Oakland Unified School District

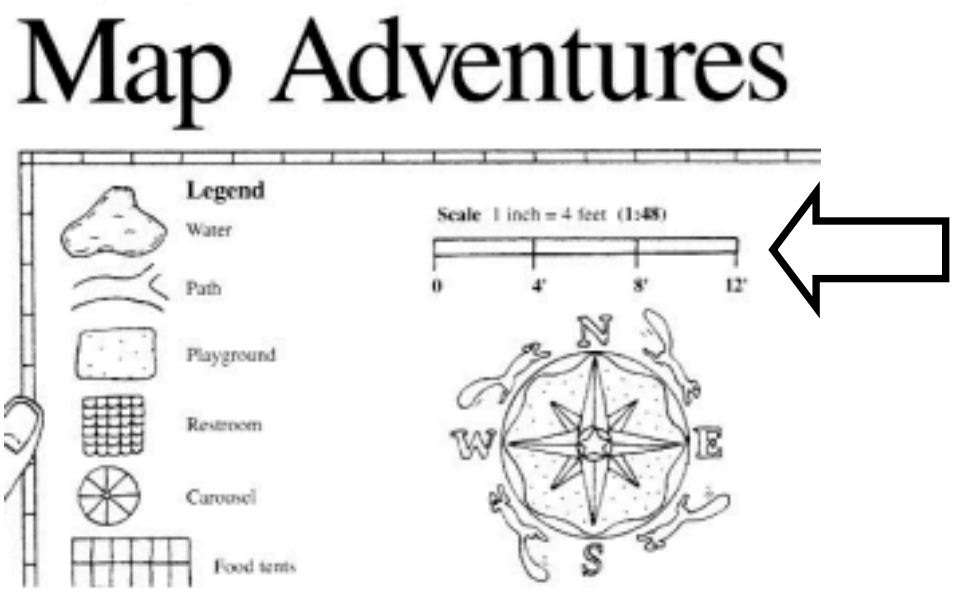
Worksheet To Accompany USGS Map Adventures Teaching Packet

Lesson 7: Map Scale

Is the large map of the park the same size as the real park?

Maps almost always have to be drawn smaller than the actual area of the land. All the things on the map are shrunken by the same amount when the map is drawn. To find out how much smaller the map is than the actual thing we have to look at the **scale** of the map.

The **map scale** tells us how much larger the actual thing is than the map. The **scale** on the map of the park is listed in the legend.



The **scale** for the large map is 1 inch = 4 feet.

There are 12 inches in each foot. This means that each inch on the map equals 48 inches in the park (12 inches per foot times 4 feet)

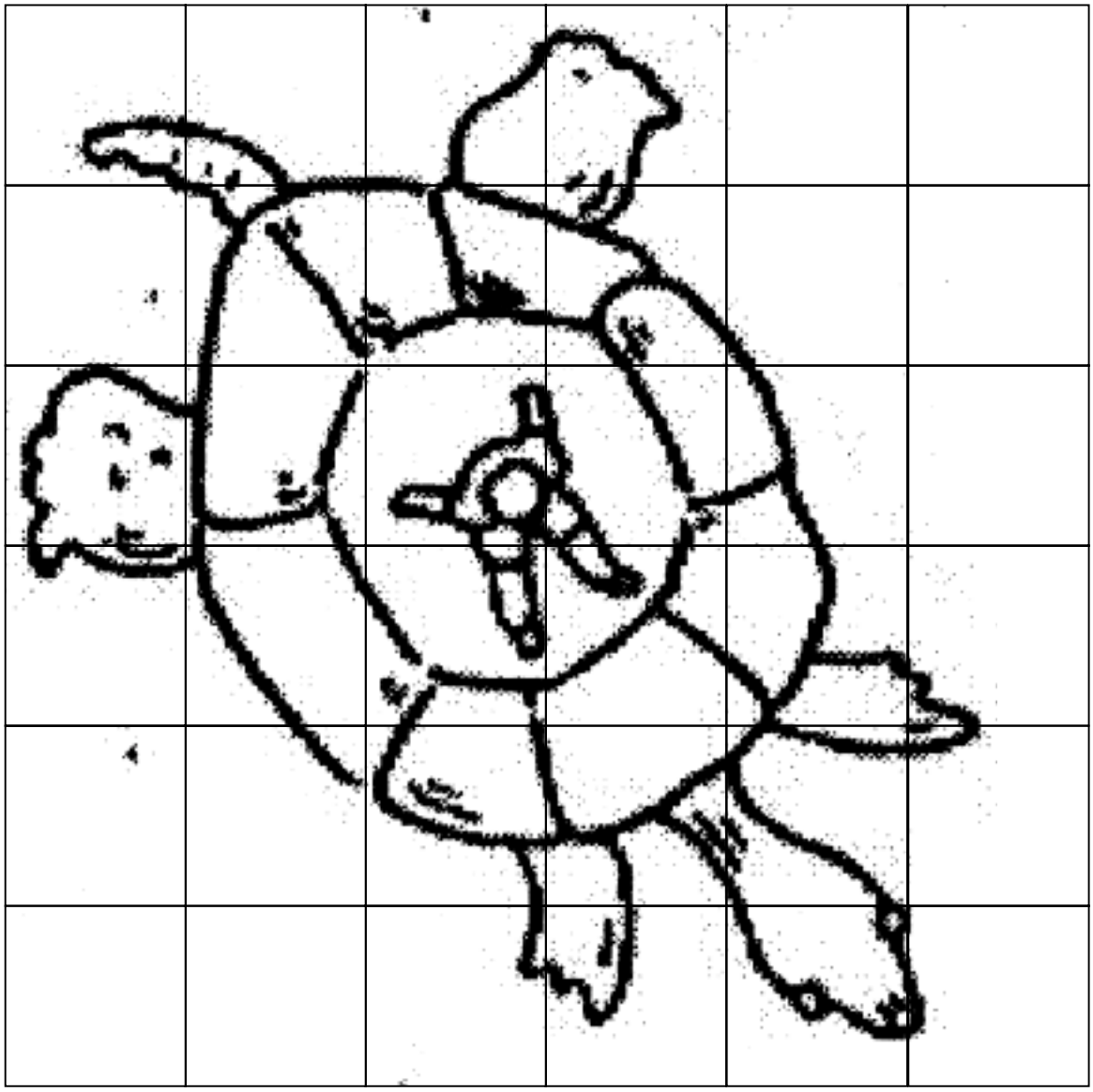
The **map scale** is listed as a proportion 1 inch to 48 inches or **1:48**. The park is 48 times larger than the map.

A person can use a map to determine the distance between two points in the real world if they know the scale of the map. The distance between two points on the map are measured with a ruler or tape measure. The distance measured is then multiplied by the scale of the map.

The stairs on the dinosaur slide are 7 inches from the center of the star. Each inch on the map equals 4 feet. The stairs of the slide in the actual park are 7 X 4 = 28 feet from the center of the star.

What would something on the map look like if it were the same size as in the park?

The drawing of the turtle sand box from the map has been blown up 4 times.

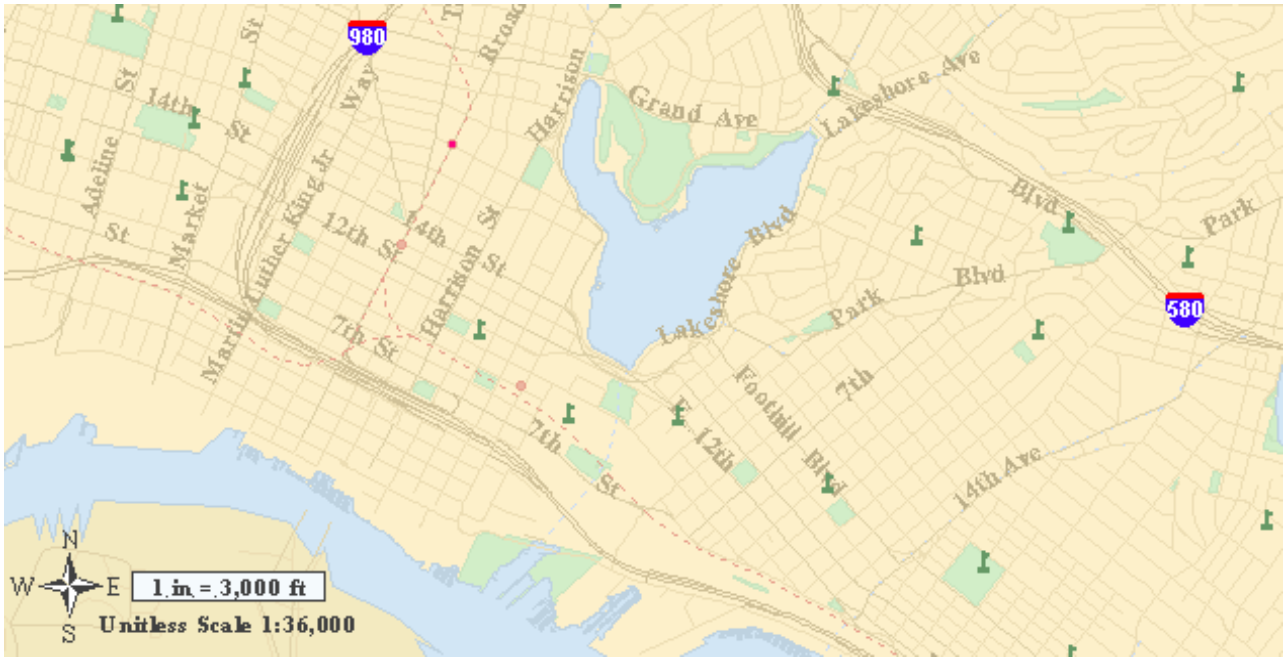


The grid is made up of 1 inch squares. Use a ruler to draw a grid where each square is 1 foot by 1 foot. You can draw your grid on a large piece of paper or with chalk on the sidewalk.

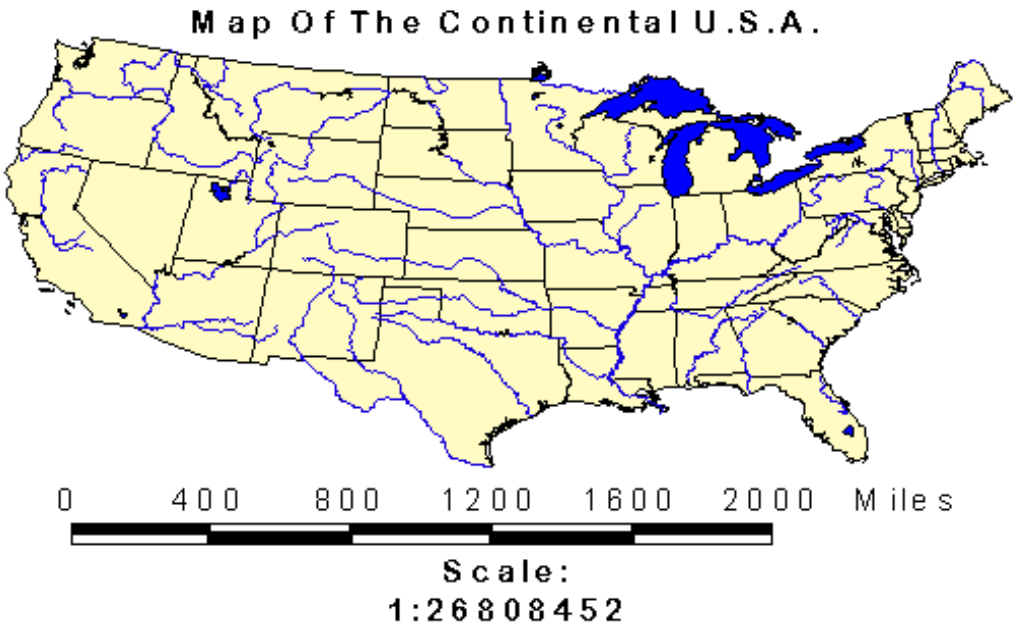
Use the drawing as a model to make a full size picture of the turtle sandbox in the large grid that you have drawn.

Oakland Unified School District

Here is a copy of a map of Oakland around Lake Merritt . . The **scale** on this map is **1:36,000**.



Here is a copy of a map of the United States. Alaska and Hawaii are not shown on this map. One inch equals 400 miles. The **scale** is **1:26,808,452**.



The **scale** of a map tells you how much bigger the land area is than the picture on the map.

The park is 48 times bigger than the map of the park.

The part of Oakland around Lake Merritt is 36 thousand times larger than the map on the previous page.

The United States is more than 26 million times bigger than the map on this page.

Think More About It

1	2	3	4

4 inch ruler

1

1 inch ruler

Travel Chess Set

Map of Travel Chess Set

Both the travel chess set and the map of the travel chess set are squares.

How wide is the map of the travel chess set? _____

How wide is the travel chess set? _____

What is the scale of the map of the travel chess set?_____

MAP CENTER Practice Session 6

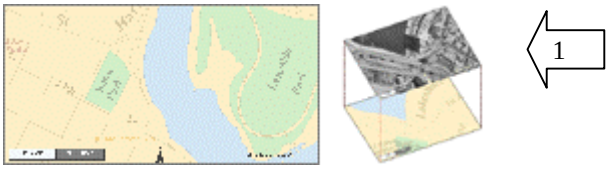
Let's use MAP CENTER to review **map scale**.

Getting To Map Center

There are several ways to get to MAP CENTER on the world wide web. The fastest way from any computer is to type the address of the MAP CENTER computer in the Address box of your web browser.

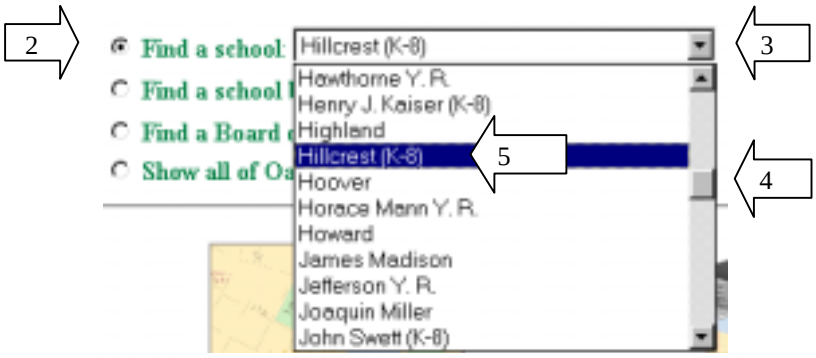
The address for MAP CENTER is
http://mapstacker.ousd.k12.ca.us/welcome.htm.

Most computers at District sites have the District's web page as their home page. If you are already on the District's home page, the easiest way to get to MAP CENTER is to click on the **Map Center** link in the **FEATURES** section.



1. Click on the **Interactive Maps** picture.

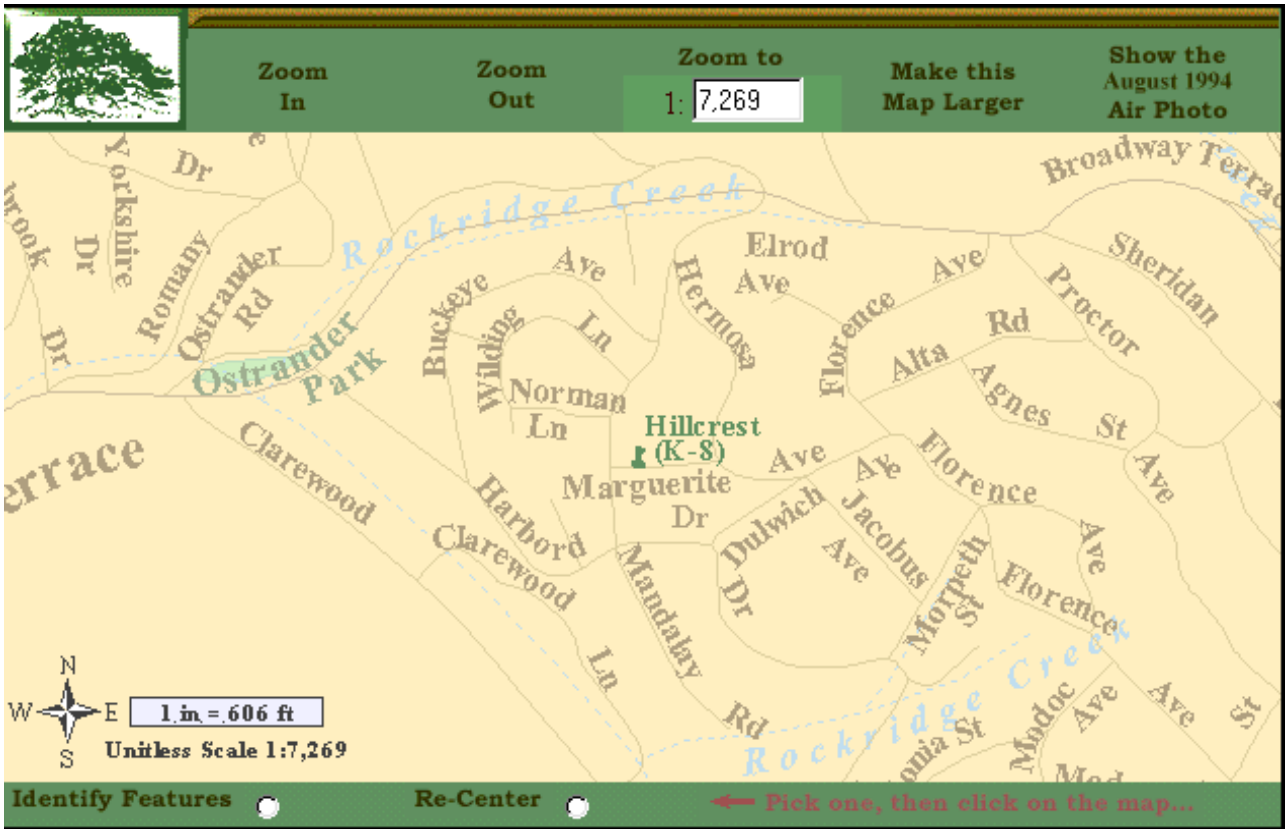
2. Click on the **Find a school:** circle.
3. Click on the down **arrowhead**.
4. Find the name of your school.
5. Click on the name of your school.



6. Click on the **Reference Map** picture

MAP CENTER Practice Session 6 (continued)

MAP CENTER displays a map with the school in the middle.



The **scale** of the map is drawn in the bottom left corner of the map.

1 inch on the map equals 606 feet around Hillcrest school.

The area around Hillcrest school shown on the map is **7,269** times larger than the area shown on the map.

The five maps that have been presented are listed in the table below. The maps are listed by scale. The map which is closest in size to the actual object it represents is listed first and the map which is the smallest in size compared to the actual object is listed last.

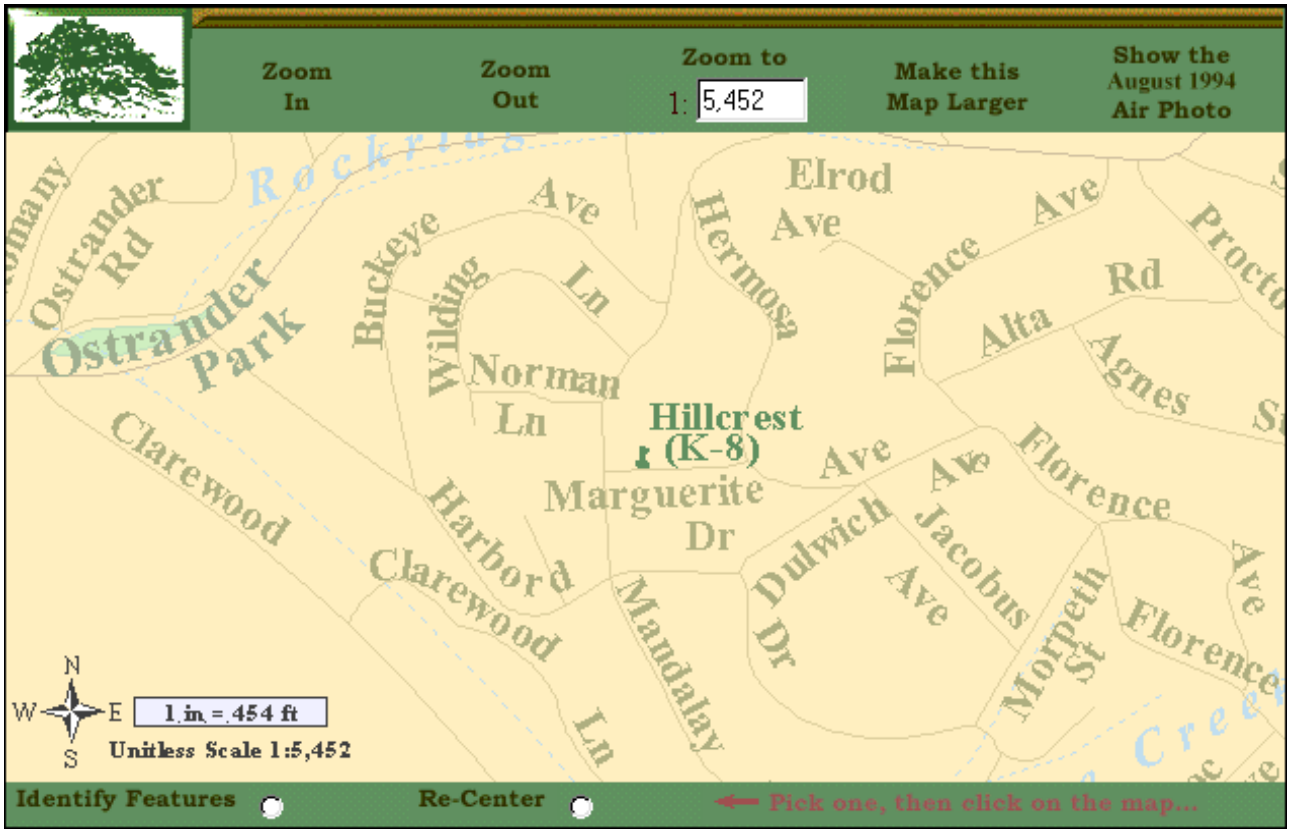
Map	**Scale**
Map of Travel Chess Set	1:4
Park Map From Nikki's Adventure	1:48
Map of Area Around Hillcrest School	1:7,269
Map of Oakland around Lake Merritt	1:36,000
Map of the Continental U.S.A.	1:26,808,452

MAP CENTER Practice Session 6 (continued)

Paper maps have only one scale which does not change. You can request MAP CENTER maps at lots of different scales.

- ☐ Click on the Zoom In Button.

MAP CENTER displays a new map. The school is still at the center of the map. The map covers less area and the things on the map are shown in greater detail.

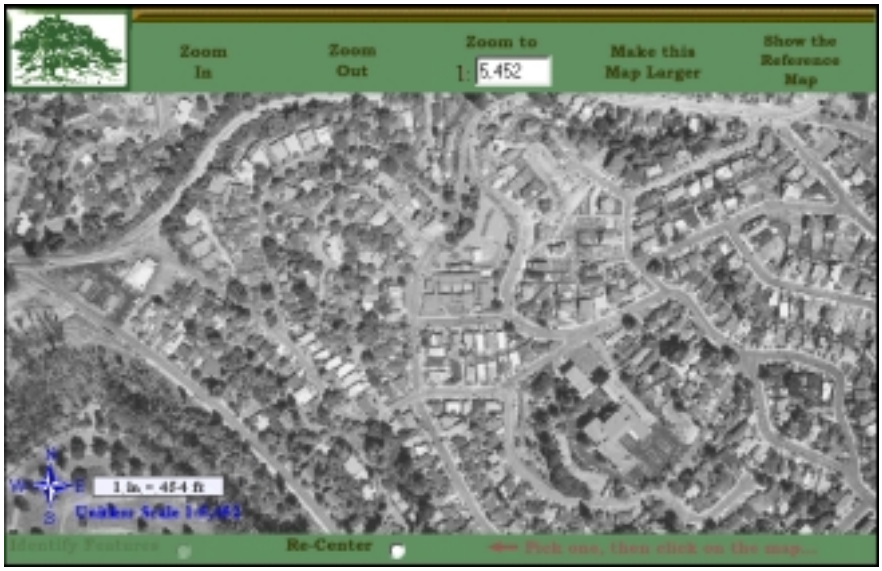


1 inch on the map now only equals **454** feet.

1 on the old map equaled **606** feet.

You see less of the area around the school than you did in the last map. This is because the screen size is still the same, but the picture being drawn on the map is larger.

MAP CENTER Practice Session 6 (continued)

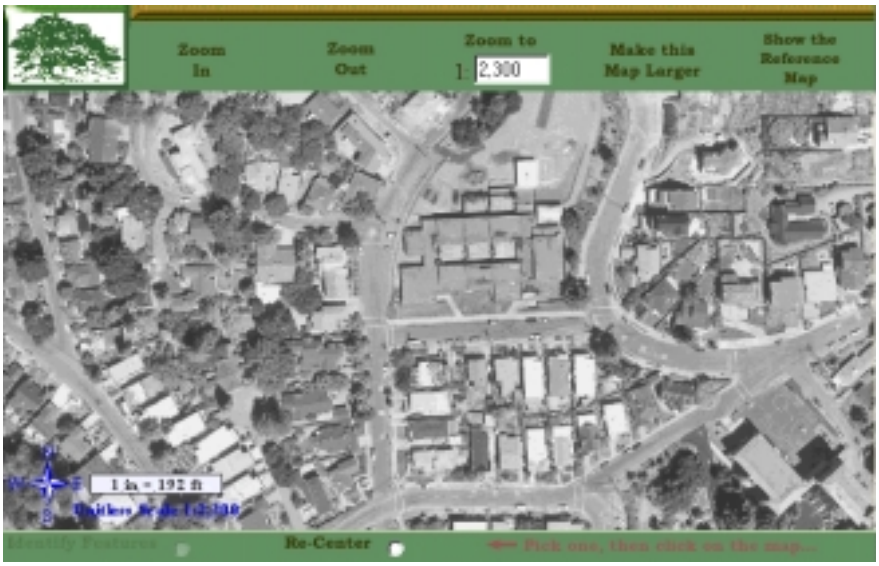


□ Click on the **Show The August 1994 Air Photo** Button.

□ Click on the **Zoom In** button 3 times.

Wait for the picture to be redrawn between clicks.

The picture is redrawn at a scale of 1 inch equals 192 feet.



Notice that the picture of the school is much larger at this **scale**.

Also notice that you can't see all of the streets at this scale could on the 1:5,452 scale photo.