



<p><b>Lesson:</b> “Tiny” Makes 10</p>	<p><b>Teacher:</b></p>
<p><b>CCSS/ Aligned STEM:</b>  <b>MATHEMATICS: Operations and Algebraic Thinking</b>  <b>CCSS.MATH.CONTENT.K.OA.A.2</b>          Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem</p> <p><b>CCSS.MATH.CONTENT.K.OA.A.3</b>          Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation (e.g., <math>5 = 2 + 3</math> and <math>5 = 4 + 1</math>).</p> <p><b>CCSS.MATH.CONTENT.K.OA.A.4</b>          For any number from 1-9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or equation.</p> <p><b>CCSS.MATH.CONTENT.K.OA.A.5</b>          Fluently add and subtract within 5.</p> <p><b>ISTE:</b>  <u>Creativity and Innovation</u>  <u>Critical Thinking, Problem Solving, and Decision-Making</u></p> <p><b>DOK:</b> Depth of Knowledge Levels 3 &amp; 4          Construction/Design and Extended Thinking</p>	<p><b>Lesson Objectives</b></p> <ol style="list-style-type: none"> <li>1. TLW use TinyTys™ to compose and decompose numbers through 10.</li> <li>2. TLW creates and orders equations using a model.</li> <li>3. TLW tells a number story using TinyTys™</li> </ol> <p><b>Materials</b></p> <ol style="list-style-type: none"> <li>1. TinyTys™ long and short Tys (Tiny(s) and Bangle(s)) PRESORTED BY COLOR</li> <li>2. Whiteboard, projector and computer (Ipad to record image optional)</li> <li>3. Blank paper and colored markers; if possible utilize colors to match numbers composed using TinyTys™.</li> <li>4. Whiteboard markers</li> </ol>
<p><b>Content</b></p>	<p><b>Teacher/Anecdotal/Reflection Notes:</b></p>
<p><b>Anticipatory Set</b>          Teacher asks, “Is there more than one way to make 10?” Teacher tells a story about a class with five girls and five boys, allowing students to be a model in a line. Teacher explains that a boy had to move away, but a new girl arrived. Teacher asks, “Did the number of students change?” Students</p>	



<p>share answers.</p>	
<p><b>Input</b> <b>Task Analysis</b></p> <ol style="list-style-type: none"> <li>1. Teacher presents 10 of the same color connected "Tiny"-sized Tys. Teacher introduced them as "This class has 10 "Tiny's in it."</li> <li>2. Teacher repeats the story about a classroom with ten same color "Tiny"s. Teacher records this number story with a numeric equation on the whiteboard or computer.</li> <li>3. Teacher demonstrates how one color chosen Tiny moves away and one a different color arrives. Teacher asks if the total or sum has changed?</li> <li>4. Teacher repeats the exercise, records each numeric equation for each math model made in succession (Teacher may pause for students to report and record the next story in the pattern, or as a class, begin to chorally tell the story).</li> <li>5. The teacher explains that students will be using TinyTys™ to create their own math models in the story, "Tiny makes 5".</li> <li>6. Teacher distributes "Tiny" - sized Tys (5 of 2 different colors) to students/small groups (depending on the availability of TinyTys™).</li> <li>7. Students manipulate the TinyTys™ to fit their "Tiny makes 5" story and record their numeric equations on whiteboards or blank paper.</li> </ol>	
<p><b>Check for Understanding</b> <b>(Throughout Lesson)</b> What math model would be next in the pattern? Has your total or sum changed? Can you show me this equation another way? Which number would you compose if you could?</p>	
<p><b>Guided Practice</b></p>	



<p>Teacher distributes materials and reminds students they will be recording their math models using numeric equations. Teacher provides students with a math model to use, Teacher notes that the math symbol = means equal to or same as Tiny makes Five. Teacher reminds students all equations will equal five and to only use two colors.</p>	
<p><b>Independent Practice</b> Students build TinyTys™ models, collaborate, and share equations, recording their answers and ordering the equations when they notice a pattern.</p>	
<p><b>Extension</b> Use other colors of TinyTys™ to create more complex math models, such as <math>3+1+1=5</math>. Use TinyTys™ pieces to represent characters in stories about a class with more than five.</p>	