





# Technology-Connected Lesson Plan

<b>Title:</b>	<b>Geoboard Area</b>
Grade Levels:	3-6
Curriculum Areas:	☞ Math
Measurable Objectives:	<ul style="list-style-type: none"> <li>☞ TLW become familiar with basic geometric shapes</li> <li>☞ TLW use appropriate geometric shape vocabulary</li> <li>☞ TLW determine the length, width, and area of rectangles</li> <li>☞ TLW understand the formula used to figure area</li> <li>☞ TLW enter data to create a graph</li> </ul>
LA Content Standards:	<p><b>G-1-E</b> determining the relationships among shapes;  <b>G-6-E</b> demonstrating the connection of geometry to the other strands and to real-life situations.  <b>G-2-M</b> identifying, describing, comparing, constructing, and classifying geometric figures and concepts;  <b>D-1-M</b> systematically collecting, organizing, describing, and displaying data in charts, tables, plots, graphs, and/or spreadsheets; systematically collecting, organizing, describing, and displaying data in charts, tables, plots, graphs, and/or spreadsheets; applying (measure or solve measurement problem) the concepts of length (inches, feet, yards, miles, millimeters, centimeters, decimeters, meters, kilometers), area, volume, capacity (cups, liquid pints and quarts, gallons, milliliters, liters), weight (ounces, pounds, tons, grams, kilograms), mass, time (seconds, minutes, hours, days, weeks, months, years), money, and temperature (Celsius and Fahrenheit) to real-world experiences;  <b>M-1-M</b> applying the concepts of length, area, surface area, volume, capacity, weight, mass, money, time, temperature, and rate to real-world experiences;  <b>D-2-E</b> constructing, reading, and interpreting data in charts, graphs, tables, etc  <b>D-1-M</b> systematically collecting, organizing, describing, and displaying data in charts, tables, plots, graphs, and/or spreadsheets</p>
Technology Guidelines:	Technology Problem-Solving and Decision-Making Tools ( <i>Problem Solving Foundation Skill</i> )

	<ul style="list-style-type: none"> <li>◆ Students employ technology for real world problem solving. Technology Productivity Tools (<i>Resource Access and Utilization Foundation Skill</i>)</li> <li>◆ Students use technology tools to enhance learning, increase productivity, and promote creativity</li> </ul>
Technology Connection:	<ul style="list-style-type: none"> <li>🖥️ computer with TV connection, overhead, Internet connection</li> </ul>
Procedures:	<ul style="list-style-type: none"> <li>🖥️ Using the overhead and overhead pattern block discuss geometric shapes and the vocabulary used to describe</li> <li>🖥️ Using a handout have the students demonstrate understanding of the basic geometric shapes.</li> <li>🖥️ Demonstrate an activity in which one student creates a three geometric piece figure (hiding it behind a book or paper); then describes it to a partner, who attempts to recreate the geometric figure.</li> <li>🖥️ Using geoboards (overhead one if possible) have students create a rectangle (4 squares by 6 squares). Discuss with the students about measuring length and wide; then how to determine area by count the squares. If you have Internet access and a TV connection use the following link to a virtual manipulative site:<a href="http://matti.usu.edu/nlvm/nav/frames_asid_125_g_3_t_3.html">http://matti.usu.edu/nlvm/nav/frames_asid_125_g_3_t_3.html</a></li> <li>🖥️ Provide the students with a data record sheet (made with tables in Word.)</li> <li>🖥️ Have the students create 10 different rectangle on their geoboard or virtual geoboard and record the information on the data record sheet</li> <li>🖥️ As a group ask students what patterns do they see in the columns? Can they think of a short cut to counting all the small squares to get the area of the rectangle? See if the students can provide a formula for figuring area of a rectangle.</li> <li>🖥️ Discuss with students about real life things that are rectangles and why we might need to know the area measurement.</li> <li>🖥️ Extension: Have students measure rectangles found the classroom or areas of the school. Students would need to determine the appropriate unit of measure.</li> </ul>
Materials:	<ul style="list-style-type: none"> <li>🖥️ data record sheet (attached), geoboards and rubberbands, overhead pattern blocks, pattern blocks, overhead geoboard,</li> </ul>
Assessment:	<ul style="list-style-type: none"> <li>🖥️ checklist of activities and data record sheet</li> </ul>

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