



Making Maps

<p>THE BASICS</p>	<p>THE TOOLBOX</p>	<p>EDUCATION STANDARDS</p>	<p>Measurement Math Standard: Learning to assign numerical value to an attribute of an object and developing an understanding of proportional relationships.</p>
<p> Grade Level: 4-12</p>	<ul style="list-style-type: none"> • Paper • Pencil • Ruler or straight edge • Tape measure • Any map with a distance scale 	<p>SAFETY CONCERNS</p>	<p>None.</p>
<p> Estimated Time: 25 min.</p>		<p>FOR KIDS WITH DISABILITIES</p>	<p>Visually-impaired students may want to use a Braille measuring tape. Mobility-impaired students may want to work with a partner.</p>



Educational Objective:

To develop spatial reasoning skills and understand scaled measurements.

What To Do:

- Assemble the materials and duplicate the activity sheet.

Questions to Ask Students As They Do This Activity:

- Why do you think that scaled drawings are useful?
- What are different ways we use scaled drawings?
- How could you use a floor plan of your bedroom? Your entire house?
- What are the differences or similarities between a floor plan and a map?
- Have you ever used a floor plan? A map?

Why It Happens:

A scale is a comparison of a smaller distance to a larger distance. Scaled drawings allow people to create smaller, proportionally correct versions of larger items. For example, if you wanted to arrange furniture in your

room at home, you could draw a floor plan and use a scale to help you represent the size of the room and your furniture on graph paper. This would allow you to determine the best use of space without actually having to move heavy furniture in several different positions.

A map is also a representation of a scale drawing. We are able to use a map that will fit on our desktop to view the entire United States or a globe to view the entire world.

WEB SITES

- **All Aboard**
<http://score.kings.k12.ca.us/lessons/allabrd.htm> (Grades 2-5)

SOFTWARE

- **Get Me Out of Here!**
Critical Thinking Books & Software, 1996. (Grades 4-12)
- **Map Room**
Steck-Vaughn Company, 1996.
(Grades 4-12)

READING ROOM

- Parker, Marla. **She Does Math! Real-Life Problems from Women on the Job.** MAA, 1995. (Grades 9+)
- Smoothey, Marion. **Maps and Scale Drawings.** Marshall Cavendish, 1995. (Grades 3-8)
- Smoothey, Marion. **Ratio and Proportion.** Marshall Cavendish, 1995. (Grades 3-8)

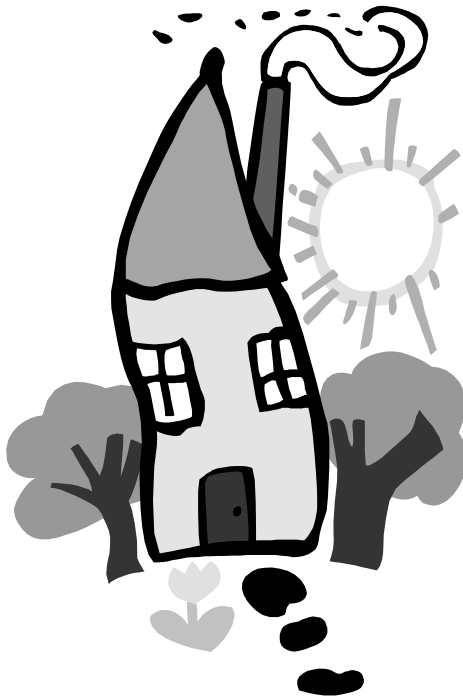
Career Connections

Architects, interior designers, and cartographers all need to understand and use scaled drawings to do their work.

MAKING MAPS ACTIVITY SHEET

Using the directions below, measure and determine a scale in order to draw a floor plan of a room.

1. Start with one room in your home, school or community center. Using a measuring tape, measure and record the length of all of the walls.
2. Develop a scale for the floor plan of this room. Should one inch represent a foot? Should one inch represent a yard? Decide what's best for your situation.
3. Use your scale to convert the wall measurements into distances on paper. For example, if a scale is 1 inch represents 1 foot, and your wall is 10 feet long, then your line should be 10 inches long.
4. After you complete that room, move on until you have completed a floor plan for your each room in your home, school, or community center. You may want to combine each room plan into one master floor plan for the entire building.



Graph Paper

