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**PROGRAM CONCENTRATION:**     **Agriculture**  
**CAREER PATHWAY:**           **Forestry and Natural Resources**  
**COURSE TITLE:**               **Wildlife Management**

This course introduces students to the principles of wildlife management and conservation and to opportunities for further education and careers in the field of wildlife biology. The course includes instruction in the history of wildlife management, ecological concepts, habitat assessment, habitat management techniques for wildlife, population dynamics, predator-prey relationships, wildlife species biology and identification, human-wildlife conflict resolution, the role of hunting in conservation, game and fish laws and regulations, hunters safety, and the application of scientific principles to managing wildlife habitat and populations. Classroom and laboratory activities are supplemented through supervised agricultural experiences and leadership programs and activities.

**AG-WL-1. Students will become oriented to the comprehensive program of agricultural education, learn to work safely in the agriculture lab and work sites, demonstrate selected competencies in leadership through the FFA and agricultural industry organizations, and develop plans for a supervised agricultural experience (SAE) program.**

- a. Explain the role of the Agriculture Education program and the FFA in personal development.
- b. Demonstrate knowledge learned through a Supervised Agricultural Experience (SAE) program.
- c. Develop leadership and personal development skills through participation in the FFA.
- d. Explore career opportunities in Ag Science through the FFA and Agriculture Education Program.
- e. Explore the professional agricultural organizations associated with the course content.

***Academic Standards:***

*ELA10C1. The student demonstrates understanding and control of the rules of the English language, realizing that usage involves the appropriate application of conventions and grammar in both written and spoken formats.*

*SCSh9. Students will enhance reading in all curriculum areas.*

*ELA10LSV1 (d). Actively solicits another person's comments or opinion. (e) Offers own opinion forcefully without domineering.*

*ELA10LSV1 (i). Employs group decision-making techniques such as brainstorming*

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*or a problem-solving sequence (e.g., recognizes problem, defines problem, identifies possible solutions, selects optimal solution, implements solution, evaluates solution).*

*ELA10LSV1 (f). Contributes voluntarily and responds directly when solicited by teacher or discussion leader; (g) Gives reasons in support of opinions expressed.*

**AG-WL-2. Students will define wildlife, explain the importance of wildlife and wildlife management, and identify the role of government and private wildlife organizations in managing wildlife resources.**

- a. Define wildlife and distinguish between game and non-game species.
- b. Define wildlife management and compare wildlife management to other agricultural sciences.
- c. Explain the importance of wildlife and the values society places on wildlife populations.
- d. Describe the historical American attitudes concerning wildlife as a resource.
- e. Describe major trends in wildlife management philosophies and practices.
- f. Identify and explain the meaning and importance of major pieces of U.S. legislation pertaining to the conservation of wildlife resources.
- g. Identify groups and organizations with concern for wildlife and explain their official position regarding hunting and other wildlife management techniques.
- h. Relate hunting to other conservation practices.
- i. Demonstrate an understanding of the causes of hunting and firearm accidents.
- j. Identify means by which hunting and firearms accidents may be prevented.
- k. Demonstrate an understanding of written laws regulating hunting activity.
- l. Demonstrate an understanding of hunter ethics and why they are important to the well being of wildlife.

**Academic Standards:**

*ELA9LSV1. The student participates in student-to-teacher, student-to-student, and group verbal interactions.*

*ELA9LSV2. The student formulates reasoned judgments about written and oral communication in various media genres. The student delivers focused, coherent, and polished presentations that convey a clear and distinct perspective, demonstrate solid reasoning, and combine traditional rhetorical strategies of narration, exposition, persuasion, and description.*

*ELA9RL5. The student researches the life of a particular person as it is represented in a variety of texts.*

*SCSh2. Students will use standard safety practices for all classroom laboratory and field investigations.*

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*SCSh9. Students will enhance reading in all curriculum areas.*

*ELA10RC2. The student participates in discussions related to curricular learning in all subject areas.*

*SEV5. Students will recognize that human beings are part of the global ecosystem and will evaluate the effects of human activities and technology on ecosystems.*

**AG-WL-3. Students will identify basic components of ecosystems and describe the relationship between living organisms and their environment.**

- a. Define terms associated with wildlife ecology.
- b. Describe the various components and functions of ecosystems.
- c. Identify components of wildlife habitat.
- d. Determine the relationship between habitat availability and wildlife populations.
- e. Define carrying capacity (biological and cultural).
- f. Explain plant succession and its relationship to wildlife habitat.
- g. Explain the "Edge Effect" and its importance.
- h. Evaluate habitat from aerial photographs.
- i. Identify habitat requirements for specific species.
- j. Identify plant materials that serve as food and/or cover for wildlife.

**Academic Standards:**

*ELA9LSV1. The student participates in student-to-teacher, student-to-student, and group verbal interactions.*

*ELA9LSV2. The student formulates reasoned judgments about written and oral communication in various media genres. The student delivers focused, coherent, and polished presentations that convey a clear and distinct perspective, demonstrate solid reasoning, and combine traditional rhetorical strategies of narration, exposition, persuasion, and description.*

*SEV1. Students will investigate the flow of energy and cycling of matter within an ecosystem and relate these phenomena to human society.*

*SCSh2. Students will use standard safety practices for all classroom laboratory and field investigations.*

*SCSh9. Students will enhance reading in all curriculum areas.*

*ELA10RC2. The student participates in discussions related to curricular learning in all subject areas.*

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## **WILDLIFE BIOLOGY**

**AG-WL-4. Students will describe the habitat needs of selected wildlife species native to Georgia, identify wildlife species of Georgia from physical characteristics and/or evidence, identify the role of selected species in their environment, and explain biological processes related to reproduction and survival of selected species.**

- a. Describe major habitat requirements for selected wildlife species.
- b. Identify wildlife species from physical evidence.
- c. Determine the age and sex of selected wildlife species.
- d. Explain biological processes of selected wildlife species related to reproduction and survival.
- e. Identify physical characteristics/attributes of species that make them well suited to their ecological niche.
- f. Explain predator/prey relationships.
- g. Interpret animal behaviors relative to life processes of selected species.
- h. Determine home range, space requirements and travel patterns of selected species.

### ***Academic Standards:***

*ELA9LSV1. The student participates in student-to-teacher, student-to-student, and group verbal interactions.*

*ELA9LSV2. The student formulates reasoned judgments about written and oral communication in various media genres. The student delivers focused, coherent, and polished presentations that convey a clear and distinct perspective, demonstrate solid reasoning, and combine traditional rhetorical strategies of narration, exposition, persuasion, and description.*

*SCSh2. Students will use standard safety practices for all classroom laboratory and field investigations.*

*SCSh9. Students will enhance reading in all curriculum areas.*

*ELA10RC2. The student participates in discussions related to curricular learning in all subject areas.*

## **WILDLIFE MANAGEMENT PRINCIPLES AND PRACTICES**

**AG-WL-5. Students will identify practices for managing wildlife populations and their habitats for the benefit of the entire biota.**

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- a. Identify management practices to improve habitat for selected species.
- b. Analyze the cause and effect of human wildlife conflicts.
- c. Analyze methods of human wildlife conflict resolution.
- d. Explain the importance of managing wildlife populations.
- e. Identify methods of manipulating wildlife populations for management purposes.
- f. Explain the purpose and goals of quality deer management.
- g. Determine harvest strategies, based on harvest data collection, to achieve a specific management objective.

**Academic Standards:**

*ELA9LSV1. The student participates in student-to-teacher, student-to-student, and group verbal interactions.*

*ELA9LSV2. The student formulates reasoned judgments about written and oral communication in various media genres. The student delivers focused, coherent, and polished presentations that convey a clear and distinct perspective, demonstrate solid reasoning, and combine traditional rhetorical strategies of narration, exposition, persuasion, and description.*

*SCSh2. Students will use standard safety practices for all classroom laboratory and field investigations.*

*SCSh9. Students will enhance reading in all curriculum areas.*

*ELA10RC2. The student participates in discussions related to curricular learning in all subject areas.*

## **POPULATIONS DYNAMICS**

**AG-WL-6. Students will be able to identify factors related to birth rate and mortality rate of wildlife and recognize the relationship between the biotic potential of wildlife species and their management.**

- a. Define populations.
- b. Explain the concept of limiting factors.
- c. Explain the relationship between carrying capacity, limiting factors, and wildlife populations.
- d. Describe factors affecting birth rate and death rate.
- e. Explain the concept of surplus as it relates to wildlife populations.
- f. Define biotic potential and calculate the biotic potential of selected species.

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- g. Explain the principles of inversivity and compensation.
- h. Analyze population curves that depict population changes among various species.
- i. Explain cause and effect relationships represented by population curves and how they are utilized in managing wildlife populations.

**Academic Standards:**

*ELA9LSV1. The student participates in student-to-teacher, student-to-student, and group verbal interactions.*

*ELA9LSV2. The student formulates reasoned judgments about written and oral communication in various media genres. The student delivers focused, coherent, and polished presentations that convey a clear and distinct perspective, demonstrate solid reasoning, and combine traditional rhetorical strategies of narration, exposition, persuasion, and description.*

*SCSh2. Students will use standard safety practices for all classroom laboratory and field investigations.*

*SCSh9. Students will enhance reading in all curriculum areas.*

*ELA10RC2. The student participates in discussions related to curricular learning in all subject areas.*

*MM2D1. Using sample data, students will make informal inferences about population means and standard deviations.*

*MM2P1. Students will solve problems (using appropriate technology).*

*MM2P3. Students will communicate mathematically.*

*MM2P4. Students will make connections among mathematical ideas and to other disciplines.*

*MM2P5. Students will represent mathematics in multiple ways.*

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## **HABITAT APPRAISAL/FINAL PROJECT**

**AG-WL-7. Students will conduct a field evaluation of wildlife habitats, identify wildlife management practices to improve the habitat for selected species and develop a habitat management plan.**

- a. Conduct a field evaluation of habitat for selected species on a given area.
- b. Identify habitat deficiencies for the survey area.
- c. Define habitat characteristics.
- d. Calculate a habitat quality index.
- e. Identify practices to improve habitat characteristics.
- f. Recommend approved practices for managing habitat and populations.
- g. Schedule practices to optimize effectiveness.
- h. Develop a wildlife management plan for a given land area.

### ***Academic Standards:***

*ELA9LSV1. The student participates in student-to-teacher, student-to-student, and group verbal interactions.*

*ELA9LSV2. The student formulates reasoned judgments about written and oral communication in various media genres. The student delivers focused, coherent, and polished presentations that convey a clear and distinct perspective, demonstrate solid reasoning, and combine traditional rhetorical strategies of narration, exposition, persuasion, and description.*

*SCSh2. Students will use standard safety practices for all classroom laboratory and field investigations.*

*SCSh9. Students will enhance reading in all curriculum areas.*

*ELA10RC2. The student participates in discussions related to curricular learning in all subject areas.*

*ELA10W3. The student uses research and technology to support writing.*

### **CTAE Foundation Skills**

The Foundation Skills for Career, Technical and Agricultural Education (CTAE) are critical competencies that students pursuing any career pathway should exhibit to be successful. As core standards for all career pathways in all program concentrations, these skills link career, technical and agricultural education to the state's academic

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performance standards.

The CTAE Foundation Skills are aligned to the foundation of the U. S. Department of Education's 16 Career Clusters. Endorsed by the National Career Technical Education Foundation (NCTEF) and the National Association of State Directors of Career Technical Education Consortium (NASDCTEc), the foundation skills were developed from an analysis of all pathways in the sixteen occupational areas. These standards were identified and validated by a national advisory group of employers, secondary and postsecondary educators, labor associations, and other stakeholders. The Knowledge and Skills provide learners a broad foundation for managing lifelong learning and career transitions in a rapidly changing economy.

**CTAE-FS-1 Technical Skills:** Learners achieve technical content skills necessary to pursue the full range of careers for all pathways in the program concentration.

**CTAE-FS-2 Academic Foundations:** Learners achieve state academic standards at or above grade level.

**CTAE-FS-3 Communications:** Learners use various communication skills in expressing and interpreting information.

**CTAE-FS-4 Problem Solving and Critical Thinking:** Learners define and solve problems, and use problem-solving and improvement methods and tools.

**CTAE-FS-5 Information Technology Applications:** Learners use multiple information technology devices to access, organize, process, transmit, and communicate information.

**CTAE-FS-6 Systems:** Learners understand a variety of organizational structures and functions.

**CTAE-FS-7 Safety, Health and Environment:** Learners employ safety, health and environmental management systems in corporations and comprehend their importance to organizational performance and regulatory compliance.

**CTAE-FS-8 Leadership and Teamwork:** Learners apply leadership and teamwork skills in collaborating with others to accomplish organizational goals and objectives.

**CTAE-FS-9 Ethics and Legal Responsibilities:** Learners commit to work ethics, behavior, and legal responsibilities in the

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workplace.

**CTAE-FS-10 Career Development:** Learners plan and manage academic-career plans and employment relations.

**CTAE-FS-11 Entrepreneurship:** Learners demonstrate understanding of concepts, processes, and behaviors associated with successful entrepreneurial performance.