

Naturalist Outreach

Lesson Plan



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Grades: K-12, adapt based on grade level Date: 22Feb19

Unit/Topic/Lessons: Canebrakes and Conservation: Introduction

Objectives		Correlation to State & National Documents	
<p>Student will be able to:</p> <p>Attempt to build a structure, Discuss how adaptations are necessary when faced with loss of resources</p>		<p><u>Alabama Course of Study: Science</u> K.5, K.6, 3.11, 7.7 <u>AHSGE/Exit</u> Standards & Eligible Content:</p>	<p><u>National Science Standards:</u> K-4 Life Science: Organisms and their Environments; Science in Personal and Social Perspectives: Changes in Environments 5-8 Life Science: Populations and Ecosystems, Diversity and Adaptations of Organisms Assessment: Scientific paper</p>
COS Content Standard	Materials/Resources	Assessment	
<p>K.5. Construct a model of a natural habitat (e.g., terrarium, ant farm, diorama) conducive to meeting the needs of plants and animals native to Alabama.</p> <p>K.6. Identify and plan possible solutions (e.g., reducing, reusing, recycling) to lessen the human impact on the local environment.*</p> <p>3.11. Construct an argument from evidence to explain the likelihood of an organism's ability to survive when compared to the resources in a certain habitat (e.g., freshwater organisms survive well, less well, or not at all in saltwater; desert organisms survive well, less well, or not at all in woodlands).</p> <p>a. Construct explanations that forming groups helps some organisms survive. b. Create models that illustrate how organisms and their habitats make up a system in which the parts depend on each other. c. Categorize resources in various habitats as basic materials (e.g., sunlight, air, freshwater, soil), produced materials (e.g., food, fuel, shelter), or as nonmaterial (e.g., safety, instinct, nature-learned behaviors).</p> <p>7.7. Use empirical evidence from patterns and data to demonstrate how changes to physical or biological components of an ecosystem (e.g., deforestation, succession, drought, fire, disease, human activities, invasive species) can lead to shifts in populations.</p>	x	Hands-On Materials	Homework
		Multimedia Materials	Test/Quiz
		Computers/notebooks/PDA	Project
		Web sites	x Participation
		Software	x Class work
		Overhead Masters	Presentation
		Workbook/Handouts	x Oral Responses
		Other Equipment/Supplies	x Teacher Observation
		Guest Speakers	x Self Evaluation
		Maps	x Group Evaluation
		Lab equipment	Portfolio
		Text:	Other (Journal Entry)
Equipment needed	Instructions	Grouping Strategies (small group, pairs)	
Playing cards, building blocks, or other material that can be used to construct a structure	Have students construct a structure, such as a small card house, in groups. Have a class discussion about what each group had to do to build the structure. Then, take away enough of the material to make it difficult to build a similar structure, and ask the students to build the structure again. Then have another class discussion about the struggles that the group faced with limited resources. Use this discussion to introduce the effects that habitat loss can have on animals based on how well they adapt, and use this to introduce canebrakes.	Work in groups of 2-3 students so they can discuss and have accountability for their ideas	
Assignments	Background/Preparation	Special	

Class work: Building structures as groups in class	Teacher should have basic knowledge of adaptation, conservation, and the effects of human environmental manipulation, as well as basic knowledge of canebrake ecosystems in Alabama. Resources: Resource guide for Alabama Canebrake Ecosystems Technology Integration: PowerPoint: Websites:	Integration with other disciplines: History, Geography Remediation Activities: Enrichment Activities/Extensions:
Guided practice: Provide suggestions for building given structure		
Reading: Text/ Articles/ Other Websites or papers about canebrakes or conservation		
Writing: Write about the effects of environment loss that students have observed or learned about elsewhere		
Homework: Have students look for cane or canebrakes around their homes or school		Special Topics/Schedules Testing:___ Activity:___ Assembly:___ Pep Rally:___ Media/PR:___ SAC:___ Career Education:___ Character Ed:___ Adopt-A-School:___ Athletics:___
Total Duration: Experiment from 20-40 minutes, writing assignment could be turned in at the end of the unit, when students have learned more about canebrakes and the effects that the loss of canebrakes has had on the animals who live in them		