

What Kind of Wildlife Habitat Can Be Found in the Knobs Region?

Question:

What kind of wildlife habitat can be found in the Knobs region?

Core Content

SC-06-4.7.1

Students will describe the consequences of change in one or more abiotic factors on a population within an ecosystem.

SS-06-4.1.1

Students will use a variety of geographic tools (maps, photographs, charts, graphs, databases, satellite images) to interpret patterns and locations on Earth's surface in the present day.

Optional: MA-06-3.1.2

Students will describe, and provide examples of the elements (e.g., sides, vertices, angles, congruent parts) of two-dimensional figures (circles, triangles, quadrilaterals, regular polygons), and will apply these elements and figures to solve real-world and mathematical problems.

Excellence in Environmental Education Guidelines for Learning (Pre K-12).

Strand 2.2

A) Organisms, populations, and communities—Learners understand that biotic communities are made up of plants and animals that are adapted to live in particular environments.

Strand 2.4

C) Resources—Learners understand that uneven distribution of resources influences their use and perceived value.

Objectives:

Students will be able to:

- List the components of a habitat
- Describe the vegetation patterns in the Knobs region using maps and other tools
- Predict what type of wildlife would live in the Knobs region

Materials:

For each group

Brodhead quadrant USGS topographic map

Optional: Protractor, string, small weight (nut), drinking straw, compass

Physiographic map of Kentucky (<http://www.uky.edu/KGS/geoky/physiographic.htm>)

Procedure:

1. Ask the question, "What is habitat?" Record students' answers on the board.
2. Have all students participate in the Habitat Lap Sit activity (http://www.inhs.uiuc.edu/chf/pub/virtualbird/habitat_lap_sit.html)
3. Review the first question and clarify the 3 main components of a habitat—food, water and shelter.
4. Review the characteristics of the Knobs region (<http://www.uky.edu/KGS/geoky/regionknobs.htm>)
5. Ask students to brainstorm and list in pairs the types of food, water and shelter that might be available for wildlife in the Knobs region. Review the lists and form one complete class list.
6. Explain to students that they will be visiting EKU's Maywoods Environmental and Educational Laboratory and looking at the habitat in the Knobs region. Have students look at the topographic map to help determine what type of vegetation is at Maywoods. They will later use this information to predict what type of wildlife may be present.
7. Explain field trip procedures, rules, etc.

Optional: Slope measurement (40 minutes)

8. Ask students, “What are other abiotic factors that are specific to the Knobs region that may influence the habitat?” (Since the Knobs are known for its dome shaped hills, slope should be one of the factors mentioned).
9. Teach students how to find slope (rise over run) and practice on graph paper.
10. Have students make clinometers using the protractor, drinking straw, string and weight (http://www.americanforests.org/envir_edu/pdfs/How%20to%20make%20a%20Clinometer1.pdf).
11. Introduce the students to the other 3 parameters of slope—aspect, shape and position.
12. Review the use of a compass with the students.
13. Take students outside on your school grounds and let them practice measuring the 4 components of slope.
14. Remind students that they will do these same measurements on their Maywoods field trip.
15. Review the impact slope may have on wildlife habitat.

Assessment

As an exit slip, ask students to list one type of wildlife at Maywoods and how this animal would obtain food, water and shelter.