Make a Survey Map of Your Yard

In this activity, originally printed in the Spring 2001 issue of *Michigan History for Kids*, students will gain hands-on experience of the survey process. Students walk through the steps of surveying by mapping out their yard (classroom, playground, etc.).

Education staff at the Michigan History Center presents this activity as part of the Statehood program at the Museum for 3rd and 4th graders. However, for 3rd and 4th graders staff does not ask students to measure and place internal features. The activity is focused on working as a team to measure the perimeter of an area. The activity as presented below would work best for 5th to 6th graders, and perhaps as a solo activity for 7th and 8th graders.

Students will:

1. Create tools needed for surveying.
2. Measure the space.
3. Report findings and draw map.

Materials:

- Measuring device (i.e. ruler, yardstick, or measuring tape)
- String (measured to be at least 10 feet long)
- Drawing paper (or graph paper)
- Pencil or colored pencils
- Markers

Preparation:

You will need to cut the string to the desired length (at least 10 feet is recommended). Depending on the age and expertise of your students you can either let them make a one-inch grid on their paper or use graph paper instead.

Lesson Procedure:

1. Read, or have the children read, the introduction provided in the “Make a Survey Map of Your Yard” in the Spring 2001 issue of *Michigan History for Kids*. 

http://www.seekingmichigan.org/learn/statehood/activities
Prepared by staff at the Michigan History Center.
2. If the topic still feels abstract to your students, we recommend that you walk through a small example with your students. First measure the perimeter of a small area, perhaps your desk. Graph that area onto paper.

3. Assign students numbers one through four then separate them into teams made up of students assigned the numbers of one, two, three, and four.

4. Once students are separated into teams, assign the following jobs by numbers initially given to students.
   1. Leaders: These students are responsible for coordinating the efforts of their teammates.
   2. Mapmaker: These students are responsible for making the grid and drawing the map based on the team’s efforts to measure.
   3. Measurer: These students work with another team member to measure the area. The measuring string is long and needs the efforts of two students to hold in place.
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5. Students need to make a grid on their paper (if given blank paper). Lines should be one inch apart. The number of squares you recommend students create depends on the size of the area you are asking them to measure. Student’s will need a square inch for every ten feet of land (this can vary depending on the size of area). Skip this step if using graph paper.

6. Using a black marker, students should make marks on the string twelve inches apart.

7. Using the rope, students should measure the outside edges of the designated area. Students should then draw the borders on the grid. Each ten feet of land should correspond with an inch-long section on their paper.

8. Next, students should measure from the outside edge of the area to a internal feature (classroom desk, swing, tree). Students should start at the shortest distance from the outer boundary to the object. Students should then make a mark on the paper where the object’s edge should be.

9. Students should walk to the outside border that joins at a 45-degree angle with the first border. Students should measure the distance from that border to the object again and make a mark on their paper.

10. Students can use their ropes to measure around the object, then draw it onto their paper at its correct location.

11. Students should repeat directions 8 through 10 for all things in their area.

12. Students should then color and label items on their map.