

**Instructor Sheet**  
**Home on the Range**  
**Lesson 17**

**Grade Level(s):** Middle, High

**Duration:** Two 60-100 minute periods

**Setting:** Indoors, use computer for research, then use state or county map & rulers

**Skills:** Research, mapping, drawing to scale, interpretation, web navigation

**Subject Areas:** Social studies, mathematics, environmental science, life science/biology

**Overview:** Students use a scaled map to show ranges for the number and type of Florida panthers that they determine a 5-county area in their part of the state would support, if space were the only consideration.

**Sunshine State Standards:**

Grades 6-8

SC.F.1.3.7 knows that behavior is a response to the environment and influences growth, development, maintenance and reproduction.

SS.B.1.3.1 uses various map forms (including thematic maps) and other geographic representations, tools, and technologies to acquire, process, and report geographic information including patterns of land use, connections between places, and patterns and processes of migration and diffusion.

MA.B.1.3.4 constructs, interprets, and uses scale drawings such as those based on number lines and maps to solve real-world problems.

MA.B.3.3.1 solves real-world and mathematical problems involving estimates of measurements including length, time, weight/mass, temperature, money, perimeter, area, and volume, in either customary or metric units.

Grades 9-12

SC.G.2.4.5 understands that the amount of life any environment can support is limited and that human activities can change the flow of energy and reduce the fertility of earth.

SS.B.1.4.1 uses a variety of maps , geographic technologies including geographic information systems (GIS) and satellite-produced imagery, and other advanced graphic representations to depict geographic problems.

MA.B.1.4.1 uses concrete and graphic models to derive formulas for finding perimeter, area, surface area, circumference, and volume of two- and three-dimensional shapes, including rectangular solids, cylinders, cones, and pyramids.

Lesson 17

MA.B.3.4.1 solves real-world and mathematical problems involving estimates of measurements, including length, time, weight/mass, temperature, money, perimeter, area, and volume, and estimates the effects of measurement errors on calculations.

**Site location(s):**

Natural History: Real Ranges

Habitat: Current Range (to print out a map of southwest Florida, if desired)

The Activity

*Pre-planning:*

1. Reserve a computer lab or set up computers in your classroom.
2. Display a large map of the state of Florida (with counties delineated and a key to symbols) or obtain individual state or county maps for students.
3. Assemble materials for marking maps: colored pencils, markers, rulers, calculators, yarn, glue, etc.

*Procedure:*

1. Explain what you mean by making the panther ranges to scale. Show how to make a key of the panther's sex, age or other pertinent characteristics.
2. Assign computers/teams
3. Explain grading rubric.
4. Have students work in teams to research the home ranges of Florida panthers and figure out average areas needed for males and females.
5. Ask students to compute the available area in the five counties they selected, then decide on an appropriate population of panthers.
6. Students then map the ranges in different colors and make a key.

*Assessment:*

- 4 = Team map is neat, complete, accurate, ranges are to scale, and map has a key with colors and any symbols used are explained
- 3 = Team map is neat, complete, accurate, has a key
- 2 = Team map is neat, partially complete, and has a key
- 1 = Team map is partially complete
- 0 = Little or no participation