

## The Making of a House Plan

Grade Level	8
Subject	Mathematics and Technology
Curriculum Objective	<p>Mathematics  <b>The learner will understand and use properties and relationships in geometry.</b>  <b>3.02</b> Apply geometric properties and relationships, including the Pythagorean theorem, to solve problems.</p> <p>Technology  <b>The learner will demonstrate knowledge and skills in the use of computer and other technologies.</b>  <b>2.03</b> Select and use spreadsheet formulas and functions to solve problems in content areas. (3)</p>
Guiding Question	How can geometry be used in an architect's job?
Lesson Summary	Students will apply the Pythagorean theorem and other geometric formulas to design a house plan of their own.
Activating Strategy	<ol style="list-style-type: none"> <li>1) Display a sample of a house plan on an ELMO/Data Projector or have a transparency of a house plan to display on an overhead projector.</li> <li>2) Ask students to describe what geometric shapes they see in the house plan.</li> <li>3) Ask students if a person could live in a house that is built to the same size of the house plan.</li> <li>4) Talk about the process of how a house plan becomes a house (basic stuff: There may be more to it, but you only need this information).             <ol style="list-style-type: none"> <li>a. house plan</li> <li>b. small –scale model of house</li> <li>c. hire contractors</li> <li>d. get building permits</li> <li>e. construction begins</li> </ol> </li> </ol>
Cognitive Strategy	<ol style="list-style-type: none"> <li>1) Give each student a piece of graph paper.</li> <li>2) Students will draw a plan for their dream house or building. They are required to have different geometric shapes: triangles, rectangles, squares, trapezoids, and circles.</li> <li>3) Have each student pick a room in their house /building to calculate the area of the room and each shape in the room.</li> <li>4) Each student will display their house plan using the ELMO and explain the purpose for each room.</li> </ol>

Summarizing Strategy	Students will apply their knowledge of finding the area of various geometric figures.
Evaluation	<ol style="list-style-type: none"><li>1) Grade each student on following the directions.</li><li>2) Check the process of finding the area of the different geometric shapes and room.</li></ol>
Resources	ELMO Graph paper
Credits	Jana Whaley, Southeastern Stokes Middle School, 8 <sup>th</sup> grade, <a href="mailto:jana.whaley@stokes.k12.nc.us">jana.whaley@stokes.k12.nc.us</a>