



<p><b>Lesson:</b> Measuring with TinyTys™</p>	<p><b>Teacher:</b></p>
<p><b>CCSS/ Aligned STEM:</b>  <b>MATHEMATICS: Measurement and Data-</b>  <b>CCSS.MATH.CONTENT.K.MD.A.1</b>          Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.  <b>CCSS.MATH.CONTENT.K.MD.A.2</b>          Directly compare two objects with a measurable attribute in common, to see which object has "more of"/"less of" the attribute, and describe the difference. <i>For example, directly compare the heights of two children and describe one child as taller/shorter.</i></p> <p><b><u>ISTE:</u></b>  <b><u>Creativity and Innovation</u></b>  <b><u>Critical Thinking, Problem Solving, and Decision-Making</u></b></p> <p><b><u>DOK:</u></b> Depth of Knowledge Levels 3 &amp; 4  <b>Construction/Design and Extended Thinking</b></p>	<p><b>Lesson Objectives</b></p> <ol style="list-style-type: none"> <li>1. TLW build a measurement-themed word bank: measurement, unit, width, length, height, object, tools</li> <li>2. TLW explore various units of measurement.</li> <li>3. TLW evaluate and determine the best unit of measurement for various sized objects.</li> </ol> <p><b>Materials</b></p> <ol style="list-style-type: none"> <li>1. TinyTys™ Jewelry Kit(s)</li> <li>2. Chart Paper or Whiteboard with word bank vocabulary listed.</li> <li>3. Various classroom objects including an apple</li> <li>4. <a href="#">"Measuring with TinyTys™ handout"</a></li> </ol>
<p><b>Content</b></p>	<p><b>Teacher/Anecdotal/Reflection Notes</b></p>
<p><b>Anticipatory Set</b>          Teacher presents an apple to the class and asks, "How big is this apple?" "How tall is this apple?" "Is it as tall as me?" "We can not use me to measure this apple; I'm too tall." Teacher chooses a student to stand beside the apple and asks, "Can we use (Student Name) to measure how tall this apple is?" "We need a smaller unit to measure this apple; I HAVE A GREAT IDEA; LET'S USE OUR TINYTYS™"</p>	
<p><b>Input</b>  <b>Task Analysis</b></p> <ol style="list-style-type: none"> <li>1. Teacher presents various TinyTys™ as units of measurement. Ie: "This is a heart unit of measurement; This is a star unit of measurement; This is a Bangle unit of measurement..."</li> <li>2. Teacher distributes one of each TinyTys™ unit to student small groups/tables.</li> <li>3. Teacher asks the class which unit of</li> </ol>	



<p>measurement they think would help them measure the apple.</p> <ol style="list-style-type: none"><li>4. Students discuss in small group and report to the class which units they chose and why they did (Teacher coaches the discussion to the importance of a uniform unit of measurement).</li><li>5. Teacher demonstrates using stars as a unit of measurement for the apple.</li><li>6. Teacher demonstrates measuring other classroom objects with the star unit.</li><li>7. Teacher hands out “Measuring with TinyTys™” handout and remainder of TinyTys™ pieces to each small group.</li><li>8. Teacher models the example on the handout, emphasizing the word bank words. Teacher points out that one question tells the unit to use, and the rest leave it up to the student to choose.</li><li>9. Students work individually or in their small group to complete the exercise. Teacher prompts students to use different types of TinyTys™ units.</li><li>10. Discussion Questions (after students complete the handout):</li></ol>	
<p><b>Check for Understanding</b> <b>(While students measure various objects)</b> Which TinyTys™ object did you use to measure and why? Why would someone need to measure and object? Have you ever measured other objects? What other ways are there to measure? Can we measure weight, temperature, time? What tools are we using to measure length, width and height of object?</p>	
<p><b>Guided Practice</b> Teacher models the example on the handout, emphasizing word bank vocabulary. Ie: “We are using TinyTys™ units to measure the width of the pencil box”</p>	



<p><b>Independent Practice</b>                  Students complete the “Measuring with TinyTys™” handout, including final question, prompting students to choose an object in the classroom to measure using TinyTys™</p>	
<p><b>Extension</b>                  Students measure the actual object in the classroom (rather than just the picture), noticing if they must change the unit of measure. Students use TinyTys™ to explore and measure perimeter and circumference of objects in the classroom or in their homes. Students use TinyTys™ to connect with other students, solving the problem: how long is the hallway? Students record images and share their exploration findings using Ipad, or other device.</p>	