



Gardening With Kids — Classroom Activities in Horticultural Science

Oklahoma Map Garden

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Oklahoma Cooperative Extension Fact Sheets
are also available on our website at:
<http://osufacts.okstate.edu>

Supplies

- Sidewalk chalk and/or classroom chalk.
- Measuring tapes or sticks.
- Maps of Oklahoma. Consult (<http://www.state.ok.us/>) for additional information.

Geography

Geographic studies of Oklahoma can be used to stimulate discussions about climate, topography, animal and plant life, population, etc.

Cities

- Label cities with populations greater than 15,000—Ada, Altus, Ardmore, Bartlesville, Chickasha, Duncan, Enid, Lawton, McAlester, Muskogee, the Oklahoma City metropolitan area (including Bethany, Del City, Edmond, El Reno, Midwest City, Moore, Norman, The Village, Warr Acres, and Yukon), Ponca City, Shawnee, Stillwater, and the Tulsa metropolitan area (including Broken Arrow, Sand Springs, and Sapulpa).
- Mark and label your hometown and county.
- Discuss the U.S. Census (<http://www.census.gov/>).

Rivers

- Draw and label the major rivers—Arkansas River, Beaver River, Cimarron River, Grand River, Kiamichi River, North Canadian River, Red River, and Verdigris River.



Mountains

- Draw and label the mountain ranges—Arbuckle Mountains, Black Mesa, Jack Fork Mountains, Kiamichi Mountains, Wichita Mountains, and Ouachita Mountains.

Roads

- Draw and label the major interstate roads—I-35, I-40, and I-44.

History

- What city was Oklahoma's first state capital?
- Where is Oklahoma's State Capitol today?
- What, where, and when was the Oklahoma Land Run?
- What, where, and when was the Cherokee Land Run?
- Mark and label areas native to Oklahoma's Indian Tribes.
- Mark and label the Indian Meridian.
- Mark, label, and discuss the Spiro Mounds.

Math

- Select origination and destination cities. Mark and label the cities. Draw an airplane symbol if the city has an airport.

Determine the scale of the garden's map

Using the concept of proportions, calculate the scale of the garden's map. Measure the distance in inches across the top of the paper map of Oklahoma. Measure the distance in inches across the top of the garden map of Oklahoma. Set up the proportion as:

$$\frac{\text{Garden Map Length}}{\text{(Scale Inches)}} = \frac{\text{Paper Map Scale}}{\text{X (Statute Miles/Scale-Inch)}}$$

Solve for **X statute miles/scale-inch**, which is the garden map's scale. Draw and label the scale for statute miles on the garden map.

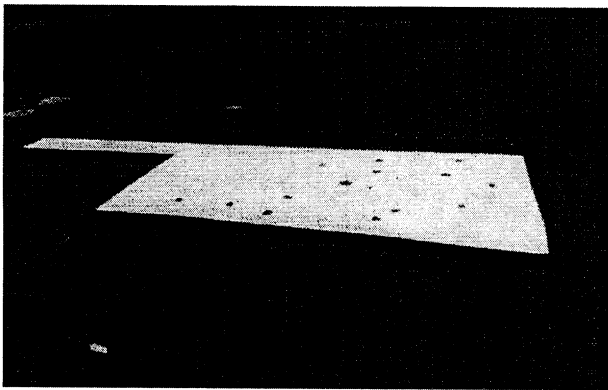
Discuss and visualize statute miles vs. nautical miles

Statute mile is a unit of distance in English-speaking countries equal to 5280 feet or 1760 yards. **Nautical mile** or **geographical mile** is a unit of distance equal to 6080 feet. (Concept: If a map's scale indicates that 1 inch = one statute mile, then 1 inch = 5280 feet, which is less than one nautical mile; therefore, the scale will indicate fewer nautical miles per inch.)

- Using the concept of proportions, determine the scale for nautical miles. Set up the proportion as:

$$\frac{5280 \text{ feet/statute mile}}{6080 \text{ feet/nautical mile}} = \frac{Y \text{ nautical miles/scale-inch}}{X \text{ statute miles/scale-inch}}$$

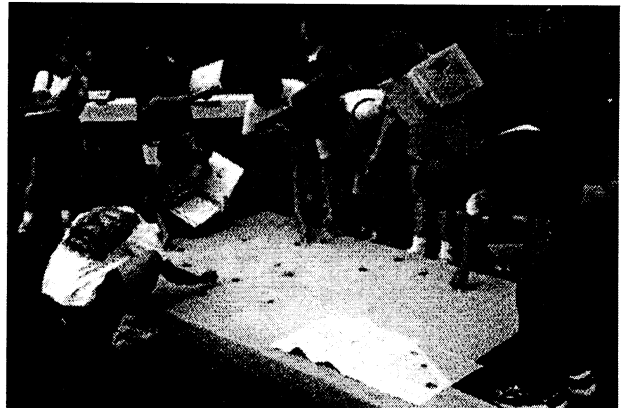
- Solve for **Y nautical miles/scale-inch**. Label the scale for nautical miles on the garden map.
- Measure the map distance between the two cities and, then, using the map's scale, determine how many nautical miles apart the cities are. If both cities have airports, calculate how long it would take to fly in a single engine airplane at 130 knots from the origination city to the destination city. If one or both cities do not have airports measure the driving distance to the nearest city with an airport and, then, using the map's scale, determine how many statute miles to the city with the airport. Estimate the time required to drive to the airport from origination city and/or from the airport to the destination city if your vehicle averaged 40 mph.



- Mark and label the roads that would be traveled to drive from the origination city to the destination city. Measure the driving distance between the two cities and then, using the map's scale, determine how many statute miles apart the cities are. Estimate the time required to drive from the origination city to the destination city if your vehicle averaged 55 mph.
- Oklahoma has a land area of 69,919 square miles. How many acres of land does Oklahoma encompass?

Agriculture

- Mark and label the "cross timbers." What vegetation characterizes the eastern deciduous forest versus the prairie?
- Discuss Oklahoma's agricultural commodities, e.g. wheat, cotton, peanuts, pecans, peaches, cattle, etc. Discuss land use and selected crops harvested, according to the Census of Agriculture (<http://www.usda.gov/nass>). How many acres of land are considered to be cropland, woodland, pastureland, and rangeland? Use area estimation to divide the map into sections, representing the indicated land use in Figure 1.
- What percentage of Oklahoma's cropland is used to grow wheat for grain? Hay? (Figure 2.)
- Discuss the value of livestock, poultry, and their products sold, according to the Census of Agriculture. What is the value of all cattle in Oklahoma? Dairy products? Hogs and pigs? Poultry and poultry products? (Figure 3.)



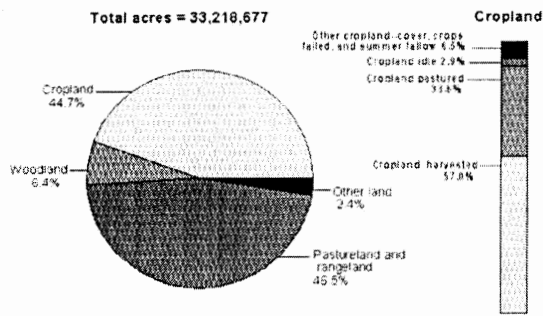


Figure 1. Land Use: 1997.
1997 Census of Agriculture, Oklahoma

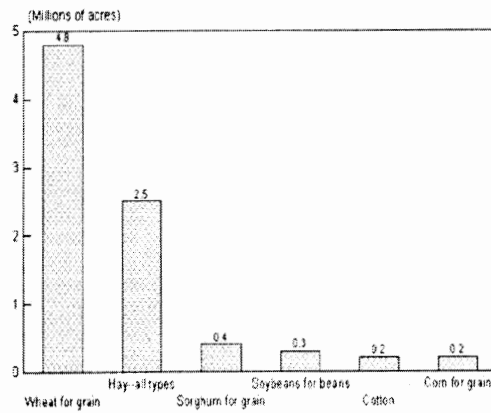


Figure 2. Selected Crops Harvested: 1997.
1997 Census of Agriculture, Oklahoma

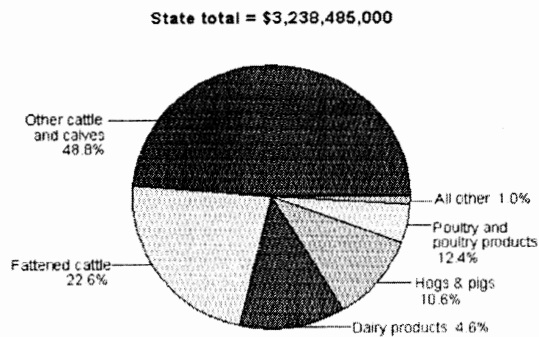


Figure 3. Value of Livestock, Poultry and their Products Sold: 1997.
1997 Census of Agriculture, Oklahoma

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The Cooperative Extension Service is the largest, most successful informal educational organization in the world. It is a nationwide system funded and guided by a partnership of federal, state, and local governments that delivers information to help people help themselves through the land-grant university system.

Extension carries out programs in the broad categories of agriculture, natural resources and environment; family and consumer sciences; 4-H and other youth; and community resource development. Extension staff members live and work among the people they serve to help stimulate and educate Americans to plan ahead and cope with their problems.

Some characteristics of the Cooperative Extension system are:

- The federal, state, and local governments cooperatively share in its financial support and program direction.
- It is administered by the land-grant university as designated by the state legislature through an Extension director.
- Extension programs are nonpolitical, objective, and research-based information.
- It provides practical, problem-oriented education for people of all ages. It is designated to take the knowledge of the university to those persons who do not or cannot participate in the formal classroom instruction of the university.
- It utilizes research from university, government, and other sources to help people make their own decisions.
- More than a million volunteers help multiply the impact of the Extension professional staff.
- It dispenses no funds to the public.
- It is not a regulatory agency, but it does inform people of regulations and of their options in meeting them.
- Local programs are developed and carried out in full recognition of national problems and goals.
- The Extension staff educates people through personal contacts, meetings, demonstrations, and the mass media.
- Extension has the built-in flexibility to adjust its programs and subject matter to meet new needs. Activities shift from year to year as citizen groups and Extension workers close to the problems advise changes.

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