

### **Course Description:**

During the first semester students will learn foundational math facts. They will learn to count to 12, how to compare sizes, ordinal numbers putting items in order, what a number line is and its uses, basic measurements such as inches and feet, and how to tell time on digital and analog clocks.

Students will have many opportunities to practice these new concepts by interacting with online confirmation exercises and filling out worksheets off line.

A special emphasis this semester is for students to have fun with numbers, finding success with concepts such as bigger and smaller and being comfortable in an online environment.

### **Major Concepts:**

- Position words
- Comparing sizes
- Shapes
- Counting to ten
- Patterns
- Basic measures
- Number line
- Telling time
- Ordinals – first through seventh

| Module | Lesson Title            | Objectives   |
|--------|-------------------------|--|
| 1      | Days of the Week        | <ol style="list-style-type: none"> <li>1. Recognize time words: morning, afternoon, evening and night.</li> <li>2. Name the days of the week in order.</li> </ol>  |
|        | Position                | <ol style="list-style-type: none"> <li>1. Recognize and use position words: above, below, beside, in front of, behind, next to, left and right.</li> </ol>   |
| 2      | Compare Sizes           | <ol style="list-style-type: none"> <li>1. Compare two items to determine longer or shorter.</li> <li>2. Compare two items to determine taller or shorter.</li> <li>3. Compare two items to determine if they are light or heavy.</li> <li>4. Identify which of 3 items is different from others in set.</li> </ol> |
|        | Sets                    | <ol style="list-style-type: none"> <li>1. Identify which of 3 items is different from others in set.</li> </ol>  |
|        | Count and Write to 3    | <ol style="list-style-type: none"> <li>1. Write and say the numbers 1-3 in order.</li> </ol>   |
| 3      | Shapes & Their Position | <ol style="list-style-type: none"> <li>1. Describe objects in the environment using names of shapes and their relative positions, using the terms above, below, beside, in front of, behind, and next to.</li> </ol>   |

| Module | Lesson Title                   | Objectives  |
|--------|--------------------------------|---|
| 3      | The Shape of It                | 1. Create basic shapes with string (circle, square, triangle, rectangle).   |
|        | Patterns                       | 1. Copy a pattern.  |
| 4      | Find the Fake                  | 1. Identify which of 3 items is unique.   |
|        | Use Your Fingers to Count to 5 | 1. Count and show numbers 0 - 5 with fingers.   |
|        | Circle and Count to 5          | 1. Circle 1 to 5 items in a set. (Understand that the last number name said tells the number of objects counted.)                                       |
| 5      | Sorting and Grouping           | <ol style="list-style-type: none"> <li>1. Compare two objects with a measurable attribute in common.</li> <li>2. Classify by color and size.</li> </ol> |

| Module | Lesson Title        | Objectives  |
|--------|---------------------|---|
| 5      | Basic Measures      | <ol style="list-style-type: none"> <li>1. Describe measurable attributes of objects, such as length, width and height.</li> <li>2. Measure length in inches.</li> </ol> |
|        | Biggest Set         | <ol style="list-style-type: none"> <li>1. Identify a set with the most items by using matching and counting strategies.</li> </ol>                                      |
| 6      | Sort and Classify   | <ol style="list-style-type: none"> <li>1. Classify, sort and count objects up to 5.</li> <li>2. Circle an object that does not belong in a set.</li> </ol>              |
|        | Which is Different? | <ol style="list-style-type: none"> <li>1. Circle any item that is different.</li> <li>2. Compare objects with a measurable attribute in common.</li> </ol>              |
| 7      | Count from 0 to 3   | <ol style="list-style-type: none"> <li>1. Write the numbers 0 to 3.</li> <li>2. Recognize the numerals 0 to 3.</li> </ol>   |
|        | Smallest or Biggest | <ol style="list-style-type: none"> <li>1. Number shapes from smallest to largest.</li> </ol>  |

| Module | Lesson Title                     | Objectives  |
|--------|----------------------------------|---|
| 7      | Position Words: Before and After | <ol style="list-style-type: none"> <li>1. Match numbers 0 - 5 with pictures of 0-5 objects.</li> <li>2. Say the number names in order, pair each object with one number name.</li> <li>3. Use the position words before and after, in front and behind in stories.</li> </ol> |
| 8      | The Number Six                   | <ol style="list-style-type: none"> <li>1. Write the number 6.</li> <li>2. Count to 6.</li> <li>3. Finger paint numbers 1 to 6.</li> </ol>   |
|        | Matching Sets                    | <ol style="list-style-type: none"> <li>1. Match a set of objects to a set with an equal number of objects.</li> <li>2. Draw the same number of objects as members in a given set.</li> </ol>  |
| 9      | Picture Graphs                   | <ol style="list-style-type: none"> <li>1. Create picture graphs.</li> </ol>   |
|        | Hopscotch to 6!                  | <ol style="list-style-type: none"> <li>1. Find a path counting up from 0 to 6.</li> </ol>   |
|        | Count to 7!                      | <ol style="list-style-type: none"> <li>1. Write the number 7.</li> <li>2. Count to 7.</li> <li>3. Classify, sort, and count pictures.</li> </ol>  |

| Module | Lesson Title        | Objectives  |
|--------|---------------------|---|
| 10     | Capacity            | <ol style="list-style-type: none"> <li>1. Fill larger containers using smaller containers of varying sizes.</li> <li>2. Match numerals 0 - 7 with pictures of 0 - 7 objects.</li> </ol>   |
|        | Ordinal Numbers 1-5 | <ol style="list-style-type: none"> <li>1. Create and interact with a number line.</li> </ol>  |
| 11     | Count to 8!         | <ol style="list-style-type: none"> <li>1. Write the number 8.</li> <li>2. Count to 8.</li> </ol>  |
|        | Less and More       | <ol style="list-style-type: none"> <li>1. Compare two objects with a measurable attribute in common, to see which object has "more of"/"less of" the attribute.</li> </ol>  |
|        | Count to 9!         | <ol style="list-style-type: none"> <li>1. Write the number 9.</li> <li>2. Count to 9.</li> </ol>  |
| 12     | More or Fewer       | <ol style="list-style-type: none"> <li>1. Select an item that best fits with a given set.</li> <li>2. Select a set with the most or fewest items.</li> <li>3. Count the items in each category and sort the categories by count.</li> </ol> |

| Module | Lesson Title           | Objectives   |
|--------|------------------------|--|
| 13     | The Number 10          | <ol style="list-style-type: none"> <li>1. Write the number 10.</li> <li>2. Count to 10.</li> <li>3. Find the number that makes 10 when added to the given number.</li> </ol> |
|        | The Number Line        | <ol style="list-style-type: none"> <li>1. Create and interact with a number line.</li> </ol>   |
| 14     | Before, After, Between | <ol style="list-style-type: none"> <li>1. Use a number line for before, after and between.</li> <li>2. Circle a group of items that is larger than another group.</li> </ol> |
|        | Dare to Compare        | <ol style="list-style-type: none"> <li>1. Identify whether the number of objects in one group is greater than; less than or equal to the number in another group.</li> </ol> |
| 15     | The Number 11          | <ol style="list-style-type: none"> <li>1. Write the number 11.</li> <li>2. Count to 11.</li> </ol>   |
|        | The Penny              | <ol style="list-style-type: none"> <li>1. Recognize pennies and using the cents symbol.</li> <li>2. Count pennies.</li> </ol>  |

| <b>Module</b> | <b>Lesson Title</b> | <b>Objectives</b>   |
|---------------|---------------------|---|
| <b>15</b>     | Sorting in Sets     | 1. Circle an item that shares the characteristics of a given set. |
| <b>16</b>     | The Nickel          | 1. Recognize and add nickels.                                     |
|               | Adding By One       | 1. Calculate the total when 1 is added to a given set.            |
|               | The Ten Frame       | 1. Use a ten frame.   |
|               | Picture Patterns    | 1. Copy a pattern of pictures.                                    |
| <b>17</b>     | Measuring Time      | 1. Keep track of time on a clock and a calendar.                  |



| Module | Lesson Title          | Objectives  |
|--------|-----------------------|---|
| 17     | First, Next, and Last | 1. Put things in order and use position words (first, next, last).  |
|        | Fewer or More         | 1. Identify a set with equal, some, many, few, more, and less.<br>2. Classify pairs as same or different. |
|        | The Hour              | 1. Tell time on the hour using an analog clock.   |
|        | Fluency with Numbers  | 1. Use ten frames to gain fluency in numbers 0 to 10.   |
| 18     | The Number 12         | 1. Write the number 12.<br>2. Count to 12.  |
|        | Add to 6              | 1. Combine two groups to total 6.   |

### **Course Description:**

Students learn to count to twenty. They work with comparing objects using the terms tall, longer, and shorter as well as comparing two objects using the terms lighter and heavier. They will continue their exploration of basic geometric shapes such as cones and spheres. They will work with the concept of first, middle, and last.

Arranging and sorting receive special emphasis this semester. Students will also work on writing numbers with 3, 4, and 5 given special attention. Students will learn the concepts of left and right. Coins are also a focus as students will count pennies, nickels and dimes. Finally, the number 7 is studied using the colors of the rainbow.

Projects include making paper fingers and thumbs and creating designs with them. They will also make the numbers 1-10 out of dough.

### **Major Concepts:**

- Counting to twenty
- Comparing weight and length
- Sorting by shape and color
- Cones, cubes, and spheres
- First middle and last
- Left and right
- Counting pennies and nickel

| Module    | Lesson Title       | Objectives  |
|-----------|--------------------|---|
| <b>19</b> | Thirteen           | <ol style="list-style-type: none"><li>1. Write the digits for 13.</li><li>2. Write the number word: thirteen.</li><li>3. Count to 13.</li></ol>         |
|           | The Order of It    | <ol style="list-style-type: none"><li>1. Put things in order using time words (today, yesterday, and tomorrow), days of the week, and months.</li></ol> |
|           | Go Forward         | <ol style="list-style-type: none"><li>1. Count forward beginning from a given number.</li></ol>   |
|           | The Lesser Numbers | <ol style="list-style-type: none"><li>1. Determine the lesser value in a pair of numerals.</li></ol>  |
|           | Shapes             | <ol style="list-style-type: none"><li>1. Identify shape attributes, such as side, corner, edge and curve.</li></ol>                                     |

| Module    | Lesson Title       | Objectives  |
|-----------|--------------------|---|
| <b>20</b> | Sequence to 12     | 1. Complete a sequence to 12 when one or two are missing.             |
|           | Naming Shapes      | 1. Name shapes correctly no matter the size or orientation.           |
|           | How Many are Left? | 1. Determine the number of objects remaining when removing up to two. |
|           | Weight             | 1. Measure weight with non-standard units.                            |
|           | Fourteen           | 1. Use the number 14.   |

| Module | Lesson Title                     | Objectives                                      |
|--------|----------------------------------|---|
| 21     | Sets with Less                   | 1. Select a set with one less than a given set. |
|        | Set Subtraction                  | 1. Create story problems that subtract from 5.  |
|        | Number Words                     | 1. Recognize and use number words: zero to ten. |
|        | Story Problems that Add to Seven | 1. Create story problems that add to 7.         |
|        | Commutative Property             | 1. Use the commutative property of addition.    |

| Module | Lesson Title        | Objectives   |
|--------|---------------------|--|
| 22     | Fifteen             | 1. Use the number 15.  |
|        | Sequence to 12      | 1. Complete a sequence to 12 when one or two are missing from the beginning. |
|        | Arrays to 16        | 1. Use arrays to 16 to count "how many" items.                               |
|        | Story Problems to 8 | 1. Create story problems that add to 8.                                      |
|        | Sorting             | 1. Classify, count and sort objects by category.                             |

| Module | Lesson Title          | Objectives  |
|--------|-----------------------|---|
| 23     | Sixteen               | 1. Use the number 16.   |
|        | Pay For It            | 1. Use pennies and nickels to pay for items.<br>2. Calculate the value of a group of pennies, nickels, and a combination of both. |
|        | Story Problems from 6 | 1. Create story problems that subtract from 6.  |
|        | 0 to 20               | 1. Write numbers from 0 to 20 and represent them with objects.  |
|        | Sum to 5              | 1. Add vertically to 5, while distinguishing the words horizontal and vertical.   |

| Module | Lesson Title          | Objectives   |
|--------|-----------------------|--|
| 24     | Seventeen to Eighteen | 1. Use the numbers 17 and 18.  |
|        | Circle Graphs         | 1. Divide items into multiple groups and place them into a circle graph.                             |
|        | Picture Graphs        | 1. Create picture graphs and circle graphs by classifying objects.                                   |
|        | Sequence to 18        | 1. Complete a sequence to 18 when one or two numbers from the beginning of the sequence are missing. |



| Module | Lesson Title                | Objectives  |
|--------|-----------------------------|---|
| 25     | Story Problems to 9         | 1. Create story problems that add to 9.                 |
|        | Ten Frames                  | 1. Solve addition story problems using ten frames.      |
|        | Length                      | 1. Measure length with non-standard units.              |
|        | Number Words                | 1. Recognize number words eleven, twelve, and thirteen. |
|        | Coloring Patterns in Shapes | 1. Color shapes so no adjacent sides share a color.     |

| Module | Lesson Title        | Objectives   |
|--------|---------------------|--|
| 26     | Sum to 10           | 1. Find the number that makes 10 when added to a given number. |
|        | Greatest Number     | 1. Select the number with the greatest value in a given set.   |
|        | Equals              | 1. Recognize numerical equivalents.                            |
|        | Distance            | 1. Measure distance with non-standard units.                   |
|        | Nineteen and Twenty | 1. Use the numbers 19 and 20.                                  |

| Module | Lesson Title             | Objectives  |
|--------|--------------------------|---|
| 27     | Compare Numbers          | <ol style="list-style-type: none"><li>1. Compare two numbers between 1 and 10 presented as written numerals.</li><li>2. Use these math signs: <math>&lt;</math>, <math>&gt;</math>, <math>=</math>.</li></ol> |
|        | Peak 10                  | <ol style="list-style-type: none"><li>1. Find pairs of numbers on a number line to 10.</li></ol>  |
|        | Story Problems from 7    | <ol style="list-style-type: none"><li>1. Create story problems that subtract from 7.</li></ol>  |
|        | Matching Sets to Numbers | <ol style="list-style-type: none"><li>1. Match a number 0-9 with a set of items.</li></ol>  |
|        | Higher Value             | <ol style="list-style-type: none"><li>1. Determine the higher value in a pair of numerals from 0 to 9.</li></ol>  |

| Module | Lesson Title      | Objectives   |
|--------|-------------------|--|
| 28     | Sum to 8          | 1. Add vertically to 8.  |
|        | Word Numbers      | 1. Recognize the word numbers: fourteen to twenty, thirty, forty, and fifty. |
|        | 20 to 30          | 1. Use the numbers 20 to 30, using rows and columns.                         |
|        | Comparing Lengths | 1. Compare and order objects by length.                                      |
|        | Sorting by Weight | 1. Sort objects by non-standard units of weight.                             |

| Module    | Lesson Title        | Objectives  |
|-----------|---------------------|---|
| <b>29</b> | Sequence to 20      | 1. Complete a sequence to 20 when two numbers are missing.                                |
|           | Addition Facts to 8 | 1. Practice addition facts to 8.  |
|           | Positions           | 1. Use position words inside and outside with geometric shapes.                           |
|           | Temperature         | 1. Sort objects by temperature and measure temperature on a Celsius and Fahrenheit scale. |
|           | 31 to 50            | 1. Use numbers 31 - 50 and place in columns and rows.                                     |

| Module    | Lesson Title       | Objectives  |
|-----------|--------------------|---|
| <b>30</b> | Sum to 9           | 1. Add vertically to 9.   |
|           | Write Numbers 0-20 | 1. Represent objects with a numeral from 0 to 20 and write those numbers. |
|           | Subtract From 6    | 1. Subtract vertically from 6 and practice subtraction facts.             |
|           | Patterns of Shapes | 1. Complete patterns of shapes.   |

| Module    | Lesson Title    | Objectives   |
|-----------|-----------------|--|
| <b>31</b> | Numbers 51-100  | 1. Use numbers 51 - 100.   |
|           | Count by 10's   | 1. Count by 10's to 100.   |
|           | Sum to 10       | 1. Add vertically to 10.   |
|           | Arrays          | 1. Write numbers 0 - 20 and identify objects in arrays representing those numbers. |
|           | Subtract From 9 | 1. Subtract vertically from 9.   |

| Module | Lesson Title                           | Objectives   |
|--------|--|--|
| 32     | Describe Objects                       | 1. Describe objects in the environment by using the names of shapes. |
|        | Using a Tally Chart                    | 1. Chart the results of rolling a cube 20 times.                     |
|        | Compare Temperatures                   | 1. Compare different temperatures.                                   |
|        | Addition and Subtraction Word Problems | 1. Solve addition and subtraction word problems.                     |
|        | Move the Shape                         | 1. Move a figure by flipping, sliding or turning it.                 |



| Module    | Lesson Title       | Objectives   |
|-----------|--------------------|--|
| <b>33</b> | Sum to 12          | 1. Add vertically to 12.   |
|           | Add Horizontally   | 1. Add horizontally to 12.   |
|           | Write Number Words | 1. Recognize and write the number words fifty, sixty, seventy, eighty, ninety and one hundred. |
|           | Subtract to 10     | 1. Subtract vertically to 10.  |
|           | Adding Dimes       | 1. Add dimes, nickels, and pennies.<br>2. Use the decimal, cent sign, and dollar sign.         |

| Module | Lesson Title                  | Objectives   |
|--------|-------------------------------|--|
| 34     | Sum to 15                     | 1. Add to 15.  |
|        | Add or Subtract?              | 1. Select addition or subtraction to solve a problem.<br>2. Select the plus or minus sign to finish an equation. |
|        | Odd and Even                  | 1. Identify odd and even numbers to 15.  |
|        | Fact Families—<br>Addition    | 1. Work with addition fact families.   |
|        | Fact Families—<br>Subtraction | 1. Work with subtraction fact families.  |

| Module    | Lesson Title     | Objectives                              |
|-----------|------------------|---|
| <b>35</b> | Making Shapes    | 1. Make large shapes out of small ones. |
|           | Sets to 20       | 1. Match sets from 0 - 20.              |
|           | Numbers 11-20    | 1. Identify numbers from 11 - 20.       |
|           | Build Numbers    | 1. Build numbers from 11 - 20.          |
|           | Ordering Numbers | 1. Put numbers in order from 0-20.      |

| <b>Module</b> | <b>Lesson Title</b>         | <b>Objectives</b>            |
|---------------|-----------------------------|------------------------------|
| <b>36</b>     | Review Ordering             | 1. Review ordering.          |
|               | Review Shapes               | 1. Review shapes.            |
|               | Review Addition Facts       | 1. Review addition facts.    |
|               | Review of Subtraction Facts | 1. Review subtraction facts. |