

Fifth Grade

<p>I. <u>Mississippi Sandhill Cranes</u></p> <p>A. General Information</p> <p>i. History of species</p> <p>ii. Endangered status</p> <p>iii. Mississippi Sandhill Cranes</p> <p>a. History</p> <p>b. Sub-species differences</p> <p>c. Biology</p> <p>d. Habitat</p> <ul style="list-style-type: none"> • Roosting and Nesting Habits <p>e. Reproduction</p> <ul style="list-style-type: none"> • Natural • Captive breeding <p>f. Crane Protection Program</p>	
<p>Fifth Grade Science Framework</p>	<p>Activity</p>
<p>1. <u>Content Strand: Inquiry</u> Apply concepts involved in a scientific investigation.</p> <p>a. Use drawings, tables, graphs, and written and oral language to describe objects and explain ideas and actions.</p> <p>b. Evaluate results of different data.</p> <p>3. <u>Content Strand: Life Science</u> Describe the characteristics, structure, life cycles and environment of organisms.</p> <p>a. Compare and contrast the diversity of organisms due to adaptations to show how organisms have evolved as a result of environmental changes.</p>	<p>1. Inquiry</p> <p>a. How big are sandhill cranes?</p> <ul style="list-style-type: none"> • Height • Weight • Wingspan • Compare the size of a crane to a classmate <p>b. Evaluate crane nesting behaviors and population recruitment hurdles.</p> <p>b. Describe the different methods used in the Captive Breeding Program and evaluate the results of each.</p> <p>b. Describe the methods of banding/radiotelemetry and the impact of its use on the results of crane research.</p> <p>3. Life Science</p> <p>a. What are some unique adaptations of the Sandhill Cranes?</p> <ul style="list-style-type: none"> • Identify different subspecies of Sandhill Cranes in the United States • What is the relationship the Mississippi Sandhill Crane population and the loss of Wet Pine Savanna?

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<p>II. <u>Wet Pine Savanna</u></p> <p>A. Definition</p> <p>B. Occurrence</p> <p>C. Content</p> <p> i. Grasses</p> <p> ii. Plants</p> <p> a. Carnivorous</p> <p> iii. Animals</p> <p>D. Maintenance</p> <p>E. Mississippi Sandhill Crane & the Wet Pine Savanna</p>	
Fifth Grade Science Framework	Activity
<p>1. <u>Content Strand: Inquiry</u> Apply concepts involved in a scientific investigation.</p> <p> a. Form hypothesis, predict outcomes and conduct a fair investigation that includes manipulating variables and using experimental controls.</p> <p> b. Make and compare different proposals when designing a solution or a product.</p> <p> c. Evaluate results of different data.</p> <p> d. Infer and describe alternate explanations and predictions</p> <p>3. <u>Content Strand: Life Science</u> Predict characteristics, structures, life cycles, environments, evolution and diversity of organisms.</p> <p> a. Compare and contrast the diversity of organisms due to adaptations to show how organisms have evolved as a result of environmental changes.</p> <ul style="list-style-type: none"> • Diversity based on kingdoms, phyla, and classes • Adaptations that increase an organism's chances to survive and reproduce in a particular habitat. <p>4. <u>Content Strand: Earth and Space Science</u> Develop and understanding of the properties of Earth materials, objects in the sky, and changes in Earth and Sky.</p> <p> a. Describe changes caused by humans on the environment and natural resources and cite evidence from research of ways to conserve natural resources in the United States, including Mississippi.</p>	<p>1. Inquiry</p> <p> a. Walk the Nature Trail</p> <ul style="list-style-type: none"> • Identify/describe what is required to have a viable savanna • Discuss plant and animal species viewed on trail • Identify plants based on visual observations <p>3. Life Science</p> <p> a. Investigate/Identify plants found in 1 square meter of Wet Pine Savanna.</p> <ul style="list-style-type: none"> • Identify/list carnivorous plants • Describe characteristics of Wet Pine Savanna that promote the adaptations seen in Carnivorous plants. <p>4. Earth and Space Science</p> <p> a. Discover the changes and developments seen over time to the Gulf Coast area and its effect on the Wet Pine Savanna.</p> <p> b. Identify area that Wet Pine Savanna is found today.</p> <p> c. Identify interventions currently used to restore and maintain the Wet Pine Savanna.</p>
<p>III. <u>Prescribed Burn Program</u></p> <p>A. Goals of the Prescribed Burn Program</p>	

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- i. Prevent wildfires
- ii. Restore, maintain, enhance habitat
 - a. Fire dependent plants, grasses, trees
- B. The Prescribed Burn
 - i. The Plan
 - a. Area to be burned
 - b. Impact on surrounding area
 - ii. The “Burn Boss”
 - iii. Spinning the Weather
 - iv. Securing the perimeter
 - v. Monitoring the site
 - vi. Results of a Prescribed Burn Program

Fifth Grade Science Framework	Activity
<ol style="list-style-type: none"> 1. <u>Content Outline: Inquiry</u> Develop and demonstrate an understanding of scientific inquiry using process skills. <ol style="list-style-type: none"> a. Form a hypothesis, predict outcomes, and conduct a fair investigation that includes manipulation variables and using experimental controls. b. Use precise measurement in conjunction with simple tools and technology to perform tests and collect data. 3. <u>Content Outline: Life Science</u> Predict characteristics, structures, life cycles, environments, evolution and diversity of organisms <ol style="list-style-type: none"> a. Compare and contrast diversity of organisms due to adaptations to show how organisms have evolved as a result of environmental changes. <ul style="list-style-type: none"> • Adaptations that increase an organism’s chance to survive and <i>reproduce</i> in a particular habitat. 4. <u>Content Outline: Earth Science</u> Develop an understanding of the properties of Earth materials, objects in the sky, and changes in Earth and sky. <ol style="list-style-type: none"> a. Explain how surface features caused by constructive processes differ from destructive processes. b. Summarize how weather changes. <ul style="list-style-type: none"> • Weather changes from day to day and over the seasons. • Tools by which weather is observed, recorded and predicted. 	<ol style="list-style-type: none"> 1. Inquiry <ol style="list-style-type: none"> a. Why burn? Formulate a hypothesis about the management of the Wet Pine Savanna using fire. <ol style="list-style-type: none"> One. Predict the outcome of a Prescribed Burn Two. Identify the differences in areas of the refuge that have had a Prescribed Burn in the last year and those that have not. b. “Spin the Weather” <ul style="list-style-type: none"> • Measure the current temperature, wind direction and speed, and, using slide rule, the humidity • Based on the findings, determine if it is appropriate to start a Prescribed Burn 2. Life Science <ol style="list-style-type: none"> a. Identify and describe fire dependent grasses, plants, trees 3. Earth and Space Science <ol style="list-style-type: none"> a. Identify the changes in the Wet Pine Savanna as a result of a fire. Decide if this is a positive or negative change. b. Describe the effect changing weather has on the decision to start a Prescribed Burn. c. Describe the methods used to identify current weather conditions

The field trip to the Mississippi Sandhill Crane National Wildlife Refuge is designed to teach about the

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interconnectivity of all the living things around us. We use the term “Eco Umbrella” to emphasize that the cranes are being used as a focus species, but that by conserving for them, we are protecting the wet pine savanna and other wildlife species that live in the savanna.

We try to make the time at the refuge the most valuable by providing the video and previsit worksheets to the classroom before the field trip.

While the student is here, we will work to meet the benchmarks described on the previous pages.