.

Direct Standards:  
K.2.D: Recognize instantly the quantity of a small group of objects in organized and random arrangements.

Game	Description
Subitizing Finger Patterns	Match the number of fingers being held up. Teaches visual representations of numbers up to 5.
Subitizing Fingers and Dice	Choose the die face corresponding to the number of fingers. Teaches visual representations of numbers up to 5.
Subitizing with Dice	Choose the die face corresponding to the number of birds. Teaches visual representations of numbers up to 6.
Double Sided Subitizing	Choose the two die faces that represent the number of birds that appeared on each side of the screen. Teaches visual representations of numbers up to 6.

#### Numbers and Objects to 10

Description:  
Count and recognize quantities from 0 to 10 using numerals and visual models. Visual models include objects presented in linear, array, circular and random arrangements and in ten frames. Students use ten frames as a useful tool to organize the objects in an easily recognizable pattern.

Supporting Standards:  
K.2.A: Count forward and backward to at least 20 with and without objects., K.2.B: Read, write, and represent whole numbers from 0 to at least 20 with and without objects or pictures., K.2.C: Count a set of objects up to at least 20 and demonstrate that the last number said tells the number of objects in the set regardless of their arrangement or order., K.2.E: Generate a set using concrete and pictorial models that represents a number that is more than, less than, and equal to a given number up to 20.

Game	Description
Dot Count	Count the number of objects that appear in a set by clicking on each object once. Students learn to count to ten.
Alien Capture	Count up to 10 spaceships.
Match Count	Match a given set of shaded circles with a set of empty circles. This game teaches counting and one-to-one correspondence.
How Many Legs?	Provide the correct number of shoes for each set of creatures.
Counting On to 5 Dots	Use visual models to learn the meaning of the numbers 1-10 and to put them in order. Count to 10 using numerals and visual representations.
Number Sticks	Learn the number symbols (1-9) and the quantities they represent.
Number Objects	Represent a numerical symbol (1-9) as a set of objects and provide the number that describes the cardinality of a given set of objects. This game helps students remember the meaning of the numerals.
Dot Count LI	Count the number of objects that appear in a set by clicking on each object once and provide the number that matches the cardinality of the given sets. Students learn to count to ten.
Match Count LI	Match a numeral with a set of empty circles. This game teaches counting and correspondence between numbers and sets of objects.

#### Analyzing Shapes

Description:  
Identify attributes of polygons, such as number of corners or sides. Group shapes with similar attributes.

Direct Standards:  
K.6.D: Identify attributes of two-dimensional shapes using informal and formal geometric language interchangeably.

Supporting Standards:  
K.6.E: Classify and sort a variety of regular and irregular two- and three-dimensional figures regardless of orientation or size.

Game	Description
How Many Corners?	Identify the number of vertices on two-dimensional shapes.
Find the Pair	Given a set of two-dimensional shapes, identify the two that have the same number of vertices.
How Many Sides or Corners?	Identify the number of sides or vertices on two-dimensional shapes.

Greater Than, Less Than, Equal To

Description:  
Visual representations of concrete objects encourage students to compare and order two quantities from 0 to 10 using foundational strategies of matching and counting. Implementing these strategies, students build towers using an amount of blocks that is greater than, less than, or equal to a given tower.

Supporting Standards:  
K.2.E: Generate a set using concrete and pictorial models that represents a number that is more than, less than, and equal to a given number up to 20. K.2.F: Generate a number that is one more than or one less than another number up to at least 20. K.2.G: Compare sets of objects up to at least 20 in each set using comparative language.

Game	Description
Tug Boat	Rearrange the boats so that the bridge will open. This game teaches addition, subtraction, and the concept of equal amounts.
Order Sort	Order and compare two quantities between 0 and 10.
Parachute	Put Jili in the correct starting place to parachute down to the ground using inclines and ladders.
More Less Parachute	Select a set of stacked objects that will be greater than, less than, or equal to a given set of stacked objects.
More Less Parachute Unstacked	Select a set of stacked objects that will be greater than, less than, or equal to a given set of unstacked objects.

Understanding Addition and Subtraction within 5

Description:  
Model addition and subtraction expressions within 5 using concrete objects, such as block models and birds flying to (addition) and away from (subtraction) a wire.

Direct Standards:  
K.3.A: Model the action of joining to represent addition and the action of separating to represent subtraction.

Supporting Standards:  
K.2.I: Compose and decompose numbers up to 10 with objects and pictures. K.3.B: Solve word problems using objects and drawings to find sums up to 10 and differences within 10. K.3.C: Explain the strategies used to solve problems involving adding and subtracting within 10 using spoken words, concrete and pictorial models, and number sentences.

Game	Description
Push Box Addition	Identify the total number of boxes. This game teaches addition by combining stacks of boxes.
Select Box Addition	Add using visual models and numerals.
Bird Expressions Addition	Add the number of new birds that arrive to find the total number of birds.
Select Box Addition LI	Add using visual models and numerals.
Push Box Subtraction	Determine how many boxes are needed to create a bridge. Watch out for holes in the ground which remove boxes. This game teaches subtraction via the removal of boxes by holes in the ground.
Select Box Subtraction	Subtract using visual models and numerals.
Bird Expressions Subtraction	Identify how many birds are left on the wire after some of them fly away. This game relates numbers to quantities and teaches subtraction.
Select Box Subtraction LI	Subtract using visual models and numerals.

Numbers and Objects to 20

Description:  
Count and recognize quantities from 0 to 20 using numerals and visual models. Visual models include objects presented in linear, array, circular and random arrangements and in ten frames. Students use ten frames as a useful tool to organize the objects in an easily recognizable pattern.

Direct Standards:  
K.2.A: Count forward and backward to at least 20 with and without objects. K.2.B: Read, write, and represent whole numbers from 0 to at least 20 with and without objects or pictures. K.2.C: Count a set of objects up to at least 20 and demonstrate that the last number said tells the number of objects in the set regardless of their arrangement or order. K.2.E: Generate a set using concrete and pictorial models that represents a number that is more than, less than, and equal to a given number up to 20.

Game	Description
Dot Count	Count the number of objects that appear in a set by clicking on each object once. Students learn to count to twenty.
Alien Capture	Count up to 20 spaceships.
How Many Legs?	Provide the correct number of shoes for each set of creatures.
Ten Frame to 20	Relate numerical symbols (up to 20) to their representations with ten frames. This game teaches correspondence between numbers and sets of objects and also provides an introduction to ones and tens place value concepts.
Fill Ground	Fill the ground with the correct number of boxes. Teaches the concept of one-to-one correspondence and the representation of numbers as quantities.
Dot Count LI	Identify the numeral that represents the set of dots.
Alien Capture LI	Count up to 20 spaceships.
Ten Frame to 20 LI	Relate numerical symbols (up to 20) to their representations with ten frames. This game teaches correspondence between numbers and sets of objects and also provides an introduction to ones and tens place value concepts.
Alien Capture Counting On LI	Count up to 20 spaceships.

Introduction to the Number Line

Description:  
Gain an understanding about the structure of the number line and its relationship to the counting sequence. Students apply this understanding to locate numbers on the number line.

Direct Standards:  
K.2.A: Count forward and backward to at least 20 with and without objects. K.2.B: Read, write, and represent whole numbers from 0 to at least 20 with and without objects or pictures. K.2.C: Count a set of objects up to at least 20 and demonstrate that the last number said tells the number of objects in the set regardless of their arrangement or order.

Game	Description
Bird Expressions	Provide the instance of a whole number within 20 on the number line using the model.
Number Line Journey	Move left and right on the number line to locate the given number.
Number Line Zoom	Plot a whole number within 20 on the number line by first indicating if the number is less than or greater than 10.
Number Line Trap	Estimate the location of a whole number within 20 on the number line with various hash marks and labeled numbers.
What's the Number	Write numerals within 20 on the number line.

Understanding Addition and Subtraction within 10

Description:  
Model addition and subtraction expressions within 10 using concrete objects, such as block models and birds flying to (addition) and away from (subtraction) a wire.

Direct Standards:  
K.3.A: Model the action of joining to represent addition and the action of separating to represent subtraction.

Supporting Standards:  
K.2.I: Compose and decompose numbers up to 10 with objects and pictures. K.3.B: Solve word problems using objects and drawings to find sums up to 10 and differences within 10. K.3.C: Explain the strategies used to solve problems involving adding and subtracting within 10 using spoken words, concrete and pictorial models, and number sentences.

Game	Description
Push Box Addition	Identify the total number of boxes. This game teaches addition by combining stacks of boxes.
Select Box Addition	Add using visual models and numerals.
Bird Expressions Addition	Add the number of new birds that arrive to find the total number of birds.
Select Box Addition LI	Add using visual models and numerals.
Push Box Subtraction	Determine how many boxes are needed to create a bridge. Watch out for holes in the ground which remove boxes. This game teaches subtraction via the removal of boxes by holes in the ground.
Select Box Subtraction	Subtract using visual models and numerals.
Bird Expressions Subtraction	Identify how many birds are left on the wire after some of them fly away. This game relates numbers to quantities and teaches subtraction.
Select Box Subtraction LI	Subtract using visual models and numerals.

Making 10 and Number Pairs

Description:  
Use different models to compose 10 when one addend is given. Decompose numbers less than or equal to 10 into different pairs of addends.

Direct Standards:  
K.2.I: Compose and decompose numbers up to 10 with objects and pictures. K.3.A: Model the action of joining to represent addition and the action of separating to represent subtraction.

Supporting Standards:  
K.3.B: Solve word problems using objects and drawings to find sums up to 10 and differences within 10. K.3.C: Explain the strategies used to solve problems involving adding and subtracting within 10 using spoken words, concrete and pictorial models, and number sentences.

Game	Description
Bouncing Shoes	Use the model to explore the concept of additively constructing a given number within 10.
Bouncing Shoes to 10	Use the model to make several additive pairs for a given number within 10.
Ten Frame	Make ten using ten frames.
Bird Lift	Each bird can lift one block, but there are more bricks than birds. Identify how many additional birds are needed.
Critter Addition	Add one-digit and two-digit whole numbers using visual models.
Bouncing Shoes with Numbers	Using the symbols, additively decompose numbers within 10.
Partners	Decompose 10 as sums.

Comparing Numbers

## Description:

Compare and order two numerals between 1 and 10 using visual models, such as the number line.

## Supporting Standards:

K.2.E: Generate a set using concrete and pictorial models that represents a number that is more than, less than, and equal to a given number up to 20. . K.2.F: Generate a number that is one more than or one less than another number up to at least 20. . K.2.G: Compare sets of objects up to at least 20 in each set using comparative language. .  
K.2.H: Use comparative language to describe two numbers up to 20 presented as written numerals.

Game	Description
More Less Parachute LI	Select a set of stacked objects that will be greater than, less than, or equal to a given number that is then represented as a set of stacked objects. This game displays the meaning of ordering numbers and provides a visual understanding of the greater than, less than, and equal to symbols.
More Less Parachute Multiple Choice	Select a number that will be greater than, less than, or equal to a given number. This game displays the meaning of ordering numbers by representing the numbers as sets of objects and provides a visual understanding of the greater than, less than, and equal to symbols.
Least Most with Number Line	Identify the smallest or largest number in a set using number line concepts.
Order Sort LI	Compare and order two whole numbers written symbolically between 1 and 10.
Least Most	Identify the smallest or largest number in a set using number line concepts.

## Numbers and Counting to 100

## Description:

Learn the counting sequence to 100. Count on and back from a given number between 1 and 99, focusing on the patterns in the decades. The number line is included.

## Direct Standards:

K.2.A: Count forward and backward to at least 20 with and without objects. . K.2.B: Read, write, and represent whole numbers from 0 to at least 20 with and without objects or pictures.

Game	Description
Number Line Journey	Move left and right on the number line to locate the given number.
Number Line Journey Zoom	Zoom in on the number line to locate the given number.
Counting On	Count forward to one hundred.
Counting On and Back	Count forward to one hundred and backward from one hundred.

## Sorting and Classifying

## Description:

Use grids and venn diagrams to explore, sort, and classify objects by one or more attributes, such as color, pattern, size, or shape. Sort objects into categories and compare the quantities using bar graphs.

## Direct Standards:

K.6.A: Identify two-dimensional shapes, including circles, triangles, rectangles, and squares as special rectangles. . K.6.E: Classify and sort a variety of regular and irregular two- and three-dimensional figures regardless of orientation or size. . K.8.A: Collect, sort, and organize data into two or three categories. . K.8.B: Use data to create real-object and picture graphs. .  
K.8.C: Draw conclusions from real-object and picture graphs.

Game	Description
Paper Jili	To put Jili together, locate the square on the grid determined by the given horizontal and vertical positions.
Shapes and Patterns Paper Jili	To put Jili together, locate the square on the grid determined corresponding to the given shape and pattern.
Attribute Grid Two Attributes	Identify two attributes (size, shape, or color) of the given shape by placing the shape in the appropriate box in the grid.
Bar Graph Bridge	Represent numerical data (the number of each type of shape) using a bar graph.
Venn Space	Place the object in the correct section of the Venn diagram according to its attributes.

## Foundations of Place Value

## Description:

Explore tens and ones relationships using visual models, such as ten frames. Compose and decompose numbers into groups of tens and ones by using visual models involving addition.

## Direct Standards:

K.2.B: Read, write, and represent whole numbers from 0 to at least 20 with and without objects or pictures. . K.2.E: Generate a set using concrete and pictorial models that represents a number that is more than, less than, and equal to a given number up to 20. . K.2.I: Compose and decompose numbers up to 10 with objects and pictures. .  
K.3.A: Model the action of joining to represent addition and the action of separating to represent subtraction.

## Supporting Standards:

K.3.B: Solve word problems using objects and drawings to find sums up to 10 and differences within 10. K.3.C: Explain the strategies used to solve problems involving adding and subtracting within 10 using spoken words, concrete and pictorial models, and number sentences.

Game	Description
Alien Capture Mothership	Count up to 20 spaceships and represent the number in place value notation using tens and ones.
Alien Capture with Numbers	Represent whole numbers up to 20 using visual models based on place value.
Alien Capture with Numerals	The small spaceships contain one alien each and the larger ones contain 10. Represent the total number (up to 20) in place value notation using tens and ones.
Ten Frame Counting	Decompose a number less than 20 into two parts. Record the decomposition using a visual equation.
Ten Frame Counting LI	Decompose a number less than 20 into two parts. Record the decomposition using a numeric equation.

## Measurable Attributes

## Description:

Explore measurable attributes by comparing the length, height, and weight of objects.

## Direct Standards:

K.7.B: Compare two objects with a common measurable attribute to see which object has more or less of the attribute and describe the difference.

## Supporting Standards:

K.7.A: Give an example of a measurable attribute of a given object, including length, capacity, and weight.

Game	Description
Order Fill	Order a set of rectangles from smallest to largest.
Swap Sort	Order a set of rectangles from smallest to largest or largest to smallest by swapping their positions.
Order Sort	Order a set of rectangles from smallest to largest or largest to smallest by clicking on each rectangle in order from smallest to largest or largest to smallest.
Two Item Slinky	Order pairs of objects by their weights. Students can use a balance to compare pairs they are unsure of.
Three Item Slinky	Compare and order three objects by their weights using a balance.

## Composing Shapes

## Description:

Create composite shapes using other familiar shapes.

## Direct Standards:

K.6.C: Identify two-dimensional components of three-dimensional objects. . K.6.F: Create two-dimensional shapes using a variety of materials and drawings.

## Supporting Standards:

K.6.A: Identify two-dimensional shapes, including circles, triangles, rectangles, and squares as special rectangles. . K.6.B: Identify three-dimensional solids, including cylinders, cones, spheres, and cubes, in the real world. . K.6.D: Identify attributes of two-dimensional shapes using informal and formal geometric language interchangeably.

Game	Description
Dot Shapes	Connect dots to form shapes which will fill holes in the ground.
Bricks	Arrange the shapes to create the composite shape shown.
Composite Shapes	Create a composite shape by arranging the shape parts.
Prisms and Cylinders	Pick the shape that is the base of a given prism.

## Reasoning with Attributes

## Description:

Explore, sort, and classify objects by examining their attributes. Examine the effects of changing an object's attributes.

## Supporting Standards:

K.6.A: Identify two-dimensional shapes, including circles, triangles, rectangles, and squares as special rectangles. . K.6.D: Identify attributes of two-dimensional shapes using informal and formal geometric language interchangeably.

Game	Description
Single Slide Transform	See how various attributes of shapes are changed when different transformations are applied.
Attribute Transform	Choose the correct attribute to change (shape, color, or size) to transform the first shape into the second. This game teaches the idea of a function in a visual way.
Multiple Slide Transform	Identify a pair of transformations that can be composed and see what happens when the composition is applied to a shape.
Multiple Transform	Choose the correct sequence of changes to turn the first shape into the second. This game teaches how to solve multi-step problems that require strategic thinking as well as the concept of a function or transformation.

## Addition and Subtraction Facts within 5

Description:  
Practice addition and subtraction facts to 5. Use visual representations, such as ten frames, to model problems.

Game	Description
Select Box LI	Add using visual models and numerals.
Basic Facts	Practice addition and subtraction facts using visual models.
Ten Frame LI	Learn numerals and addition facts using ten frames.

## Challenge

Description:  
Use spatial reasoning to solve challenging multi-step puzzles that explore symmetry, reflections, rotations, and analytical thinking.

Game	Description
Venn Space	Place the object in the correct section of the Venn diagram according to its attributes.
Venn Space Pick Shape	Identify the object that has the attributes corresponding to a particular section of a Venn diagram.
Attribute Transform	Choose the correct attribute to change (shape, color, or size) to transform the first shape into the second. This game teaches the idea of a function in a visual way.
Bird Brain	Find birds in a grid after a sequence of transformations.
Ice Caves	Identify lines of symmetry in two-dimensional shapes.
Dot Shapes	Connect dots to form shapes which will fill holes in the ground.
Pattern Monkey	Identify and extend patterns of different geometric shapes.
Pattern Monkey 2	Create repeating patterns of varying length with different geometric shapes. Identify repeating patterns of varying length in a sequence of geometric shapes.
Upright Jili	Find a sequence of rotations to move Jili into an upright position.
Kick Box	Use lasers and mirrors to move the spheres out of the way so Jili can pass.

## Exploring Patterns

Description:  
Explore, identify, extend and create AB patterns by examining attributes such as shape and color.

Game	Description
Pattern Monkey Intro	Create repeating patterns of two-dimensional shapes.
Pattern Monkey	Identify repeating patterns of a sequence of two, three or four geometric shapes.
Pattern Walkway with Shapes	Fit the shapes together to identify and extend a pattern. This will build a bridge for Jili to walk across.

## Advanced Patterns

Description:  
Explore, identify, label, extend, and create more complex patterns by examining attributes such as shapes, color, and direction.

Game	Description
Pattern Monkey Intro	Create repeating patterns of two-dimensional shapes.
Pattern Monkey	Identify repeating patterns of a sequence of two, three or four geometric shapes.
Pattern Walkway with Shapes	Fit the shapes together to identify and extend a pattern. This will build a bridge for Jili to walk across.
Pattern Directions	Extend repeating patterns in various directions. Here the objects all have the same shape; the patterns are based on color, orientation, and rotation.
Pattern Directions Comparing and Filling	Extend the patterns in various directions by filling in the boxes. The patterns are based on the color and orientation of the objects.
Pattern Walkway with Letters	Build a bridge for Jili by fitting the shapes together to make a pattern. Now the shapes are labeled with letters.

## Position

Description:  
Identify the direction of an obstacle relative to Jili. Manipulate Jili in space.

Game	Description
Match Position	Remove the ball that is blocking Jili's path. This game teaches orientation and relative position in two dimensions.
Match Shape	Match shapes to their outlines to clear Jili's path. This game introduces basic geometric shapes and the ideas of direction and position.
Match Direction Top View	Identify which way Jili needs to turn to remove the ball. This game teaches orientation and relative position in two dimensions.
Upright Jili	Create a series of rotations needed to change Jili's current orientation to a new orientation. This game strengthens the ability to visually manipulate objects.
Treasure Hunt with Boxes	Help Jili navigate around the map to find the correct destination. This game helps develop spatial reasoning by working with position and direction concepts.

## Position LI

Description:  
Identify the direction of an obstacle relative to Jili as above, below, in front of, or behind.

Game	Description
Match Position Side View LI Intro	Remove the ball that is blocking Jili's path by identifying its position relative to Jili using the terms "behind", "in front", "above" and "below".
Match Direction Top View LI	Remove the ball that is blocking Jili's path by identifying its position relative to Jili using the terms "forward", "backward", "to the right", and "to the left".
Upright Jili	Create a series of rotations needed to change Jili's current orientation to a new orientation. This game strengthens the ability to visually manipulate objects.
Treasure Hunt with Squares	Help Jili navigate around the map to find the correct destination. This game helps develop spatial reasoning by working with position and direction concepts.
Match Position Side View LI	Remove the ball that is blocking Jili's path by identifying its position relative to Jili using the terms "behind", "in front", "above" and "below".
Match Direction Top View with Turns LI	Remove the ball that is blocking Jili's path by identifying its position relative to Jili using the terms "forward", "backward", "to the right", and "to the left". Jili's path to the door is not necessarily direct.

## Kindergarten

### Optional Objectives

### Technology Interaction

Description:  
Helps children develop basic computer skills. Children learn to hold a mouse, use a mouse to control the cursor and point and click on objects on the screen.

Game	Description
Defog Jili	This game teaches students how to use a mouse, while clearing the fog away from Jili.

## Money

Description:  
Identify coins and their values. Calculate the value of multiple coins; compare money amounts. Show multiple ways to represent the same value, including numerical notation using the ¢ sign.

Game	Description
Toll Bridge Single Coin	Learn the value of each coin.
Toll Bridge Multiple Coin	Choose or count out the coin or combination of coins whose value is equal to the given amount.
Money Notation	Practice reading and writing money amounts using the cent symbol.

## Standards

### Kindergarten

#### Number and Operations

K.2.A. Count forward and backward to at least 20 with and without objects.

##### Direct Objectives

- Numbers and Objects to 20
- Introduction to the Number Line
- Numbers and Counting to 100

**Supporting Objectives**

- Numbers and Objects to 5
- Numbers and Objects to 10

K.2.B. Read, write, and represent whole numbers from 0 to at least 20 with and without objects or pictures.

**Direct Objectives**

- Numbers and Objects to 20
- Introduction to the Number Line
- Numbers and Counting to 100
- Foundations of Place Value

**Supporting Objectives**

- Numbers and Objects to 5
- Numbers and Objects to 10

K.2.C. Count a set of objects up to at least 20 and demonstrate that the last number said tells the number of objects in the set regardless of their arrangement or order.

**Direct Objectives**

- Numbers and Objects to 20
- Introduction to the Number Line

**Supporting Objectives**

- Numbers and Objects to 5
- Numbers and Objects to 10

K.2.D. Recognize instantly the quantity of a small group of objects in organized and random arrangements.

**Direct Objectives**

- Numbers and Objects to 5
- Subitizing

K.2.E. Generate a set using concrete and pictorial models that represents a number that is more than, less than, and equal to a given number up to 20.

**Direct Objectives**

- Numbers and Objects to 20
- Foundations of Place Value

**Supporting Objectives**

- Numbers and Objects to 5
- Numbers and Objects to 10
- Greater Than, Less Than, Equal To
- Comparing Numbers

K.2.F. Generate a number that is one more than or one less than another number up to at least 20.

**Supporting Objectives**

- Greater Than, Less Than, Equal To
- Comparing Numbers

K.2.G. Compare sets of objects up to at least 20 in each set using comparative language.

**Supporting Objectives**

- Greater Than, Less Than, Equal To
- Comparing Numbers

K.2.H. Use comparative language to describe two numbers up to 20 presented as written numerals.

**Supporting Objectives**

- Comparing Numbers

K.2.I. Compose and decompose numbers up to 10 with objects and pictures.

**Direct Objectives**

- Making 10 and Number Pairs
- Foundations of Place Value

**Supporting Objectives**

- Understanding Addition and Subtraction within 5
- Understanding Addition and Subtraction within 10

K.3.A. Model the action of joining to represent addition and the action of separating to represent subtraction.

**Direct Objectives**

- Understanding Addition and Subtraction within 5
- Understanding Addition and Subtraction within 10
- Making 10 and Number Pairs
- Foundations of Place Value
- Addition and Subtraction Facts within 5

K.3.B. Solve word problems using objects and drawings to find sums up to 10 and differences within 10

**Supporting Objectives**

- Understanding Addition and Subtraction within 5
- Understanding Addition and Subtraction within 10
- Making 10 and Number Pairs
- Foundations of Place Value

K.3.C. Explain the strategies used to solve problems involving adding and subtracting within 10 using spoken words, concrete and pictorial models, and number sentences.

**Supporting Objectives**

- Understanding Addition and Subtraction within 5
- Understanding Addition and Subtraction within 10
- Making 10 and Number Pairs
- Foundations of Place Value

**Algebraic Reasoning****Geometry and Measurement**

K.6.A. Identify two-dimensional shapes, including circles, triangles, rectangles, and squares as special rectangles.

**Direct Objectives**

- Sorting and Classifying

**Supporting Objectives**

- Composing Shapes
- Reasoning with Attributes

K.6.B. Identify three-dimensional solids, including cylinders, cones, spheres, and cubes, in the real world.

**Supporting Objectives**

- Composing Shapes

K.6.C. Identify two-dimensional components of three-dimensional objects.

**Direct Objectives**

- Exploring Shapes
- Composing Shapes

K.6.D. Identify attributes of two-dimensional shapes using informal and formal geometric language interchangeably.

**Direct Objectives**

- Exploring Shapes
- Analyzing Shapes

**Supporting Objectives**

- Composing Shapes
- Reasoning with Attributes

K.6.E. Classify and sort a variety of regular and irregular two- and three-dimensional figures regardless of orientation or size.

**Direct Objectives**

- Sorting and Classifying

**Supporting Objectives**

- Exploring Shapes
- Analyzing Shapes

K.6.F. Create two-dimensional shapes using a variety of materials and drawings.

**Direct Objectives**

- Composing Shapes

K.7.A: Give an example of a measurable attribute of a given object, including length, capacity, and weight.

*Supporting Objectives*

- Measurable Attributes

K.7.B: Compare two objects with a common measurable attribute to see which object has more or less of the attribute and describe the difference.

*Direct Objectives*

- Measurable Attributes

#### Data Analysis

K.8.A: Collect, sort, and organize data into two or three categories.

*Direct Objectives*

- Sorting and Classifying

K.8.B: Use data to create real-object and picture graphs.

*Direct Objectives*

- Sorting and Classifying

K.8.C: Draw conclusions from real-object and picture graphs.

*Direct Objectives*

- Sorting and Classifying

#### Personal Financial Literacy

K.9.A: Identify ways to earn income.

K.9.B: Differentiate between money received as income and money received as gifts.

K.9.C: List simple skills required for jobs.

K.9.D: Distinguish between wants and needs and identify income as a source to meet one's wants and needs.