

Objectives

First Grade

Default Objectives

Intro to ST Math

Description:
Introduce Jili 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 Jili to complete a problem.

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

Introduction to the Number Line

Description:
Recognize and place numbers from 0 to 20 on a number line.

Direct Standards:
1.2.C: Use objects, pictures, and expanded and standard forms to represent numbers up to 120.

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 Trap	Estimate the location of a whole number within 20 on the number line with various hash marks and labeled numbers.
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.
Missing Tick Marks	Estimate the location of a whole number within 20 on the number line with various hash marks and labeled numbers.
Missing Tick Marks Bubble Select	Write numerals within 20 on the number line.

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:
1.2.C: Use objects, pictures, and expanded and standard forms to represent numbers up to 120.

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.

Addition and Subtraction Within 10

Description:
Explore addition problems that encourage the use of counting on and the commutative property as an efficient strategy to solve for the sums. Connect addition to subtraction with an emphasis on portraying subtraction as a missing addend problem through visual models.

Direct Standards:
1.3.D: Apply basic fact strategies to add and subtract within 20, including making 10 and decomposing a number leading to a 10.

Supporting Standards:
1.3.B: Use objects and pictorial models to solve word problems involving joining, separating, and comparing sets within 20 and unknowns as any one of the terms in the problem such as $2 + 4 = []$, $3 + [] = 7$, and $5 = [] - 3$.
1.3.E: Explain strategies used to solve addition and subtraction problems up to 20 using spoken words, objects, pictorial models, and number sentences. 1.3.F: Generate and solve problem situations when given a number sentence involving addition or subtraction of numbers within 20.
1.5.D: Represent word problems involving addition and subtraction of whole numbers up to 20 using concrete and pictorial models and number sentences. 1.5.F: Determine the unknown whole number in an addition or subtraction equation when the unknown may be any one of the three or four terms in the equation.

Game	Description
Select Box Addition	Add using visual models and numerals.
Push Box Addition	Identify the total number of boxes. This game teaches addition by combining stacks of boxes.
Push Box Addition LI	Identify the total number of boxes. This game teaches addition by combining stacks of boxes.
Select Box Addition LI	Add using visual models and numerals.
Ten Frame Addition	Practice addition facts using ten frames.
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.
Pie Monster	Use the model to solve subtraction problems.
Basic Fact Subtraction	Practice addition and subtraction facts using visual models and numerals.
Basic Fact Subtraction LI	Practice addition and subtraction facts using visual models.
Pie Monster LI	Use the model to solve subtraction problems.

Measurement Concepts

Description:
Compare and order up to four objects by height, both from least to greatest and greatest to least. Use objects to measure a given length, and express the distance as a number of these units. Practice measurement skills.

Direct Standards:
1.7.A: Use measuring tools to measure the length of objects to reinforce the continuous nature of linear measurement. 1.7.B: Illustrate that the length of an object is the number of same-size units of length that, when laid end-to-end with no gaps or overlaps, reach from one end of the object to the other.

Supporting Standards:
1.7.C: Measure the same object/distance with units of two different lengths and describe how and why the measurements differ. 1.7.D: Describe a length to the nearest whole unit using a number and a unit.

Game	Description
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.
Measure It with Objects	Measure the length of a gap using various objects as the unit of measurement by lining up the object properly.
Measure It Multiple Choice	Measure and determine the number of objects needed to measure a gap.

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:
1.2.C: Use objects, pictures, and expanded and standard forms to represent numbers up to 120.

Supporting Standards:
1.2.F: Order whole numbers up to 120 using place value and open number lines.

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.

Addition, Subtraction and Equations

Description:
Use visual models to represent and generate equations involving addition and subtraction.

Direct Standards:
1.2.C: Use objects, pictures, and expanded and standard forms to represent numbers up to 120. 1.3.D: Apply basic fact strategies to add and subtract within 20, including making 10 and decomposing a number leading to a 10. 1.5.E: Understand that the equal sign represents a relationship where expressions on each side of the equal sign represent the same value(s). 1.5.F: Determine the unknown whole number in an addition or subtraction equation when the unknown may be any one of the three or four terms in the equation.

Supporting Standards:
1.3.B: Use objects and pictorial models to solve word problems involving joining, separating, and comparing sets within 20 and unknowns as any one of the terms in the problem such as $2 + 4 = []$; $3 + [] = 7$; and $5 = [] - 3$.
1.3.E: Explain strategies used to solve addition and subtraction problems up to 20 using spoken words, objects, pictorial models, and number sentences. 1.3.F: Generate and solve problem situations when given a number sentence involving addition or subtraction of numbers within 20.
1.5.D: Represent word problems involving addition and subtraction of whole numbers up to 20 using concrete and pictorial models and number sentences.

Game	Description
Bird Expressions	Model two-step addition and subtraction of single digit numbers.
Build Expression	Model addition or subtraction of whole numbers within 20 and find the sum or difference.
Mice Island	Fill in the missing number to make the equation true. This game teaches addition and subtraction of one- and two-digit whole numbers.

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:
1.2.B: Use concrete and pictorial models to compose and decompose numbers up to 120 in more than one way as so many hundreds, so many tens, and so many ones. 1.2.C: Use objects, pictures, and expanded and standard forms to represent numbers up to 120.

Supporting Standards:
1.3.A: Use concrete and pictorial models to determine the sum of a multiple of 10 and a one-digit number in problems up to 99. 1.3.C: Compose 10 with two or more addends with and without concrete objects.

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.

Number Pairs and Making 10

Description:
Practice composing and decomposing numbers less than or equal to 10 using fact families and visual models.

Direct Standards:
1.3.C: Compose 10 with two or more addends with and without concrete objects. 1.3.D: Apply basic fact strategies to add and subtract within 20, including making 10 and decomposing a number leading to a 10.

Supporting Standards:
1.3.B: Use objects and pictorial models to solve word problems involving joining, separating, and comparing sets within 20 and unknowns as any one of the terms in the problem such as $2 + 4 = []$; $3 + [] = 7$; and $5 = [] - 3$.
1.3.E: Explain strategies used to solve addition and subtraction problems up to 20 using spoken words, objects, pictorial models, and number sentences. 1.3.F: Generate and solve problem situations when given a number sentence involving addition or subtraction of numbers within 20.

Game	Description
Tug Boat	Rearrange the boats so that the bridge will open. This game teaches addition, subtraction, and the concept of equal amounts.
Tug Boat with Pictures	Rearrange the numbers so that the sums on each side are the same. This game teaches addition, subtraction, and the concept of equal amounts.
Bouncing Shoes	Use the model to make several additive pairs for a given number within 10.
Bouncing Shoes with Numbers	Using symbols, additively decompose numbers within 10.
Building Blocks	Fill in the missing addend to make a sum of 10.
Partners	Decompose 10 as sums.

Counting by Tens

Description:
Count objects in up to 9 groups of ten and record the count using numerals.

Direct Standards:
1.2.B: Use concrete and pictorial models to compose and decompose numbers up to 120 in more than one way as so many hundreds, so many tens, and so many ones. 1.2.C: Use objects, pictures, and expanded and standard forms to represent numbers up to 120. 1.5.B: Skip count by twos, fives, and tens to determine the total number of objects up to 120 in a set. 1.5.C: Use relationships to determine the number that is 10 more and 10 less than a given number up to 120.

Supporting Standards:
1.2.D: Generate a number that is greater than or less than a given whole number up to 120. 1.2.F: Order whole numbers up to 120 using place value and open number lines.

Game	Description
Hundreds Pit	Skip count from a given number less than 90 by various amounts.
Counting by Ones on the Hundreds Chart	Use a hundreds chart to count on by ones.
Counting by Tens on the Hundreds Chart	Use a hundreds chart to count on by tens.
Counting by Tens on the Number Line	Add multiple tens to a given number where the sum is less than 100.
Alien Capture with Tens	Regrouping into small ships each holding 10 aliens, count the number of aliens and record the result on ten frames.
Alien Capture Units	Count the number of aliens and the number of ships that hold 10 aliens. Numerically record the count of each.
Alien Capture Bubble Select	Bubble select the number of aliens that are shown in either a grouped format or a scattered arrangement.

Counting with Groups

Description:
Count a set of grouped objects in up to 9 groups of ten and 1-9 single units and record the count using a two-digit number.

Direct Standards:
1.2.B: Use concrete and pictorial models to compose and decompose numbers up to 120 in more than one way as so many hundreds, so many tens, and so many ones. 1.2.C: Use objects, pictures, and expanded and standard forms to represent numbers up to 120. 1.5.B: Skip count by twos, fives, and tens to determine the total number of objects up to 120 in a set.

Supporting Standards:
1.3.A: Use concrete and pictorial models to determine the sum of a multiple of 10 and a one-digit number in problems up to 99.

Game	Description
Alien Capture	Separately, count up to 20 alien ships or 10 motherships.
Motherships and Aliens	Count up to 10 motherships and then alien ships together in an organized arrangement.
Motherships Groups	Determine the number of motherships needed and how many alien ships are still left when counting a group of alien ships and record the result on ten frames.
Motherships and Aliens Bubble Select	Count up to 10 motherships and then alien ships together in an organized arrangement. Record the answer numerically.
Motherships Groups Bubble Select	Determine the number of motherships needed and how many alien ships are still left when counting a group of alien ships and record the result numerically.

Counting to 120

Description:
Expand the count sequence by counting on from numbers between 100 and 120, and plotting numbers to 120 on the number line.

Direct Standards:
1.2.C: Use objects, pictures, and expanded and standard forms to represent numbers up to 120. 1.5.A: Recite numbers forward and backward from any given number between 1 and 120.

Supporting Standards:
1.2.F: Order whole numbers up to 120 using place value and open number lines.

Game	Description
Number Line Journey	Move left and right on the number line to locate the given number.
Counting On	Count forward to one hundred.
Number Line Trap	Estimate the location of whole numbers (1-120) on the number line. The student is also introduced to place value concepts with ones and tens.
Counting On and Back	Count forward to one hundred and backward from one hundred.

Place Value Concepts

Description:
Learn how to represent a quantity of objects using groups of ten and ones. Students read and write two-digit numbers using the digits 0-9 by writing the quantity of tens and then the quantity of ones.

Direct Standards:

1.2.B: Use concrete and pictorial models to compose and decompose numbers up to 120 in more than one way as so many hundreds, so many tens, and so many ones. 1.2.C: Use objects, pictures, and expanded and standard forms to represent numbers up to 120.

Supporting Standards:

1.2.A: Recognize instantly the quantity of structured arrangements.

Game	Description
Multiple Choice Petals	Represent ones, tens and hundreds using words, numerals and visual models.
Pulling Petals	Gain an understanding of place value by transforming the pile of petals into tens (flowers with 10 petals each) ones (single petals).
See Petals	Represent numbers using a place value based flower petal model. In some levels, students determine the order of magnitude, given a number and a pile of petals (e.g. given the number 7, identify the size of the pile as 7 ones, 7 tens, or 7 hundreds).
Petals Place Value	Given a one- or two-digit whole number, identify the number of tens and the number of ones.
Petals Bubble Select	Find the total number of petals by counting the flowers (tens) and single petals (ones) and then filling in the tens and ones places with the correct numerals.
How Many Petals?	Write the numeral for how many petals are in a given pile.

Addition and Subtraction Situations with Unknowns

Description:

Explore the relationship between addition and subtraction and relate problem situations to equations.

Direct Standards:

1.3.D: Apply basic fact strategies to add and subtract within 20, including making 10 and decomposing a number leading to a 10. 1.5.E: Understand that the equal sign represents a relationship where expressions on each side of the equal sign represent the same value(s). 1.5.F: Determine the unknown whole number in an addition or subtraction equation when the unknown may be any one of the three or four terms in the equation. 1.5.G: Apply properties of operations to add and subtract two or three numbers.

Supporting Standards:

1.3.B: Use objects and pictorial models to solve word problems involving joining, separating, and comparing sets within 20 and unknowns as any one of the terms in the problem such as $2 + 4 = []$, $3 + [] = 7$, and $5 = [] - 3$. 1.3.E: Explain strategies used to solve addition and subtraction problems up to 20 using spoken words, objects, pictorial models, and number sentences. 1.3.F: Generate and solve problem situations when given a number sentence involving addition or subtraction of numbers within 20. 1.5.D: Represent word problems involving addition and subtraction of whole numbers up to 20 using concrete and pictorial models and number sentences.

Game	Description
Pie Monster Addition	Use the model to solve addition problems. Includes missing addend.
Critter Addition	Add one-digit and two-digit whole numbers within 20 using visual models.
Pie Monster Subtraction	Use the model to solve subtraction problems. Includes missing subtrahend or minuend.
Push Box	Identify the total number of boxes. This game teaches addition by combining stacks of boxes.
Critter Addition LI	Add one-digit and two-digit whole numbers using visual models.
Push Box LI	Identify the total number of boxes. This game teaches addition by combining stacks of boxes.
Missing Addend	Select the other addend to make a given sum.
Answer Check	Choose the expression that can be used to check the result of an addition or subtraction calculation.

Equal Shares and Partitioning

Description:

Students count parts of shapes and recognize them as equal or different sizes. Students mix identical or different-sized parts of a shape together and maintain an understanding of the sum of the parts as compared to the maximum area of the whole shape.

Direct Standards:

1.6.G: Partition two-dimensional figures into two and four fair shares or equal parts and describe the parts using words. 1.6.H: Identify examples and non-examples of halves and fourths.

Game	Description
Equal Areas	Determine which figure is divided up equally based on area.
Equal Division	Divide blocks into equal parts.
Match Partitions	Match the partitioning of two rectangular blocks.
Fricks	Represent the same length using different partitionings.
Alien Bridge	Combine the shaded parts of two equivalent wholes together.
Balance Pies	Match the area of one side of a balance using parts of a whole.
Pie Monster	Implicitly add two shaded regions together.

Shape Differences

Description:

Distinguish between defining attributes versus non-defining attributes. Correctly name shapes regardless of their orientations or overall size. Count and record vertices of 2D and 3D shapes.

Direct Standards:

1.6.A: Classify and sort regular and irregular two-dimensional shapes based on attributes using informal geometric language. 1.6.D: Identify two-dimensional shapes, including circles, triangles, rectangles, and squares, as special rectangles, rhombuses, and hexagons and describe their attributes using formal geometric language.

Game	Description
Pick Geometric Shapes 2D	Identify the number of edges and vertices on two-dimensional shapes.
Shape Names	Identify the given polygon.
Pick Geometric Shapes 2D LI	Learn the names and number of edges of different polygons.
Find the Pair	Given a set of two-dimensional shapes, identify the two that have the same number of vertices.
Prisms and Cylinders	Pick the shape that is the base of a given prism.
Pick Geometric Shapes 3D/2D with Vertices	Identify the number of edges and vertices on two-dimensional shapes.

Composite Shapes

Description:

Create composite shapes using other familiar shapes. Students quantify the number of shapes needed to form a composite.

Direct Standards:

1.6.C: Create two-dimensional figures, including circles, triangles, rectangles, and squares, as special rectangles, rhombuses, and hexagons. 1.6.F: Compose two-dimensional shapes by joining two, three, or four figures to produce a target shape in more than one way if possible.

Supporting Standards:

1.6.G: Partition two-dimensional figures into two and four fair shares or equal parts and describe the parts using words. 1.6.H: Identify examples and non-examples of halves and fourths.

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.
Fill Half Circles	Determine the number of half-circles needed to fill the shapes given.

Adding and Subtracting by Tens

Description:

Students develop place value strategies to add or subtract 1 or 10 from a given two-digit number. This objective builds on base ten concepts developed in previous objectives to expand students' understanding of adding and subtracting by tens and ones.

Direct Standards:

1.3.A: Use concrete and pictorial models to determine the sum of a multiple of 10 and a one-digit number in problems up to 99. 1.3.D: Apply basic fact strategies to add and subtract within 20, including making 10 and decomposing a number leading to a 10. 1.5.C: Use relationships to determine the number that is 10 more and 10 less than a given number up to 120. 1.5.E: Understand that the equal sign represents a relationship where expressions on each side of the equal sign represent the same value(s). 1.5.F: Determine the unknown whole number in an addition or subtraction equation when the unknown may be any one of the three or four terms in the equation.

Supporting Standards:

1.3.B: Use objects and pictorial models to solve word problems involving joining, separating, and comparing sets within 20 and unknowns as any one of the terms in the problem such as $2 + 4 = []$, $3 + [] = 7$, and $5 = [] - 3$. 1.3.E: Explain strategies used to solve addition and subtraction problems up to 20 using spoken words, objects, pictorial models, and number sentences.

Game	Description
Petals Place Value	Given a one- or two-digit whole number, identify the number of tens and the number of ones.
Add or Subtract by 1 or 10	Add and subtract 1 and 10 from two-digit whole numbers using mental arithmetic.
Add or Subtract Single Place Numbers	Add and subtract 1 and 10 from two-digit whole numbers using mental arithmetic.
Table Directions	Add and subtract one-digit and two-digit whole numbers using a number table.
Addition and Subtraction on the Number Line	Add two-digit whole numbers and mark the sum on a number line. Most of the sums and differences involve numbers that are multiples of 5 or 10.

Using Place Value to Add

Description:

Use strategies based on place value to add two-digit numbers. This objective uses visual models to develop understanding that when adding two-digit numbers, the digits in the tens and ones place represent amounts of tens and ones, and like units are added to like units. Learn that in adding two two-digit numbers, it is necessary to make a ten if there are ten or more ones. This objective builds on earlier place value objectives that develop the concept of grouping ones to form tens.

Direct Standards:

1.3.A: Use concrete and pictorial models to determine the sum of a multiple of 10 and a one-digit number in problems up to 99. 1.3.C: Compose 10 with two or more addends with and without concrete objects. 1.3.D: Apply basic fact strategies to add and subtract within 20, including making 10 and decomposing a number leading to a 10.

Game	Description
Petals Addition	This game introduces the standard algorithm for addition using a visual model, with ones represented as single petals and tens represented as flowers.
Petals Addition Method	Use the standard algorithm to add two-digit whole numbers without regrouping. Verify with the model.
Intro to Regrouping	Regroup ones into a group of ten using the visual model.
Regrouping with Written Method	Use the standard algorithm to add two-digit whole numbers with regrouping in the ones place. Verify with the model.

Comparing and Ordering Two-Digit Numbers

Description:
Order concrete objects and numbers. Compare numbers less than 100 using the symbols $<$, $>$, and $=$. Find the number that is the least or most in a group of numbers.

Direct Standards:

1.2.E: Use place value to compare whole numbers up to 120 using comparative language. 1.2.F: Order whole numbers up to 120 using place value and open number lines. 1.2.G: Represent the comparison of two numbers to 100 using the symbols for greater than, less than, and equal.

Game	Description
Order Sort	Order sets of stacked objects from smallest to largest or largest to smallest.
Order Sort Same Digits	From smallest to largest, order two-digit numbers that share the same digit in either place value.
Order Sort Two Digit Numbers	From smallest to largest, order two-digit numbers.
Numberline Trap	Use estimation and an understanding of place value to plot whole numbers (up to two digits) on a number line.
Least or Most	Identify the smallest or largest number in a set using number line concepts.
Comparison Signs	Order sets of objects and whole numbers using the symbols for less than, greater than, and equal to.
Number Comparison	Order whole numbers using both methods based on place value and the symbols for less than, greater than, and equal to.

Organizing Data

Description:
Organize, represent, and interpret graphical representations of data including Venn diagrams, tally marks, grids, and graphs.

Direct Standards:

1.8.B: Use data to create picture and bar-type graphs.

Supporting Standards:

1.8.A: Collect, sort, and organize data in up to three categories using models/representations such as tally marks or T-charts. 1.8.C: Draw conclusions and generate and answer questions using information from picture and bar-type graphs.

Game	Description
Venn Space	Identify the object that has the attributes corresponding to a particular section of a Venn diagram.
Venn Space Pick Shape	Identify the object that has the attributes corresponding to a particular section of a Venn diagram.
Paper J/II	To put J/II together, locate the square on the grid determined by the given horizontal and vertical positions.
Attribute Grid	Identify attributes of an object including size, color, and shape. Choose the location on a two-dimensional grid that corresponds to a pair of attributes describing an object.
Shapes and Attributes Paper J/II	Graph the given data by locating the type of shape on the vertical axis and the number of shapes on the horizontal axis.
Tally Marks	Use tally marks to record and represent the numbers and objects from one to ten.
Bar Graph Bridge	Construct bar graphs for a data set given as single observations or in a table.
Graph Sort	Students order quantities from least to most represented by bars of varying length progressing to points on a graph.

Telling Time

Description:
Identify parts of both analog and digital clocks including hour, minute, and second hands. Tell time to the half hour using both analog and digital clocks. Use vocabulary and clocks to identify the time of day.

Direct Standards:

1.7.E: Tell time to the hour and half hour using analog and digital clocks.

Game	Description
Hours and Minutes	Choose the correct hand corresponding to hours, minutes, and seconds on an analog clock. The game prepares students to tell and record time on an analog clock.
Telling Time	Students place the hands on a clock in the correct position to represent time to the hour and half-hour on an analog clock.
Time on a Line	Read an analog clock to the hour and half-hour and select the correct time on a number line. This game helps to build a foundation for the idea of elapsed time presented in later grades.
Hours and Minutes, Digital	Choose the correct location on a digital clock that displays the hours, minutes, and seconds. The game prepares students to tell and write time on a digital clock.
Telling Time, Digital	Students read an analog clock to the hour and half-hour and record the time on a digital clock.
Time Of Day Earth	Identify approximate time of day based on orientation of the Earth and the concepts of morning, afternoon, and evening.

Addition and Subtraction Within 20

Description:
Apply the ability to compose and decompose numbers. Solve addition and subtraction problems more efficiently using strategies about making (or decomposing to) a ten. Visual models, including ten frames are provided to support the development of these strategies.

Direct Standards:

1.3.D: Apply basic fact strategies to add and subtract within 20, including making 10 and decomposing a number leading to a 10.

Supporting Standards:

1.5.D: Represent word problems involving addition and subtraction of whole numbers up to 20 using concrete and pictorial models and number sentences.

Game	Description
Ten Frame Addition	Practice addition facts using ten frames.
Ten Frame Addition 2	Practice addition facts using ten frames.
Basic Facts	Practice addition and subtraction facts using visual models.
Ten Frame Subtraction	Practice addition facts using ten frames.

Money

Description:
Identify coins and their values. Calculate the value of collections of coins; compare money amounts. Show multiple ways to represent the same value; use given amounts to shop for real world objects.

Direct Standards:

1.4.A: Identify U.S. coins, including pennies, nickels, dimes, and quarters, by value and describe the relationships among them. 1.4.C: Use relationships to count by twos, fives, and tens to determine the value of a collection of pennies, nickels, and/or dimes.

Supporting Standards:

1.4.B: Write a number with the cent symbol to describe the value of a coin.

Game	Description
Identify Coin	Learn the value of each coin.
Money Place Value	Express a whole number using currency and place value concepts.
Money Swapper	Order coins and combinations of coins by their values.
Toll Bridge	Choose or count out the coin or combination of coins whose value is equal to the given amount.

Challenge

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

Game	Description
Dot Shapes	Connect dots to form shapes which will fill holes in the ground.
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.
Ice Caves	Identify lines of symmetry in two-dimensional shapes.
Bird Brain	Find birds in a grid after a sequence of transformations.
Big Seed	Find a sequence of actions that will unfold the given image into the desired shape.
Kick Box	Use lasers and mirrors to move the spheres out of the way so J/II can pass.
Upright J/II	Find a sequence of rotations to move J/II into an upright position.

Description:
Partition circles and rectangles into two and four equal shares, describe the shares using the words halves, fourths, and quarters, and use the phrases half of, fourth of, and quarter of.

Game	Description
Fraction of Shape LI	Both symbolically and linguistically state what portion of the shape is shaded.
Crank Pies	Match the shaded region to the terms 'ones', 'halves', and 'fourths'. Determine how many of these are given.
Match Fraction LI	Represent a given fraction using a visual model by first dividing a whole into equal parts and then shading the correct number of parts.

Two-Digit Number Words

Description:
Write two-digit numbers given in expanded notation. Use expanded notation representations to read and write two-digit numbers using number names.

Game	Description
Place Value Builder	Identify the digit values of given whole numbers using models based on place value. This game covers expanded notation and place value concepts up to the tens place while enforcing the skills of reading and writing whole numbers.
Expanded Form	Provide a number when given its representation in expanded notation. This game also covers place value concepts to the tens place while enforcing the skills of reading and writing whole numbers.
Numbers to Words	Convert two-digit whole numbers from symbols to words.
Words to Numbers	Convert two-digit whole numbers from words to symbols.

First Grade

Optional Objectives

Addition and Subtraction Facts

Description:
Review addition and subtraction facts to 20. Use visual representations to model problems, including ten frames, number lines, and blocks.

Game	Description
PushBox Addition Facts	Practice addition facts using visual block representations for sums under 10
SelectBox Addition Facts	Practice addition facts using alternate visual block representations for sums under 10
Basic Subtraction Facts	Practice Subtraction facts under 10 using visual block representations.
SelectBox Subtraction Facts	Practice Subtraction facts under 10 using alternate block representations.
TenFrame Addition Facts	Practice addition facts to 20 using Ten Frames
TenFrame Subtraction Facts	Practice subtraction facts using visual block representations.
Mixed Facts	Practice addition and subtraction facts using visual block representations.
Addition and Subtraction facts on the numberline	Practice addition and subtraction facts using a numberline representation.
AddFacts Bridge	Practice addition facts using a tricky inverted format.
Concentration numbers	Practice multiple addition and subtraction facts quickly in sequence

Standards

First Grade

Number and Operations

1.2.A: Recognize instantly the quantity of structured arrangements.

Supporting Objectives

- Place Value Concepts

1.2.B: Use concrete and pictorial models to compose and decompose numbers up to 120 in more than one way as so many hundreds, so many tens, and so many ones.

Direct Objectives

- Foundations of Place Value
- Counting by Tens
- Counting with Groups
- Place Value Concepts

1.2.C: Use objects, pictures, and expanded and standard forms to represent numbers up to 120.

Direct Objectives

- Introduction to the Number Line
- Subitizing
- Counting to 100
- Addition, Subtraction and Equations
- Foundations of Place Value
- Counting by Tens
- Counting with Groups
- Counting to 120
- Place Value Concepts

1.2.D: Generate a number that is greater than or less than a given whole number up to 120.

Supporting Objectives

- Counting by Tens

1.2.E: Use place value to compare whole numbers up to 120 using comparative language.

Direct Objectives

- Comparing and Ordering Two-Digit Numbers

1.2.F: Order whole numbers up to 120 using place value and open number lines.

Direct Objectives

- Comparing and Ordering Two-Digit Numbers

Supporting Objectives

- Counting to 100
- Counting by Tens
- Counting to 120

1.2.G: Represent the comparison of two numbers to 100 using the symbols for greater than, less than, and equal.

Direct Objectives

- Comparing and Ordering Two-Digit Numbers

1.3.A: Use concrete and pictorial models to determine the sum of a multiple of 10 and a one-digit number in problems up to 99.

Direct Objectives

- Adding and Subtracting by Tens
- Using Place Value to Add

Supporting Objectives

- Foundations of Place Value
- Counting with Groups

1.3.B: Use objects and pictorial models to solve word problems involving joining, separating, and comparing sets within 20 and unknowns as any one of the terms in the problem such as $2 + 4 = []$, $3 + [] = 7$, and $5 = [] - 3$.

Supporting Objectives

- Addition and Subtraction Within 10
- Addition, Subtraction and Equations
- Number Pairs and Making 10
- Addition and Subtraction Situations with Unknowns
- Adding and Subtracting by Tens

1.3.C: Compose 10 with two or more addends with and without concrete objects.

Direct Objectives

- Number Pairs and Making 10
- Using Place Value to Add

Supporting Objectives

- Foundations of Place Value

1.3.D: Apply basic fact strategies to add and subtract within 20, including making 10 and decomposing a number leading to a 10.

Direct Objectives

- Addition and Subtraction Within 10
- Addition, Subtraction and Equations
- Number Pairs and Making 10
- Addition and Subtraction Situations with Unknowns

- Adding and Subtracting by Tens
- Using Place Value to Add
- Addition and Subtraction Within 20

1.3.E: Explain strategies used to solve addition and subtraction problems up to 20 using spoken words, objects, pictorial models, and number sentences.

Supporting Objectives

- Addition and Subtraction Within 10
- Addition, Subtraction and Equations
- Number Pairs and Making 10
- Addition and Subtraction Situations with Unknowns
- Adding and Subtracting by Tens

1.3.F: Generate and solve problem situations when given a number sentence involving addition or subtraction of numbers within 20.

Supporting Objectives

- Addition and Subtraction Within 10
- Addition, Subtraction and Equations
- Number Pairs and Making 10
- Addition and Subtraction Situations with Unknowns

1.4.A: Identify U.S. coins, including pennies, nickels, dimes, and quarters, by value and describe the relationships among them.

Direct Objectives

- Money

1.4.B: Write a number with the cent symbol to describe the value of a coin.

Supporting Objectives

- Money

1.4.C: Use relationships to count by twos, fives, and tens to determine the value of a collection of pennies, nickels, and/or dimes.

Direct Objectives

- Money

Algebraic Reasoning

1.5.A: Recite numbers forward and backward from any given number between 1 and 120.

Direct Objectives

- Counting to 120

1.5.B: Skip count by twos, fives, and tens to determine the total number of objects up to 120 in a set.

Direct Objectives

- Counting by Tens
- Counting with Groups

1.5.C: Use relationships to determine the number that is 10 more and 10 less than a given number up to 120.

Direct Objectives

- Counting by Tens
- Adding and Subtracting by Tens

1.5.D: Represent word problems involving addition and subtraction of whole numbers up to 20 using concrete and pictorial models and number sentences.

Supporting Objectives

- Addition and Subtraction Within 10
- Addition, Subtraction and Equations
- Addition and Subtraction Situations with Unknowns
- Addition and Subtraction Within 20

1.5.E: Understand that the equal sign represents a relationship where expressions on each side of the equal sign represent the same value(s).

Direct Objectives

- Addition, Subtraction and Equations
- Addition and Subtraction Situations with Unknowns
- Adding and Subtracting by Tens

1.5.F: Determine the unknown whole number in an addition or subtraction equation when the unknown may be any one of the three or four terms in the equation.

Direct Objectives

- Addition, Subtraction and Equations
- Addition and Subtraction Situations with Unknowns
- Adding and Subtracting by Tens

Supporting Objectives

- Addition and Subtraction Within 10

1.5.G: Apply properties of operations to add and subtract two or three numbers.

Direct Objectives

- Addition and Subtraction Situations with Unknowns

Geometry and Measurement

1.6.A: Classify and sort regular and irregular two-dimensional shapes based on attributes using informal geometric language.

Direct Objectives

- Shape Differences

1.6.B: Distinguish between attributes that define a two-dimensional or three-dimensional figure and attributes that do not define the shape.

1.6.C: Create two-dimensional figures, including circles, triangles, rectangles, and squares, as special rectangles, rhombuses, and hexagons.

Direct Objectives

- Composite Shapes

1.6.D: Identify two-dimensional shapes, including circles, triangles, rectangles, and squares, as special rectangles, rhombuses, and hexagons and describe their attributes using formal geometric language.

Direct Objectives

- Shape Differences

1.6.E: Identify three-dimensional solids, including spheres, cones, cylinders, rectangular prisms (including cubes), and triangular prisms, and describe their attributes using formal geometric language.

1.6.F: Compose two-dimensional shapes by joining two, three, or four figures to produce a target shape in more than one way if possible.

Direct Objectives

- Composite Shapes

1.6.G: Partition two-dimensional figures into two and four fair shares or equal parts and describe the parts using words.

Direct Objectives

- Equal Shares and Partitioning

Supporting Objectives

- Composite Shapes

1.6.H: Identify examples and non-examples of halves and fourths.

Direct Objectives

- Equal Shares and Partitioning

Supporting Objectives

- Composite Shapes

1.7.A: Use measuring tools to measure the length of objects to reinforce the continuous nature of linear measurement.

Direct Objectives

- Measurement Concepts

1.7.B: Illustrate that the length of an object is the number of same-size units of length that, when laid end-to-end with no gaps or overlaps, reach from one end of the object to the other.

Direct Objectives

- Measurement Concepts

1.7.C: Measure the same object/distance with units of two different lengths and describe how and why the measurements differ.

Supporting Objectives

- Measurement Concepts

1.7.D: Describe a length to the nearest whole unit using a number and a unit.

Supporting Objectives

- Measurement Concepts

1.7.E: Tell time to the hour and half hour using analog and digital clocks.

Direct Objectives

- Telling Time

Data Analysis

1.8.A: Collect, sort, and organize data in up to three categories using models/representations such as tally marks or T-charts.

Supporting Objectives

- Organizing Data

1.8.B: Use data to create picture and bar-type graphs.

Direct Objectives

- Organizing Data

1.8.C: Draw conclusions and generate and answer questions using information from picture and bar-type graphs.

Supporting Objectives

- Organizing Data

Personal Financial Literacy

1.9.A: Define money earned as income.

1.9.B: Identify income as a means of obtaining goods and services, oftentimes making choices between wants and needs.

1.9.C: Distinguish between spending and saving.

1.9.D: Consider charitable giving.