

Come Live in the Boundary!



STANDARD COURSE OF STUDY CORRELATIONS:

Social Studies, Grade 4, Goal 1: The learner will apply the five themes of geography to North Carolina and its people.

1.01 Locate, in absolute and relative terms, major landforms, bodies of water and natural resources in North Carolina.

1.02 Describe and compare physical and cultural characteristics of the regions.

Science, Grade 4, Goal 1: The learner will make observations and conduct investigations to build an understanding of animal behavior and adaptation.

1.02 Observe and record how animals of the same kind differ in some of their characteristics and discuss possible advantages and disadvantages of this variation.

1.03 Observe and discuss how behaviors and body structures help animals survive in a particular habitat.

1.04 Explain and discuss how humans and other animals can adapt their behavior to live in changing habitats.

1.05 Recognize that humans can understand themselves better by learning about other animals.

Science, Grade 6, Goal 7: The learner will conduct investigations and use technologies and information systems to build an understanding of population dynamics.

7.01 Describe ways in which organisms interact with each other and with non-living parts of the environment:

- Coexistence/Cooperation/Competition.
- Symbiosis.
- Mutual dependence.

7.02 Investigate factors that determine the growth and survival of organisms including:

- Light.
- Temperature range.
- Mineral availability.
- Soil/rock type.
- Water.
- Energy.

Biology, Goal 5: The learner will develop an understanding of the ecological relationships among organisms.

5.01 Investigate and analyze the interrelationships among organisms, populations, communities and ecosystems: biotic and abiotic factors; limiting factors.

INTRODUCTION TO LESSON: Groups of students will write brochures that advertise North Carolina as a great home for wildlife. Each group will focus on a different habitat and/or group of organisms. Students will make the brochures by hand or use a computer to write and format them.

BACKGROUND FOR TEACHER: Natural boundaries are the most northern, eastern, southern or western edge of a plant or animal's range. North Carolina's diverse overall climate and microclimates are hospitable to species that are generally associated with much more northern or southern latitudes. Such species thrive in our varied ecosystems.

MATERIALS

- 🦎 Real estate company brochures or real estate section from the newspaper
- 🦎 Computer access (optional)
- 🦎 Field guides and other reference materials on North Carolina flora, fauna and habitats
- 🦎 Assignment sheets (1 copy per student)
- 🦎 Construction paper, colored markers and other brochure-making supplies

PREPARATION

Gather field guides and other materials for students to use in "Elaborate" (see *Additional Resources*).

engage > Ask a few questions to introduce the idea that different homes serve different purposes: What would you look for in an ideal home? What do you think a pine tree or an alligator would need in a home? Do they have different requirements, or does “one size fit all”? Tell students they will be learning about the vastly different kinds of habitats in North Carolina and some of the organisms that live in them, then developing real estate advertisements to “sell” North Carolina’s diversity to wildlife. [Show Chapter 1 of the video.](#)

explore > After showing the video, divide the class into several groups. Hand out real estate ads. Ask the students to name a few of the amenities that are marketed to prospective buyers. Now ask students to create their own real estate brochures that will entice wildlife to want to live in one of North Carolina’s habitats. In addition to the video content, students may rely on information found in *Additional Resources*.

explain > Have students on each team select a leader to read their brochure to the class. Ask the class to discuss and share how they decided what to include in the brochure.

elaborate > Ask students to select a specific North Carolina habitat to research (e.g., cypress swamp, Sandhills, mountain bald). Have them compile a complete biological and physical profile for the habitat (e.g., common organisms, temperature range, rainfall, soil types). Then have students predict what would happen if a real estate company “sold” the habitat to the wrong clients (for example, if coastal organisms were recruited to a mountain bald or if a non-native invasive species moved in). Students should consider how limiting factors would play a role in the outcome. Have them produce an essay or cartoon describing what happened to the recruits and other residents. The end product should include a thorough description of the habitat.

evaluate > Use the rubric to evaluate the brochures. Assess the cartoon or essay to measure students’ understanding and articulation of the concepts in the lesson.

Teacher’s Notes:

BEYOND THE CLASSROOM

As a long-term project, have students survey their school campus or another location to measure plant biodiversity and microclimates. The surveys could include identifying the plants found on the campus, categorizing them as native or non-native, and investigating their preferred habitats. Divide the campus into sections (north, south, etc.) and have students keep track of abiotic factors, e.g., temperature, rainfall, soil moisture. Some questions to address might include: What are some substantial differences between the various sections? What did you learn about different plants and their preferences? How do your findings concur with published sources? What, if any, unexpected observations did you make?

Additional Resources:

Nature’s Ways is a collection of 200 essays from *Wildlife in North Carolina* magazine. Essays relevant to this lesson include:

- *Our Mile-High Forests* (Vol. 1), which contains information on high peaks and ruffed grouse;
- *The Whistle Pig Moves East* (Vol. 1), which describes the changing range of the groundhog;
- *Long-Lost Relatives* (Vol. 6), which explores the origin of disjunct tree populations in North Carolina.

Nature’s Ways is available from the N.C. Wildlife Resources Commission, <http://www.ncwildstore.com/store-naturesways.html>.

Benyus, Janine M. 1989. *The Field Guide to Wildlife Habitats of the Eastern United States*. New York: Simon and Schuster.

Godfrey, Michael A. 1997. *A Field Guide to the Piedmont*. Chapel Hill, N.C.: The University of North Carolina Press.

Lawrence S. Earley, ed. 1993. *North Carolina Wild Places: A Closer Look*. Raleigh, N.C.: North Carolina Wildlife Resources Commission, Division of Conservation Education.

The Nature Conservancy—North Carolina Chapter "Places We Protect" • <http://www.nature.org/wherework/northamerica/states/northcarolina/preserves/>

The North Carolina Museum of Natural Sciences "Fun Stuff" Web Page • <http://www.naturalsciences.org/funstuff/nchabitat/index.html> • General information on habitats, with illustrations.

Brochure Tutorials • http://www.readwritethink.org/lessons/lesson_view.asp?id=1002 • <http://www.waterwiseeducation.org/mod/resource/view.php?id=121>

	Poor (1 pt)	Fair (2 pts)	Good (3 pts)	Outstanding (4 pts)
REQUIRED ELEMENTS	No required elements present.	Some required elements present.	Most required elements present.	All required elements present.
ORGANIZATION	Format and organization are confusing.	Some organization, but format seems random.	Format appropriate and well-organized.	Excellent formatting and very well organized.
SCIENTIFIC INFORMATION	Information is inaccurate and inappropriate. Questions not addressed.	Some information is accurate and appropriate. Questions addressed inadequately.	Most information is accurate and appropriate. Most questions addressed adequately.	All information is accurate; evidence of individual research. All questions thoroughly addressed.
CONVENTIONS, SPELLING & GRAMMAR	Many spelling/ grammar errors. Sentences are incomplete.	Few spelling/ grammar errors. Many sentences are incomplete.	Few spelling/ grammar errors. Some sentences are incomplete.	No spelling/ grammar errors. All sentences are complete.
GRAPHICS	Graphics unclear or unattractive; do not match subject of text.	Some graphics well-chosen; graphics match text subject.	Most graphics well-chosen; graphics match subject of text.	All graphics well-chosen and attractive; graphics enhance understanding of text.
CREATIVITY	Contains bare minimum. No evidence that author has used imagination.	Few creative details/ descriptions. Little evidence that author has used imagination.	Some creative details/ descriptions. Some evidence that author has used imagination.	Many creative details/ descriptions. Much evidence that author has used imagination.

Assignment

Come Live in the Natural Boundary!



Your team will be creating an advertising brochure. The target for your brochure is any kind of wild species—plant or animal—that might find North Carolina a good place to live.

REQUIRED ELEMENTS:

- 1.** Provide a title.
- 2.** Include the name of your real estate company and your “development” (habitat).
- 3.** Graphics: Provide at least five pictures (at least two should show the habitat).
- 4.** Write content that addresses the following questions:
 - 🦋 What kinds of habitats are found in North Carolina?
 - 🦋 What are some examples of various kinds of wildlife that have already found homes in North Carolina?
 - 🦋 Why should your target audience move to North Carolina?
 - 🦋 Why does North Carolina have such varied habitats?
- 5.** Use correct grammar and spelling.
- 6.** Sources: Cite the video and at least two other sources.