



◀ Education Program Packet—3rd Grade ▶

Zoo Atlanta Education Programs:

Zoo School Auditorium: Georgia Jaunt

Zoo School Classroom: Wild Georgia

Zoomobile Outreach: Georgia Goes Wild

NightCrawlers Overnight: Backyard Georgia or Zoo Tech

GEORGIA PERFORMANCE STANDARDS: For program information and Georgia Performance Standards for each program, click http://www.zooatlanta.org/education_school_programs.htm and follow the links to the program(s) you registered for.

Activity Packet

◀ **Subject/Course:** Science, Math, English/Language Arts and Writing

◀ **Grades:** 3rd

Activity Packet: Stage 1-Desired Results

Packet Established Goals:

- **S3CS3.** Students will use tools and instruments for observing, measuring, and manipulating objects in scientific activities utilizing safe laboratory procedures. **a.** Choose appropriate common materials for making simple mechanical constructions and repairing things. **b.** Use computers, cameras and recording devices for capturing information.
- **S3L1.** Students will investigate the habitats of different organisms and the dependence of organisms on their habitat. **a.** Differentiate between habitats of Georgia (mountains, marsh/swamp, coast, Piedmont, Atlantic Ocean) and the organisms that live there. **b.** Identify features of green plants that allow them to live and thrive in different regions of Georgia. **c.** Identify features of animals that allow them to live and thrive in different regions of Georgia. **d.** Explain what will happen to an organism if the habitat is changed.
- **M3D.** Data Analysis. Students will gather, organize, and display data and interpret graphs.
- **M3D1.** Students will create and interpret simple tables and graphs. **a.** Solve problems by organizing and displaying data in bar graphs and tables. **b.** Construct and interpret bar graphs using scale increments of 1, 2, 5, and 10.
- **ELA3R3** The student uses a variety of strategies to gain meaning from grade-level

text. The student: **a.** Reads a variety of texts for information and pleasure. **g.** Summarizes text content. **h.** Interprets information from illustrations, diagrams, charts, graphs, and graphic organizers.

- **ELA3W1** The student demonstrates competency in the writing process. The student: **j.** Uses a variety of resources to research and share information on a topic. **i.** Writes a persuasive piece that states a clear position. **m.** Prewrites to generate ideas, develops a rough draft, rereads to revise, and edits to correct. **n.** Publishes by presenting an edited piece of writing to others.

Understandings:

Students will understand that...

- All animals depend on plants. Some animals eat plants for food. Other animals eat animals that eat the plants.
- An organism's patterns of behavior are related to the nature of that organism's environment, including the kinds and numbers of other organisms present, the availability of food and resources, and the physical characteristics of the environment. When the environment changes, some plants and animals survive and reproduce and others die or move to new locations.
- All organisms cause changes in the environment where they live. Some of these changes are detrimental to the organism or other organisms, whereas others are beneficial.

Essential Questions:

- How do the habitats of different organisms in Georgia regions differ from each other?
- To what extent do the features of green plants allow them to live and thrive in different regions of Georgia?
- To what extent do the features of animals allow them to live and thrive in different regions of Georgia?
- What happens to plants and animals when habitats are changed?

Students will know...

- The habitats of different organisms and the dependence of organisms on their habitat.
- Features and the growth of green plants and animals in Georgia regions.
- How changes to a habitat affect organisms.
- Key vocabulary terms

Students will be able to...

- Compare and contrast the different habitats in Georgia (mountains, marsh/swamp, coast, Piedmont, Atlantic Ocean) and the organisms that live there.
- Identify features of green plants that allow them to live and thrive in different regions of Georgia.
- Identify features of animals that allow them to live and thrive in different regions of Georgia.
- Explain what will happen to an organism if the habitat is changed.

Stage 2-Assessment Evidence

Performance Tasks:

You are a land developer. The Governor of Georgia has requested your services. You must find a way for plants and animals to survive in their environments while land developers provide living accommodations for the growing population in the state. You and your team of researchers (naturalist, marine biologist, ecologist, linguist, and a zoologist) will

- Investigate the habitats of organisms in the different regions in Georgia and the dependence of organisms on their habitat.
- Identify features of green plants and animals that allow them to live and thrive in different regions of Georgia.
- Establish a statewide conservation plan to save the wildlife and plants while keeping up with the growing population of Georgia, and explain what will happen to an organism if the habitat is changed.
- Use data to determine the plant or animal population in a Georgia region.

Your team will present your plan to the Governor, citizens of Georgia, Wildlife Conservation Society, environmentalists, and developers. Keep in mind your plan must be available to the public on video. Also, provide brochures, research articles, diagrams, maps and/or display models and write a newspaper article for *The Atlanta Journal-Constitution* that support your findings.

Key Criteria

- Rubric
- Accuracy
- Quality of presentation
- Thoroughness of explanation
- Appropriate identification of plant and animal habitats of Georgia

Other Evidence

- Observations and dialogues
- Performance task
- Team work
- Quizzes and tests on the plant and animal habitats in Georgia regions

Stage 3-Learning Plan

Materials: graphic organizers, writing journals, books about plants and animals, Junior Scientist Notebook, pencil, realistic plastic animal models, tape recorder

Vocabulary: mountains, marsh/swamp, coast, Piedmont, Atlantic Ocean, mammals, reptiles, amphibians, fish, birds, extinction, dependence, endangered, threatened, habitat, predator, prey, camouflage, producers, consumers, decomposers, ecosystems, protection

Learning Activities

Pre-visit Classroom Activities

- Use three KWL graphic organizers to find out what students know and what to know about the different regions, plants, and animals in Georgia. The last column will be

completed at the end of the unit.

- Introduce key vocabulary terms throughout the unit.
- Visit www.goodwinc.com/chris/georgia1.htm to research Georgia's physical geography, natural resources, economic activities, the people of Georgia, education and cultural institutions and recreation and places of interest. Read Georgia's Amazing Coast: Natural Wonders from Alligators to Zoeas by David Bryant & George Davidson. Guide students as they research the regions of Georgia and the animals that live there. Discuss how these animals adapt to survive in the different regions of Georgia. Discuss key questions with students: What do these animals need to survive? In what ways do animal coverings protect them? How are the plants and animals able to thrive in different regions in Georgia? How do plant and animal habitats differ in the different regions in Georgia? Complete journal writings about the new information collected.
- Preview the Junior Scientist Notebook handout. Allow students to practice completing the handout using realistic plastic animal models. Tell students that they will follow the same process while viewing the animals at the Zoo.

Post-Program Zoo Activities

- Allow students to view real animals. Identify and discuss the external features of animals that live and thrive in different regions (cold, warm, wet, dry, etc.) in Georgia and in other areas around the world.
- Determine the major locations the animals at Zoo Atlanta live in. Find out why certain animals need to live in these regions. The external features may include but are not limited to: body covering, size and relative scale of body parts, movement and food gathering. Write a newspaper article, brochures, PowerPoint, or display models supporting what you've learned.
- Students can create journal entries after observing the animals they see at the Zoo. An example journal entry, Junior Scientist Notebook, is included in this packet.

Post-visit Classroom Activities

- Make a poster, and write an illustrated story telling about the plants or animals in your area, such as where they live, what they consume, and what external features the animals or plants have that enable them to live where they do. Use what you know about other areas in Georgia to conclude if the organisms could live in other environments.
- Facilitate a discussion about how adaptation, certain characteristics and behaviors help plants and animals survive in their environment. Students will research the adaptation of animals and design a pop-up book or book cover about the adaptation of Georgia's wildlife.
- Choose a green plant or animal that lives in Georgia. Write a report about that plant or animal, its needs, its habitat, and information about its population decline or increase over the past 10 years.
- Visit www.cviog.uga.edu/Projects/gainfo/wildlife/wildlifelinks.htm or similar websites and books, and find additional information about the animals of Georgia. Create a pamphlet about the animals of Georgia and how people can protect the wildlife. Research the increase or decline of plant and animal population for the past decade.

- Model questioning techniques for students in preparation for an interview. Have students prepare a list of questions to interview citizens, plant specialists or animal specialists and find out their views on what will happen to plants or animals in their surrounding area if the habitat is changed. Record your interview. Take notes. Summarize.
- After visiting the Zoo, find out what accommodations in food, environmental conditions, and habitat the caretakers use to make to keep plants and animals alive in Georgia.



Suggested Reading

How do Animals Adapt? (The Science of Living Things) by Bobbie Kalman

Animals Born Alive and Well by Ruth Heller

Georgia Schoolyard Wildlife Habitat Planning Guide by Misty Blake Herrin

Atlas of Plants by Claude Delafosse, Gallimard Jeunesse, Sylvaine Perols
Scholastic, Inc., © 1996 ISBN: 0-590-58113-9

Soil by Karen Bryant-Mole. ISBN: 0-817-24213-9

Acting for Nature: What Young People Around the World Have Done to Protect the Environment by Sneed B. Collard III

Birds in Your Backyard by Barbara Herkert

Discovering Endangered Species by Nancy Field, and Sally MacHlis

Forests by Neil Morris

Friendships in Nature by James Gary Hines II

In a Backyard by Jen Green

Leapfrogging Through Wetlands by Nancy Field

Rabbits, Squirrels and Chipmunks by Mel Boring

Rivers & Lakes by Neil Morris

Describes how rivers and lakes are formed, flooding around the world, creating electricity, fish, animals, and people, and preservation of our waterways

Appalachian Wildflowers: An Ecological Guide to Flowering Plants from Quebec to Georgia
by Thomas E. Hemmerly; University of Georgia Press, 2000; ISBN 0-8203-2164-8 (hardcover); ISBN 0-8203-2181-8 (paperback)

Botanical North America: The Illustrated Guide to Our Native Plants, Their Botany, History, and the Way They Have Shaped Our World

by Marjorie Harris; HarperCollins, 2003; ISBN 0-06-270231-9

Grasses: An Identification Guide

by Lauren Brown; Houghton Mifflin Co., Reprint 1979; ISBN 0395628814

Guide to the Vascular Plants of the Blue Ridge

by B. Eugene Wofford; University of Georgia Press, 1989; ISBN 0-8203-1080-8

Native Shrubs and Woody Vines of the Southeast: Landscaping Uses and Identification

by Leonard E. Foote and Samuel B. Jones, Jr.; Timber Press, 1989; ISBN 0-88192-416-4

Native Trees of Georgia

by G. Norman Bishop & George Foster Peabody; Georgia Forestry Commission, 1978; Available in PDF format from the Georgia Forestry Commission

Trees of Georgia and Adjacent States by Claud L. Brown and L. Katherine Kirkman;

Timber Press, 1990; ISBN 0-88192-148-3

Trees of Southeastern United States by Wilbur H. Duncan and Marion B. Duncan;

University of Georgia Press, 2000; ISBN 0-8203-2271-7

Wildflowers of Georgia by Hugh Nourse and Carol Nourse;

University of Georgia Press, 2000; ISBN 0-8203-2179-6

Wildflowers of the Eastern United States by Wilbur H. Duncan and Marion B. Duncan;

University of Georgia Press, 1999; ISBN 0-8203-2107-9

The American Woodland Garden: Capturing the Spirit of the Deciduous Forest

by Rick Darke; Timber Press, 2002; ISBN 0881925454

The Encyclopedia of Natural Insect and Disease Control: The Most Comprehensive Guide to Protecting Plants, Vegetables, Fruit, Flowers, Trees and Law

by Roger B. Yepsen, Jr.; Rodale Press, 1984; ASIN 0878574883

Gardening with Native Plants of the South by Sally Wasowski with Andy Wasowski;

Taylor Publishing Co., 1994; ISBN 0878338020

The Natural Garden by Ken Druse; Clarkson N. Potter, 1989; ISBN 0517550466

The Southern Gardener's Book of Lists: The Best Plants for All Your Needs, Wants, and Whims

by Lois Trigg Chaplin; Taylor Publishing, 1994; ISBN 0878338446

Native Trees, Shrubs, and Vines: A Guide to Using, Growing, and Propagating North

American Woody Plants by William Cullina; Houghton Mifflin Co., 2002; ISBN 0618098585

The Backyard Naturalist by Craig Tufts; National Wildlife Federation, 1998;
ASIN 0912186933

Beastly Abodes: Homes for Birds, Bats, Butterflies and other Backyard Wildlife
by Bobbe Needham; Lark Books, 1996; ASIN 0806931698

Homes for Wildlife: A Planning Guide for Habitat Enhancement on School Grounds
by Marilyn C. Wyzga; NH Fish and Game Department, 1998; ISBN 0-9652156-2-8

Living With Wildlife: How to Enjoy, Cope with, and Protect North America's Wild Creatures
Around Your Home and Theirs
by The California Center for Wildlife, with Dianan Landau and Shelley Stump;
Sierra Club Books, 1994; ISBN 0-87156-547-1

Suggested Websites

Zoo Atlanta- www.zooatlanta.org

Association of Zoos and Aquariums - www.aza.org

Georgia Wildlife Federation: Gardening for Wildlife- www.gwf.org/habitats.htm

Georgia Wildlife Federation Plant Index- www.gwf.org/plantindex.htm

Georgia Native Plant Society- www.gnps.org

Georgia's Natural Wonder- [www.okeswamp.com/ts Animals/plants animals.html](http://www.okeswamp.com/ts_Animals/plants_animals.html)

PBS: Nature - <http://www.pbs.org/wnet/nature/>

Animal World- <http://www.kbears.com/borrigo>

Quia - Simple Animals- <http://www.quia.com/custom/3406main.html>

Zoo Animals- <http://edtech.kennesaw.edu/web/zooanim.html>

Animal Diversity Web - <http://animaldiversity.ummz.umich.edu/site/index.html>

Systematics- <http://www.nbio.gov/disciplines/systematics.html>

Tree of Life- <http://tolweb.org/tree/phylogeny.html>

Create a Graph- <http://nces.ed.gov/nceskids/createagraph/>

Graphic Organizers



KWL Chart

Student Name _____ Date _____

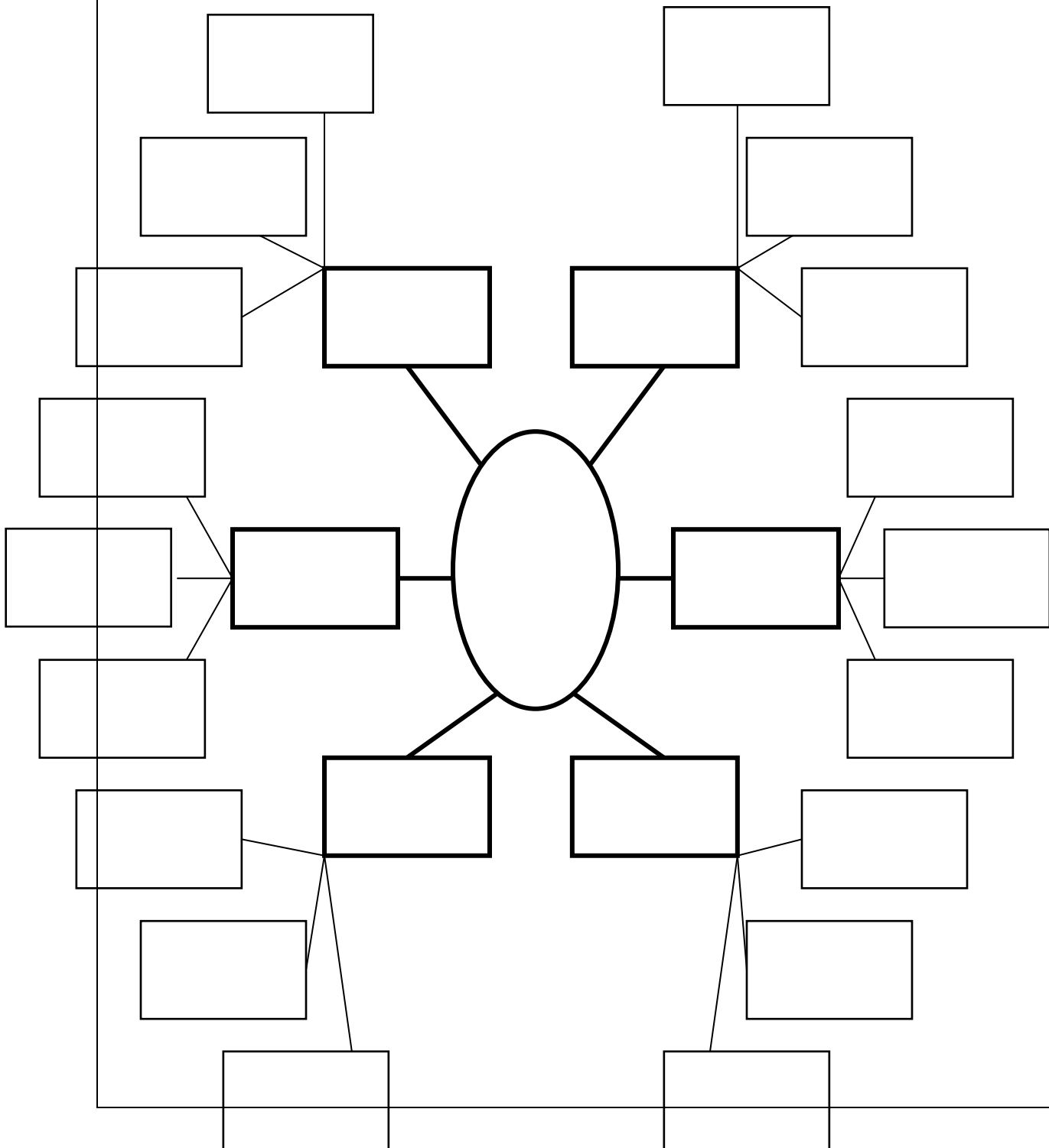
Before you begin your research, list details in the first two columns. Fill in the last column after completing your research.

Topic: _____		
What I Know	What I Want to Know	What I Learned



Student Name _____ Date _____

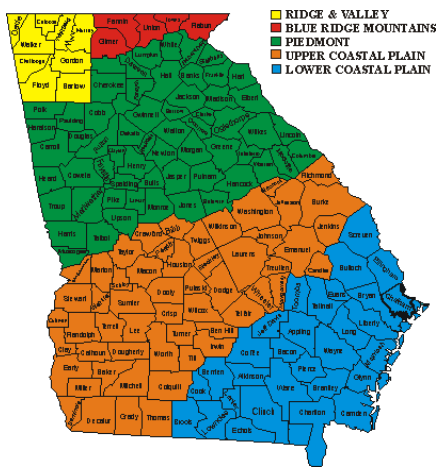
WEB DIAGRAM: Classifying Habitats in Georgia's Regions





Student Name _____ Date _____

Directions: Discuss the regions of Georgia. Explain how the State of Georgia extends from the Atlantic Ocean into the Blue Ridge Mountains. The State is divided into five regions based upon physical geography. These regions are called **Physiographic Provinces**. The five physiographic provinces of Georgia are the Coastal Plain (subdivided into upper and lower regions on the map at left), the Piedmont Region, the Blue Ridge Region, the Ridge and Valley Region, and the Appalachian Plateau. Vegetation varies among these provinces and within them, depending on soil type, elevation, moisture and disturbances.



Research one different region of Georgia. Find interesting facts, animals, landforms, counties, etc. What are the obvious adaptations of animals to this region?



Student Name _____ Date _____

Junior Scientist Notebook

As a Junior Scientist, use this notebook as a guide as you walk through the Zoo. Select one animal that you want to observe. Complete your animal observation. It is important to remember that the animals can see and hear you; therefore, try not to disturb the animals.

Observer Information

Name: _____ Date and Time of Day: _____

Weather Conditions _____

Animal Species: _____

Natural Habitat: _____

Diet: _____

Behavior Observed: _____

Description of the animal:

Draw a picture of the animal here.



RUBRIC

	Exemplary 4	Accomplished 3	Developing 2	Beginning 1
Identification	Consistently demonstrates the ability to identify features of green plants and animals that allow them to live and thrive in different regions of Georgia.	Usually demonstrates the ability to identify features of green plants and animals that allow them to live and thrive in different regions of Georgia.	Sometimes demonstrates the ability to identify features of green plants and animals that allow them to live and thrive in different regions of Georgia.	Rarely demonstrates the ability to identify features of green plants and animals that allow them to live and thrive in different regions of Georgia.
Use of Scientific Language	Consistent, accurate usage of terms	Adequate usage of scientific terms	Occasional use with few errors	No terms of frequent errors in usage
Classification	Demonstrates full understanding of what will happen to an organism if the habitat is changed.	Displays a complete and accurate understanding of what will happen to an organism if the habitat is changed.	Displays an incomplete understanding of what will happen to an organism if the habitat is changed.	Demonstrated severe misconceptions about what will happen to an organism if the habitat is changed.
Teamwork	Assumed leadership role within group; strong contributions	Participated with good contributions	Participated with weak contributions	Did not participate in group discussions
Application to the Real World	Able to apply learning	Usually finds practical application	Occasionally relates to real life skills	No practical application
Communication	Uses rich, vivid, and powerful description in a variety of ways to clearly communicate observations, data, and conclusions.	Consistently communicates information effectively through accurately recording and describing observations and conclusions.	Communicates plausible facts but lacks clarity in presenting facts and observations.	Is ineffective in communicating information.
Presentation	Presents information in logical, interesting sequence; demonstrates full knowledge (more than required); Maintains eye contact; Uses a clear voice.	Presents information in logical sequence; Feels at ease with expected answers; Maintains eye contact most of the time. Voice is clear, pronounces most words correctly.	Audience has difficulty following presentation because student jumps around; Student is uncomfortable with information; Occasionally uses eye contact; Voice is low and incorrectly pronounces terms.	Audience cannot understand presentation due to no sequence; Does not have grasp of information; Reads all of the report with no eye contact; Mumbles or incorrectly pronounces terms.

